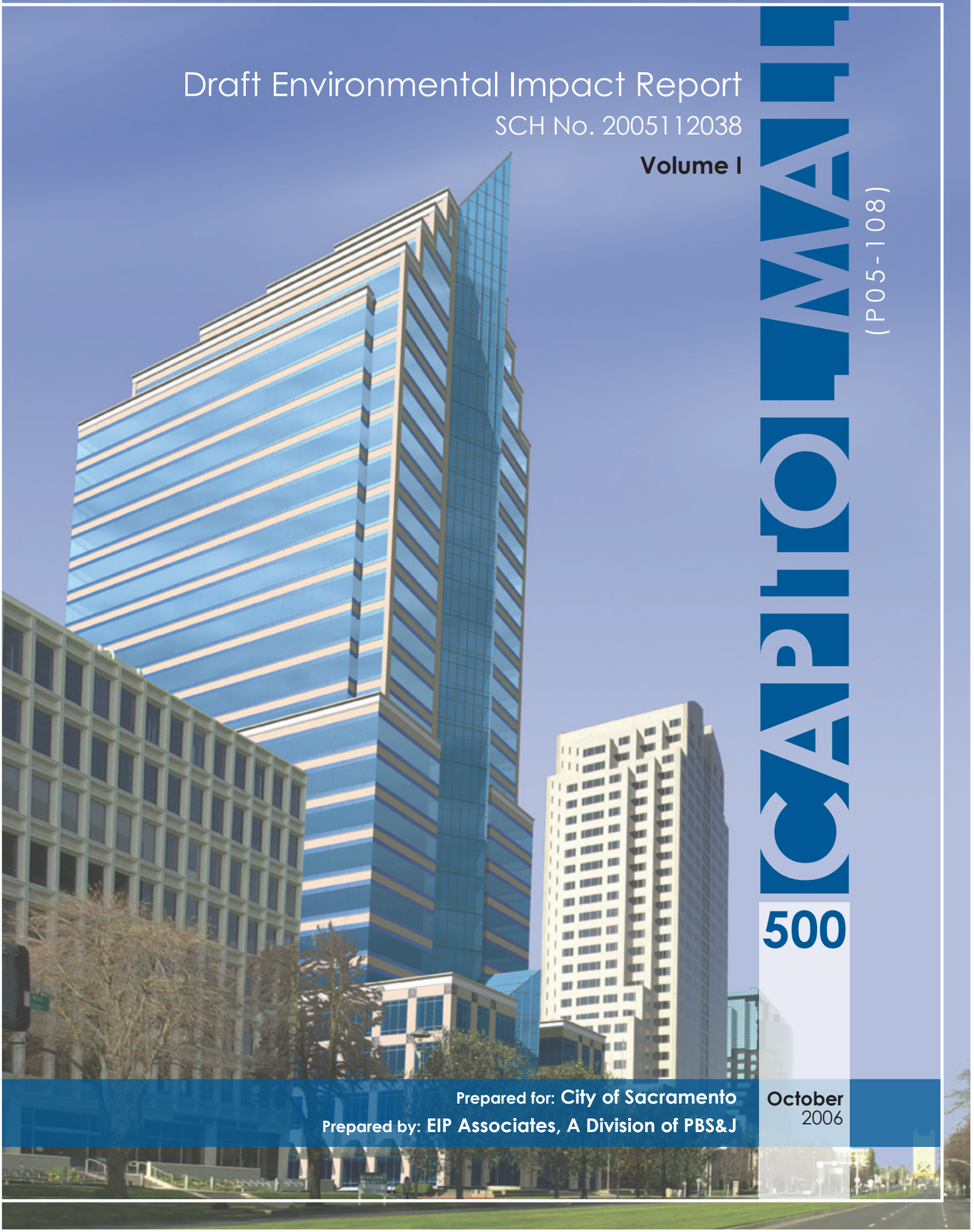
Draft Environmental Impact Report

SCH No. 2005112038

Volume I

CAPITOL MALL 500

(P05-108)



Prepared for: City of Sacramento

Prepared by: EIP Associates, A Division of PBS&J

October 2006

500 Capital Mall (PO5-108)
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SCH No. 2005112038
Volume I: DEIR & Appendices A-H

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1. INTRODUCTION

1.0 INTRODUCTION

PURPOSE OF THE ENVIRONMENTAL IMPACT REPORT

This Draft Environmental Impact Report (DEIR) has been prepared in conformance with the California Environmental Quality Act (CEQA) of 1970 (as amended) to evaluate the environmental impacts associated with the 500 Capitol Mall project (proposed project).

CEQA requires the preparation of an EIR when there is substantial evidence that a project could have a significant effect on the environment. The purpose of an EIR is to provide decision makers, public agencies, and the general public with an objective and informational document that fully discloses the potential environmental effects of the proposed project. The term "proposed project," as used in this EIR, refers to the 500 Capitol Mall project (P05-108). The EIR process is specifically designed to describe the objective evaluation of potentially significant direct, indirect, and cumulative impacts of the proposed project; to identify alternatives that reduce or eliminate the project's significant effects; and to identify feasible measures that mitigate significant effects of the project. In addition, CEQA requires that an EIR identify those adverse impacts determined to remain significant after mitigation.

The City of Sacramento is the lead agency under CEQA for the preparation of this EIR. In accordance with CEQA regulations, a Notice of Preparation (NOP) was circulated for public review from November 10, 2005 through December 9, 2005 for a 30-story, 455-foot-tall building. A scoping meeting was held on December 9, 2005. The project has since been redesigned, and a revised development plan was submitted to the City of Sacramento on April 4, 2006. A second NOP was released on April 13, 2006, and was circulated for public review from April 13, 2006 through May 12, 2006. The NOP was distributed to responsible agencies, interested parties and organizations, and landowners within 1,000 feet of the project site, and private organizations and individuals that have stated an interest in the project. The purpose of the NOP is to provide responsible agencies and interested persons with sufficient information describing the proposed project and its potential environmental effects to enable them to make a meaningful response as to the scope and content of the information to be included in the EIR. Responses to both versions of the NOP were received from agencies and individuals. A copy of the original NOP, the revised NOP, and comments on both NOPs are included in Appendix B of this DEIR in accordance with CEQA.

Comments on the NOP expressed concerns regarding:

- Traffic impacts on State highways and local streets;
- Increase in parking demand and potential impacts on alternate forms of transportation;
- Construction and Project-generated air emissions;
- Construction and Project-generated noise;
- Fire suppression system and Fire Department access;
- Building security;
- Stormwater discharge and potential impacts to the City's Combined Sewer System; and
- Aesthetic impacts associated with an increase in light and glare.

The DEIR is being circulated for public review and comment for a period of 45 days. During this period, comments on the DEIR's accuracy and completeness may be submitted to the lead agency from the general public, as well as organizations and agencies. The 45-day public review period will be from October 11, 2006 through November 27, 2006.

Upon completion of the public review period, a Final EIR (FEIR) will be prepared that will include written comments on the DEIR received during the public review period and responses to those comments. The FEIR will address any revisions to the DEIR made in response to public or staff-initiated comments. The DEIR and FEIR together will comprise the EIR for the proposed project.

Before the lead agency can approve the project, the agency must certify that the EIR has been completed in compliance with CEQA, that the decision-making body has reviewed and considered the information in the EIR, and that the EIR reflects the independent judgment of the lead agency.

The proposed project is subject to the approval of the City of Sacramento Design Review and Preservation Board and Planning Commission. Project approval would also entail adoption of Findings of Fact and a Statement of Overriding Considerations by the Planning Commission.

LEAD AGENCY

The City of Sacramento is the lead agency for preparation of the 500 Capitol Mall EIR. In conformance with sections 15050 and 15367 of the State CEQA Guidelines, the City of Sacramento has been designated the “lead agency” which is defined as the “public agency which has the principal responsibility for carrying out or disapproving a project.”

Required Discretionary Actions

City of Sacramento

The City of Sacramento would be required to certify that the EIR adequately identifies the significant environmental effects of the proposed project, pursuant to the State CEQA Guidelines and the City of Sacramento. In order to develop the proposed project, approval of the following discretionary actions is necessary:

- Special Permit: Major Project over 75,000 square feet;
- Design Review;
- Certification of the EIR; and
- Adoption of the Mitigation Monitoring Plan (MMP).

Other Agencies

- Sacramento Metropolitan Air Quality Management District (SMAQMD) Permits: SMAQMD requires any business or person to obtain an Authority to Construct/Permit to Operate before installing or operating new equipment or processes that may release air pollutants to ensure that all SMAQMD rules and regulations are considered. The proposed project may need permits for such equipment as industrial boilers used for heating of the building, or diesel generators that could be used for emergency back-up power.
- State Water Resources Control Board (SWRCB): The SWRCB would issue a Construction Stormwater Discharge permit, if required.

- Federal Aviation Administration (FAA): The FAA reviews all buildings over 200-feet in height to ensure there are no airspace conflicts.

Lead Agency Contact

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No Responsible Agency, which is defined as a public agency other than the lead agency that has discretionary approval over the project, has been identified at this time.

USE OF THIS EIR

This EIR is a "Project EIR," pursuant to section 15161 of the CEQA Guidelines. A Project EIR examines the environmental impacts of a specific project. This type of EIR focuses on the changes in the environment that would result from implementation of the project, including construction and operation.

How to Use this Report

This report includes nine principal parts; Project Description, Summary, Land Use and Planning, Environmental Analysis (Setting, Impacts, and Mitigation Measures), Alternatives Analysis, CEQA Considerations, References, and Report Preparation.

The **Project Description** (Chapter 2) describes the location of the project, project background, existing conditions on the project site, and the nature and location of specific elements of the proposed project that are proposed for construction.

The **Summary** (Chapter 3) presents an overview of the results and conclusions of the environmental evaluation. This section identifies impacts of the proposed project and available mitigation measures.

Land Use and Planning (Chapter 4) addresses the land use and planning implications of the project and discusses consistency with land use policies.

The **Environmental Analysis** (Chapter 5) includes a topic-by-topic analysis of impacts that would or could result from implementation of the proposed project or alternatives. Topics discussed are those identified in the Initial Study Checklist as requiring further analysis (see Appendix A). The analysis is organized in six topical sections. Each section is organized into two major subsections: Environmental Setting (existing conditions and regulatory setting), and Impacts and Mitigation Measures, including cumulative impacts and mitigation measures.

It is possible that office uses could occupy the penthouse instead of restaurant use. While the penthouse area would represent less than 3 percent of the total rentable area in the building, where resource demand or generation rates for these uses substantially differ from one another, this EIR analyzes both possible uses (restaurant or office) for the areas that could be used for either

restaurant or office. This approach ensures that the EIR analysis accounts for the most intensive possible use of the proposed project.

Alternatives (Chapter 6) includes a description of the project alternatives. An EIR is required by CEQA to provide adequate information for decision makers to make a reasonable choice between alternatives based on the environmental aspects of the proposed project and alternatives. The impacts of the alternatives are qualitatively compared to those of the proposed project. This chapter also identifies the environmentally superior alternative.

CEQA Considerations (Chapter 7) discusses issues required by CEQA: unavoidable adverse impacts, irreversible environmental changes, growth inducement, and a summary of cumulative impacts.

The **References** (Chapter 8) used throughout the DEIR are included in this chapter.

Report Preparation (Chapter 9) includes a list of preparers of the DEIR.

The **Appendices** contain a number of reference items providing support and documentation of the analyses performed for this report.

Scope of this EIR

The City of Sacramento, as lead agency, identified in the Initial Study for this EIR potentially significant impacts that could result from implementation of the proposed project. Based on the Initial Study (see Appendix A), the City determined that this EIR will address the following technical issues:

- Aesthetics
- Air Quality
- Cultural Resources
- Noise
- Public Utilities and Services
- Transportation and Circulation

Land use and planning is not considered a technical issue, but is addressed in Chapter 4.

Issues focused out of this EIR that were identified as being less than significant in the Initial Study include:

- Agricultural Resources
- Biological Resources
- Geology and Soils
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Mineral Resources
- Population and Housing

- Recreation

For a complete discussion of technical issues focused out of this EIR, please see the Initial Study in Appendix A.

2. PROJECT DESCRIPTION

2.0 PROJECT DESCRIPTION

PROPOSED PROJECT

The 500 Capitol Mall project (proposed project) includes the development of a 25-story, 396-foot-tall high-rise building with office, retail, and restaurant uses and a parking garage. The project site encompasses 1.13 acres on the western portion of the block between 5th and 6th Streets and Capitol Mall and N Street in the Central Business District (CBD) of downtown Sacramento (see Figure 2-1). The gross area of the building would be 467,942 square feet (sf), including office and retail, with 264,353 sf for the parking garage for a total building area of 732,295 gross sf. The net area within the building is as follows: 406,384 sf of rentable office area and 27,124 sf of rentable retail / restaurant area, for a net building square footage of 433,508 sf. The project would include retail uses on the ground floor, and a restaurant on two penthouse floors. A total of 794 parking stalls would be provided on one sub-grade floor, and ten parking levels would occupy portions of floors one through eight in the office portion of the project. Depictions of the north, west, south, and east elevations of the proposed project are included on Figures 2-2 and 2-3.

PROJECT LOCATION

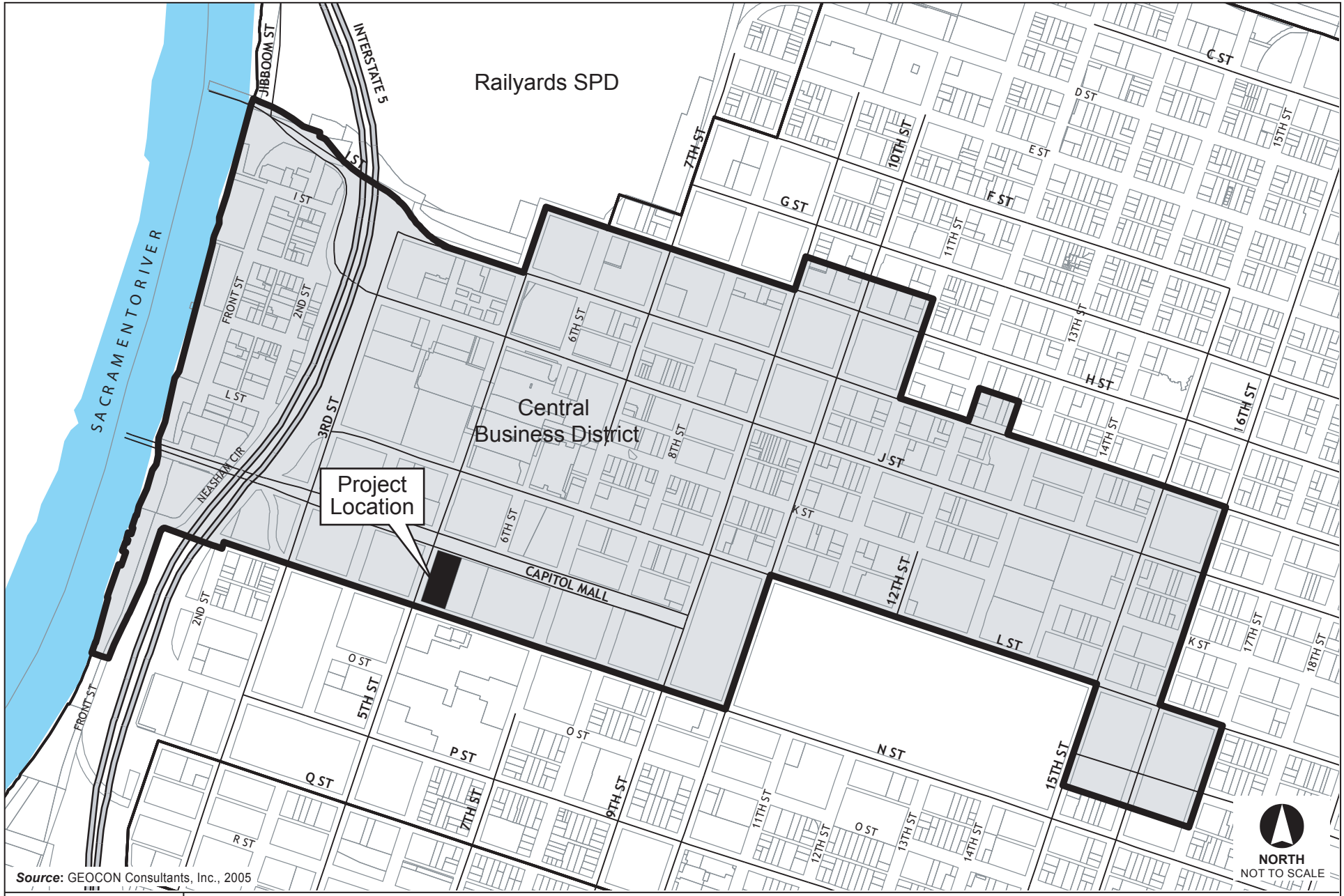
The proposed project site is located within the CBD Special Planning District (SPD) and is zoned for general commercial use (C-3-SPD). The proposed project site is not within the Capitol View Protection Corridor.

The CBD is typified by mixed-use commercial, retail, residential, and office uses of medium to high density. There are currently no residential structures located along Capitol Mall, but two residential projects have been approved: the Towers on Capitol Mall, a 53-story building (comprised of two separate towers on a single pedestal) that would include residential and hotel uses at 301 Capitol Mall, and the Aura Condos, a 35-story residential building at 601 Capitol Mall, with occupancy expected in 2007-2008. Residential uses are also located south of the proposed project along N Street.

The proposed project is located in an area of the CBD with a high volume of pedestrian and vehicle traffic during business hours. The proposed project site is located on the western half of the block bounded by Capitol Mall to the north, N Street to the south, 7th Street to the east, and 5th Street to the west. The project site is located four blocks west of the State Capitol building along Capitol Mall, an east-west four-lane roadway that maintains a large volume of vehicle traffic during business hours. Despite concentrated vehicular traffic, Capitol Mall maintains a pedestrian-friendly atmosphere with a wide median strip and sidewalks for the employees and patrons of the local businesses. The volume of vehicle and pedestrian traffic decreases during the evening hours.

Project Site Land Uses and Designations

A five-story, 155,180 square foot, unoccupied bank building and attached parking structure currently occupy the project site. The existing building fronts Capitol Mall. The parking structure is located along the south portion of the block, along N Street. The proposed project site land use designation in the Sacramento General Plan is Regional Commercial and Office (RCO). The Central City Community Plan designates the proposed project site as Multi-Use and the site is zoned C-3-SPD.



Source: GEOCON Consultants, Inc., 2005

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FIGURE **2-1**

Project Location

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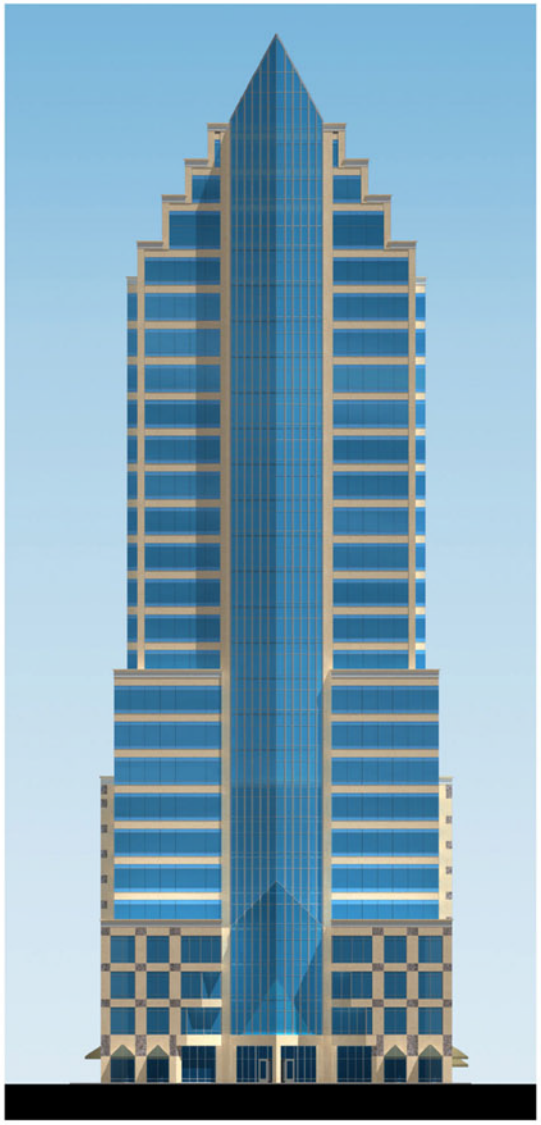
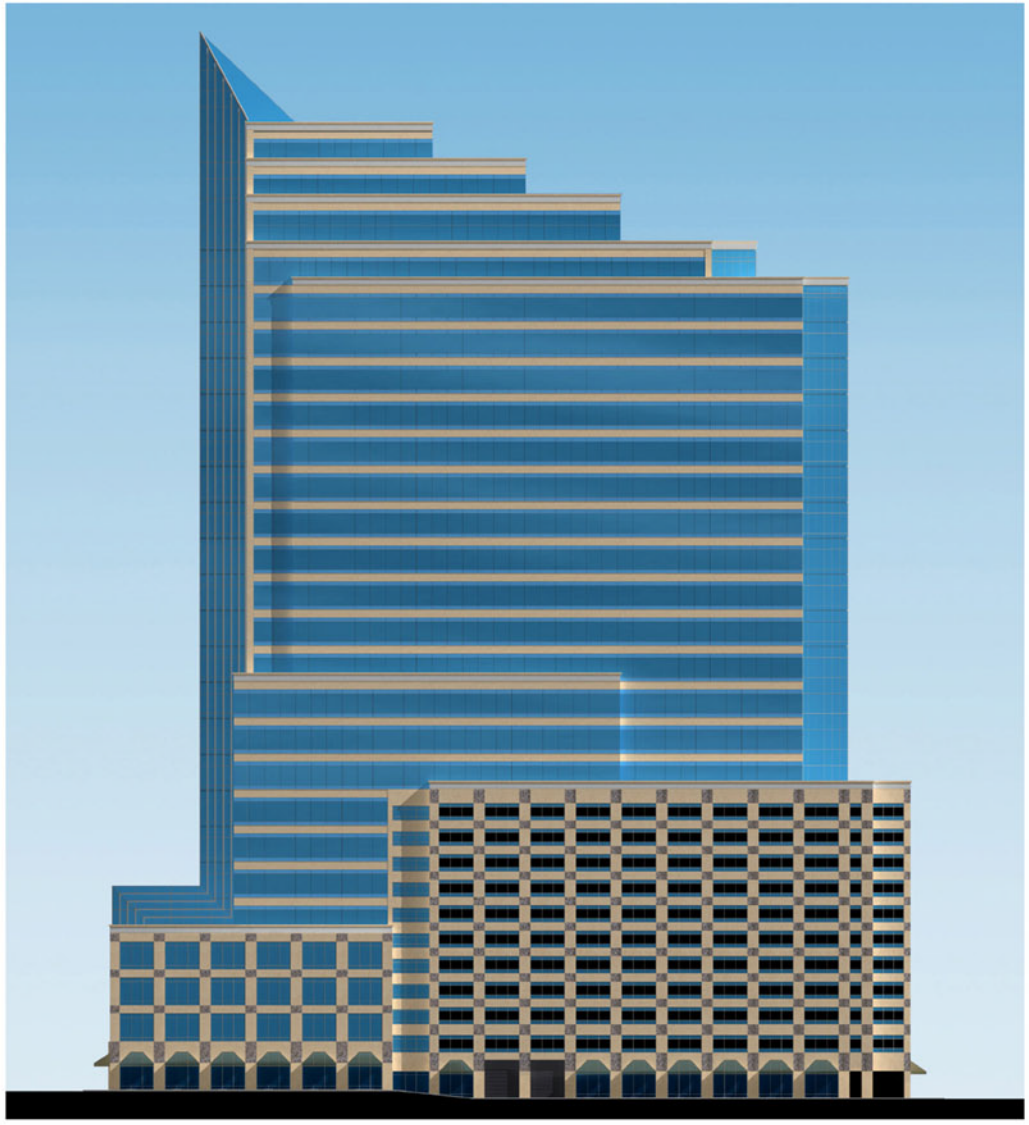
500 Capitol Mall



NORTH ELEVATION



WEST ELEVATION

***Source*:** E.M. Kado Associates–AIA, Inc., 2006.

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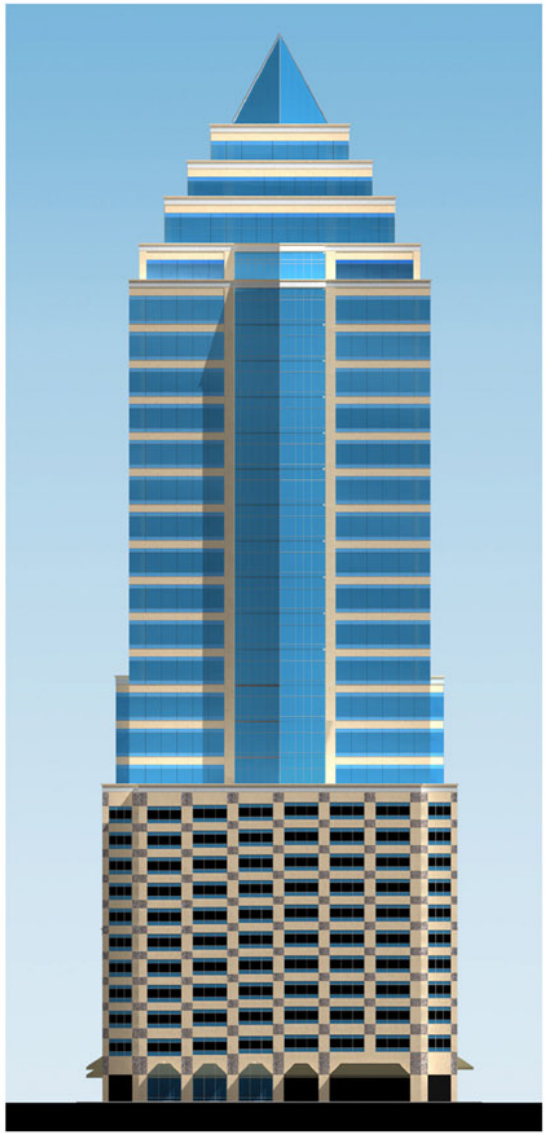
FIGURE **2-2**

North and West Building Elevations

D51121.00

500 Capitol Mall



SOUTH ELEVATION

EAST ELEVATION

***Source*:** E.M. Kado Associates–AIA, Inc., 2006.

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FIGURE **2-3**

South and East Building Elevations

D51121.00

500 Capitol Mall

Surrounding Land Uses

The predominant land uses along Capitol Mall are office. Structures along Capitol Mall vary in height from five floors (currently occupying the project site) to 30 floors to the west on the other side of 5th Street. The tallest existing building along Capitol Mall is the Wells Fargo Center, which is 30 floors and 423 feet tall, located directly west of the project site across 5th Street. The two 15-story Plaza Five Fifty Five office towers are located immediately north of the proposed project site along Capitol Mall. East of the project site, located across an alley on the same block is the eight-story American River Bank office building. Continuing east along the four blocks leading to the State Capitol, state and federal office buildings are the predominate uses along either side of Capitol Mall. The 15-story Bridgeway Towers apartment building and parking garage is located south of the proposed project site, along N Street. Further north of the proposed project site, north of Capitol Mall, there are additional office and commercial uses, including Downtown Plaza, an open-air mall consisting of department stores, restaurants, and retail shops located along K Street between 4th and 7th Streets.

PROJECT OBJECTIVES

The objectives of the proposed project are to:

- Develop an architecturally significant, premier high-rise office building adjacent to Capitol Mall in the City of Sacramento.
- Provide for office, retail, and potential restaurant uses consistent with existing land use designations on the project site.
- Promote the development of high quality office opportunities within the Capitol Mall corridor of the City of Sacramento.
- Foster economic and employment opportunities within the City of Sacramento's Central Business District through the utilization of a currently underutilized property.
- Provide necessary circulation and infrastructure improvements associated with development of the site.
- Promote site design and building orientation that is compatible with adjacent uses and the Capitol Mall Corridor.

PROJECT ELEMENTS

Proposed Uses by Floor

The ground floor of the proposed project would include the entrance lobby, retail uses, storage and maintenance facilities, bicycle lockers and racks, a parking garage entry/exit fronting on N Street, and a loading dock fronting on 5th Street. Floors two through eight would include parking and office space. Floors 9 through 24 (there would be no 13th floor) would house office space exclusively. Above floor 24, the lower penthouse floor would be divided between a mechanical equipment area and restaurant use. The upper penthouse floor would comprise restaurant use or, alternatively, office use. An elevator machine room would be located above the penthouse floors.

Building Materials

The proposed project would be constructed with concrete foundations and floors, steel columns and beams, and metal decks. The exterior of the building would be comprised of horizontal and vertical panels of predominately beige granite with brown and black mottling. The intersection of the horizontal and vertical panels would be accented with rusty red granite with black speckles. Two

different types of glass would be used on the building: spandrel glass, which is used to conceal materials and construction elements from the exterior, and view glass, which would be a ¼-inch, light-blue-tinted, low-E, dual-pane insulated assembly. The window frames would be aluminum in aluminum color finish.

Landscape and Streetscape Improvements

The landscape design has been reviewed by the City arborist and includes revisions based upon City arborist direction. As part of the landscape plan, existing vegetation on the project site, which consists of turf areas, ornamental shrubs, and 19 ornamental trees, would be removed and replaced with 48-inch boxed Maidenhair trees along N Street and 5th Street and 36-inch boxed Littleleaf Linden trees along Capitol Mall. The trees would be planted in planter strips along all street frontages (excluding crosswalks, driveways, bus stops, and drop-off areas). The planter strips would also be planted with shrubs and ground cover. The ground surface area between the edge of the planter and the building and the ground area between the ends of the planters would be paved with granite pavers with a coarse surface finish. The granite pavers would be in two colors, creating a ribbon pattern that aligns with the base columns of the building. In addition to the shading from the new trees, there would be canopies that extend out from the building.

Lighting and Signage

Soffit lights under each canopy would illuminate the ground level around the building. Some spotlights located atop the fourth floor roof would illuminate the face of the building along Capitol Mall. Continuous strips of LED lights could be located along the tops of each step in the building façade. A “500 Capitol Mall” sign with backlit chrome or polished-brass characters may be located either on the Capitol Mall building frontage (i.e., the north elevation) or on a monument sign (separated from the building) that would be visible from east- and west-bound Capitol Mall. There would also be street-level signage identifying the various retail users. All signage would be required to comply with the regulations set forth in the Sacramento Municipal Code (section 15.148 (Signs)).

Building Setbacks

The Zoning Ordinance does not require specific building setbacks in the CBD zone; however, the Sacramento Urban Design Plan contains Massing Guidelines applicable to the Capitol Mall corridor. The Guidelines recommend that buildings fronting Capitol Mall include a setback of at least 90 feet from the center line of Capitol Mall and a tower setback of 140 feet from the center line. Elevations fronting on other streets (i.e., 5th Street and N Street) should be 15 feet from the street wall. The project setbacks are as follows: approximately 1 foot from the property line fronting N Street; approximately 14 feet from the property line fronting 5th Street; approximately 5 feet from the property line fronting the alley on the eastern boundary of the property; and approximately 93 feet from the centerline of Capitol Mall. The stepback for the lower tower, which comprises floors 6 through 12, is approximately 140 feet from the centerline of Capitol Mall, and the upper tower, which comprises floors 7 through 25, is approximately 145 feet from the centerline of Capitol Mall. City staff have determined that the project is generally compliant with the recommended setbacks contained in the Design Guidelines.

Energy Features

The proposed project would include up-to-date energy-saving equipment, lighting, windows, and other energy conservation measures. Although specific features have not been determined at this time, lighting conservation would include installation of such features as occupancy sensors to automatically turn off lights when not in use, lighting reflectors, electronic ballasts, and energy-efficient lamps. Glazing for the project would include insulated, low-E glass with solar reflectance of

15 percent (Viracon, Inc.: Solarscreen Radiant Low-E (VRE) Insulating Glass, VRE 5-59).[1] Conservation efforts are also expected to involve improved HVAC systems with microprocessor-controlled energy management systems.

Fire Protection Considerations

The proposed project would be required to comply with the City's ordinance for high-rise buildings (Chapter 15.100) that requires a number of systems within the building to ensure occupant safety in the event of fire. As described in Sacramento Municipal Code section 15.100.020, the following elements of the life safety system must be installed in accordance with approved plans and specifications and must be tested, certified and proved to be in proper working condition to the satisfaction of the building inspections division and fire department before issuance of the certificate of compliance:

- Standby and emergency electrical power systems;
- Fire alarm and related equipment;
- Firefighters phone and voice communication systems;
- Enclosed stairway pressurization system;
- Smoke evacuation and control systems (mechanical equipment);
- Other fire protection and extinguishing systems;
- Fire department breathing air system;
- Fire hydrant system;
- Automatic fire sprinkler system;
- Fire apparatus access roadways;
- Elevators and controls;
- All equipment and equipment rooms;
- Compliance with all applicable requirements in Titles 19 and 24, California Code of Regulations and the Uniform Building Code, Uniform Fire Code, and N.F.P.A. codes and standards;
- Complete exit systems.

Building plans would be reviewed by the City's fire department to determine that the appropriate fire protection systems are included in the project design.

Utilities and Infrastructure

Wastewater and Storm Drainage

The Central City is served by the City of Sacramento's combined sewer system (CSS) and Basin 52 for wastewater and stormwater disposal, respectively. For wastewater, the proposed project would connect to an 18-inch sewer line (part of the CSS) on 5th Street that conveys sewer flows to the

1 Viracaon, Inc. <http://www.viracon.com/products.php?category=40> (July 17, 2006); Personal communication with Dan Wacek, Engineering Tech Services, Viracon Inc., July 18, 2006: The referenced glass (VRE 5-59) has a low light and heat transmittance level and is thus energy efficient while maintaining low levels of "vis-out" reflectance.

south. The proposed project would connect to a 30-inch storm drain line that runs west on N Street and continues south on 4th Street, conveying storm drainage to Sump 52 (located at P Street and 2nd Street). A grease-recovery device would be installed in the basement of the building should a restaurant tenant be leased.

Water Supply

An existing 6-inch metered water line services the project site at the northeast corner of the property. It had provided both fire protection water and domestic water to the existing building. This existing service would be removed and/or capped to the satisfaction of the Sacramento Department of Utilities. New 8-inch fire, 3-inch domestic, and 1-inch irrigation services would be installed along 5th Street, connecting to the existing 12-inch line in the street. All services would include meters and backflow prevention.

Circulation

The proposed project site is located on a block bounded Capitol Mall to the north, N Street to the south, 7th Street to the east, and 5th Street to the west. Capitol Mall is an east-west four-lane roadway continuing from Business Route 80 in West Sacramento (State Route 275) to 10th Street. N Street is a three-lane one-way (eastbound) roadway that extends from 2nd Street to 32nd Street. 7th Street is a two- to three-lane, one-way (southbound) roadway that extends from just south of G Street to T Street; north of G Street, 7th Street is a two-way roadway into the Richards Boulevard area. Fifth Street is a two- to three-lane, north-south roadway that connects H Street to 4th Avenue.

There are two signalized intersections within the immediate vicinity of the project site: at the corner of 5th Street and Capitol Mall and at the corner of 5th Street and N Street. Both of the existing signalized intersections would remain intact after the implementation of the proposed project.

Primary access to the parking garages (both above and below grade) would be from N Street. Access to the loading dock would be from 5th Street. Pedestrian and visitor access to the building would be located along Capitol Mall, with additional access to the retail areas along 5th Street and N Street.

Site Preparation

To accommodate construction of the proposed project, half of the block would be cleared, including demolition of the existing building and attached parking structure. Although the existing building would be constructed below street grade, some additional excavation would be required for the sub-grade component of the proposed project. The foundation would sit atop a deep foundation system, consisting of piles driven or drilled into the ground to a depth of between 40 and 75 feet. The actual depth of piles would be determined based upon the performance of test piles.

Project Schedule

It is anticipated that demolition of the existing structure would begin in winter 2006-2007. The construction phase, beginning with shoring, excavation, and placement of piles is anticipated to begin in early 2007 and last approximately 26 months, with building occupancy anticipated for early 2009.

Project Approvals

As a public agency principally responsible for approving the proposed project, the City of Sacramento is considered the Lead Agency under the CEQA. The City of Sacramento has the

authority to either approve or deny the project. In addition to certification of the EIR, additional entitlements have been requested for the proposed project, as indicated below:

City of Sacramento

- Special Permit: Major Project over 75,000 square feet;
- Design Review: Compliance with Capital View Protection Guidelines;
- Certification of the EIR; and
- Adoption of the Mitigation Monitoring Plan (MMP).

Other Agencies

- Sacramento Metropolitan Air Quality Management District (SMAQMD) Permits: The SMAQMD requires any business or person to obtain an Authority to Construct/Permit to Operate before installing or operating new equipment or processes that may release air pollutants to ensure that all SMAQMD rules and regulations are considered. The proposed project may need permits for such equipment as industrial boilers used for heating of the building, or diesel generators that could be used for emergency back-up power.
- State Water Resources Control Board (SWRCB): The SWRCB would issue a Construction Stormwater Discharge permit, if required.
- Federal Aviation Administration (FAA): The FAA reviews all buildings over 200-feet in height to ensure there are no airspace conflicts.

3. SUMMARY OF IMPACTS AND MITIGATION MEASURES

3.0 SUMMARY OF IMPACTS AND MITIGATION MEASURES

PROJECT UNDER REVIEW

The proposed project is an approximately 732,295-gross-square-foot high-rise building. The proposed project includes the development of a 25-story, 396-foot-tall building with 467,942 square feet of rentable office and retail/restaurant space, and 264,353 square feet for a 794-space parking garage. The existing building on the site, a 155,180-gross-square-foot, unoccupied, 5-story building, would be demolished to accommodate the project.

The proposed project is located in Sacramento's Central Business District (CBD) at 500 Capitol Mall. The site is bounded by 5th Street to the west, Capitol Mall to the north, the American River Bank building to the east, and N Street to the south. The CBD is typified by mixed-use commercial, retail, residential, and office uses of medium to high density. Most of the buildings within the project vicinity are occupied by office uses; however, there are existing residential buildings immediately south of the proposed project across N Street and approved residential buildings along Capitol Mall to the west and north of the site.

SUMMARY OF IMPACTS

Effects Found to be Less Than Significant

As shown in Table 3-1, a number of project impacts identified in the EIR were found to be less than significant, requiring no mitigation. These impacts are found in Section 5.1 (Aesthetics), Section 5.2 (Air Quality), Section 5.3 (Cultural Resources), Section 5.4 (Noise), Section 5.5 (Public Utilities and Services), and Section 5.6 (Transportation and Circulation). In the course of drafting the EIR for this project, it was determined that numerous other identified impacts could be reduced to a less-than-significant level with implementation of the proposed mitigation measures described herein.

Environmental Impacts and Mitigation

Under CEQA, a significant effect on the environment is defined as a substantial or potentially substantial adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance (CEQA Guidelines section 15382). Implementation of the proposed project would result in significant impacts to some of these resources, which are fully analyzed in Sections 5.1 through 5.6 of this document and summarized in Table 3-1 (provided at the end of this Chapter).

This EIR discusses mitigation measures that could be implemented by the City and/or the project applicant to reduce potential adverse impacts to a level that is considered less than significant. Such mitigation measures are noted in this document and are found in the following sections: Section 5.1 (Aesthetics), Section 5.2 (Air Quality), Section 5.3 (Cultural Resources), Section 5.4 (Noise), Section 5.5 (Public Utilities and Services), and Section 5.6 (Transportation and Circulation). However, even with the application of feasible mitigation measures, some impacts could not be reduced to less-than-significant levels. The significant and unavoidable impacts that were identified for both project-level and cumulative impacts are shown below.

Project-Specific Significant and Unavoidable Impacts

5.2-4 Operation of the proposed project would contribute to emissions of ozone precursors.

5.4-1 Construction of the proposed project would temporarily produce noise.

5.4-2 Construction activity would temporarily produce ground-borne vibration.

5.6-2 The project would increase traffic volumes on the freeway mainline.

5.6-3 The project would increase traffic volumes at the freeway interchanges.

Cumulative Significant and Unavoidable Impacts

5.6-11 Impacts to freeway mainline under Near Term Plus Project Condition.

5.6-12 Impacts to freeway merge / diverge / weave areas under Near Term Plus Project Condition.

5.6-13 Impacts to freeway ramp queues under Near Term Plus Project Conditions.

5.6-18 Impacts to freeway mainline under Long Term Plus Project Conditions.

5.6-19 Impacts to freeway merge / diverge / weave areas under Long Term Plus Project Conditions.

5.6-20 Impacts to freeway ramp queues under Long Term Plus Project Conditions.

ALTERNATIVES TO THE PROPOSED PROJECT

The EIR analyzes the following alternatives to the proposed project:

- No Project/ No Development Alternative, which assumes that the proposed project would not be constructed and there would be no new development of the site. This alternative assumes the existing building on the site would remain.
- Reduced Intensity Development Alternative which would include the construction of a smaller building on the project site with approximately 310,000 sf of office use and 27,000 sf of retail.
- Off-Site Alternative, in which the proposed land uses are developed at another location in the Central Business District.

The environmentally superior alternative is the No Project/No Development Alternative, due to the limited environmental impacts associated with this alternative. However the No Project/No Development Alternative does not achieve any of the project's objectives. The Off-Site Alternative achieves all of the project objectives; however, physical environmental effects under this alternative would be similar to the proposed project. Also, the site may not be available for development, as another project has been approved for the Off-Site Alternative site. The Reduced Intensity Alternative would reduce environmental impacts associated with traffic, air, noise, and utilities, and reduce operational air quality and operational noise impacts to a less-than-significant level. The Reduced Intensity Alternative would meet most of the objectives of the project, but the extent to which the Reduced Intensity Alternative would foster economic and employment opportunities within the City of Sacramento's Central Business District would be less than the proposed project. Nonetheless, with the exception of the No Project/ No Development Alternative, the Reduced Intensity Alternative would be the environmentally superior alternative.

The relative effects of the alternatives are identified by impact area in Chapter 6, Alternatives.

Potential Areas of Concern

Comments were received on the original NOP, as well as the revised NOP for the project (see Appendix B). Those comments addressed traffic impacts on State highways and local streets, in addition to concerns about parking demand and alternate forms of transportation. Comments regarding construction and operational air emissions and noise were also received. Additional comments included concerns regarding fire suppression and Fire Department access, building security, impacts to the Combined Sewer System and stormwater drainage, and aesthetic impacts from light and glare.

SUMMARY TABLE

Table 3-1 (Summary of Impacts and Mitigation Measures), has been organized to correspond with the environmental issues discussed in Chapter 5. The summary table is arranged in four columns:

1. Environmental impacts ("Impact").
2. Level of significance without mitigation ("Significance").
3. Mitigation measures ("Mitigation Measure").
4. The level of significance after implementation of mitigation measures ("Residual Significance").

If an impact is determined to be significant or potentially significant, mitigation measures are identified, where appropriate and feasible. More than one mitigation measure may be required to reduce the impact to a less-than-significant level. This EIR assumes that all applicable plans, policies, and regulations would be implemented, including, but not necessarily limited to, City General Plan Policies, laws, and requirements or recommendations of the City of Sacramento. Applicable plans, policies, and regulations are identified and described in the Regulatory Setting of each issue area and within the relevant impact analysis. A description of the organization of the environmental analysis, as well as key foundational assumptions regarding the approach to the analysis, is provided in Chapter 5.0 (Introduction to the Analysis).

TABLE 3-1

SUMMARY OF IMPACTS AND MITIGATION MEASURES

	Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
	5.1 Aesthetics			
5.1-1	The proposed project could substantially degrade the existing visual character or quality of the project site and its surroundings.	LS	None required.	NA
5.1-2	The proposed project could create light or glare that could affect adjacent properties.	LS	None required.	NA
5.1-3	Implementation of the proposed project could conflict with applicable City policies or design guidelines, resulting in a physical environmental impact.	LS	None required.	NA
5.1-4	The proposed project, in combination with cumulative development in the Central City, could substantially degrade the existing visual character or quality of the project site and its surroundings.	LS	None required.	NA
5.1-5	The proposed project, in combination with cumulative development in the Central City, could create cumulative light or glare that could affect adjacent properties.	LS	None required.	NA
5.1-6	The proposed project, in combination with cumulative development in the Central City, could conflict with applicable City policies or design guidelines.	LS	None required.	NA
	5.2 Air Quality			
5.2-1	Construction of the proposed project would generate emissions of ozone precursors.	S	5.2-1 The following measures shall be incorporated into construction bid documents as recommended by the SMAQMD: (a) The project applicant shall provide a plan for approval by SMAQMD demonstrating that the heavy-duty (>50 horsepower) off-road vehicles to be used in the construction project, including owned, leased, and subcontractor vehicles, shall achieve a project wide fleet-average 20 percent NO_x reduction and 45 percent particulate reduction compared to the most recent CARB fleet average at time of construction. (b) The following measure shall be incorporated into construction bid documents: At least one piece of diesel equipment used on the site during the demolition, earthmoving and clearing stages of construction shall be fitted with a level 3 California Air Resources Board verified diesel emission control system.	LS

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TABLE 3-1

SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		(c) The project applicant and/or contractor shall submit to SMAQMD a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that shall be used an aggregate of 40 or more hours during any portion of the construction project. The inventory shall include the horsepower rating, engine production year, and projected hours of use or fuel throughput for each piece of equipment. The inventory shall be updated and submitted monthly throughout the duration of the project, except that an inventory shall not be required for any 30-day period in which no construction activity occurs. At least 48 hours prior to the use of subject heavy-duty off-road equipment, the project applicant and/or contractor shall provide SMAQMD with the anticipated construction timeline, including start date and name and phone number of the project manager and on-site foreman. (d) The project applicant and/or contractor shall ensure that emissions from all off-road diesel powered equipment used on the project site do not exceed 40 percent opacity for more than three minutes in any one hour. Any equipment found to exceed 40 percent opacity (or Ringelmann 2.0) shall be repaired immediately and SMAQMD shall be notified within 48 hours of identification of non-compliant equipment. A visual survey of all in-operation equipment shall be made at least weekly, and a monthly summary of the visual survey results shall be submitted to the SMAQMD throughout the duration of the project, except that the monthly summary shall not be required for any 30-day period in which no construction activity occurs. The monthly summary shall include the quantity and type of vehicles surveyed as well as the dates of each survey. (e) Prior to issuance of a grading permit, the project applicant shall provide the City with proof of payment of the NO_x off-site mitigation fee in the amount of $23,375 (as detailed in Table 5.2-7).	
5.2-2 Construction of the proposed project would generate emissions of particulate matter.	LS	None required.	NA

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TABLE 3-1

SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact		Level of Significance Prior to Mitigation	Mitigation Measure(s)		Level of Significance After Mitigation
5.2-3	Activities associated with the operation of the proposed project would generate emissions of particulate matter.	LS	None required.		NA
5.2-4	Operation of the proposed project would contribute to emissions of ozone precursors.	S	5.2-4	Prior to issuance of Certificate of Occupancy, the project applicant shall prepare and receive written endorsement from the SMAQMD of an operational Air Quality Mitigation Plan detailing the measures that shall be employed to reduce the proposed project's operational emissions by at least 15 percent. The project applicant shall obtain the endorsement from the SMAQMD and provide it to the City's Environmental Services Department.	SU
5.2-5	The proposed project would increase traffic volumes that, in turn, would contribute to CO concentrations near roadways and intersections.	LS	None required.		NA
5.2-6	Construction of the proposed project would add to cumulative levels of criteria air pollutants.	LS	None required.		NA
5.2-7	Operational activities associated with the proposed project would contribute to cumulative levels of particulate matter.	LS	None required.		NA
5.2-8	The proposed project, in conjunction with future development, would contribute to cumulative CO levels.	LS	None required.		NA
5.3 Cultural Resources					
5.3-1	The proposed project could cause a substantial adverse change in the significance of a historical resource as defined in section 15064.5 of the State CEQA Guidelines.	LS	None required.		NA
5.3-2	The proposed project could cause a substantial adverse change in the significance of an archaeological resource pursuant to section 15064.5 of the State CEQA Guidelines.	PS	5.3-2	Prior to the issuance of grading or construction permits, the project applicant shall retain an archaeologist with knowledge of prehistoric and historic-period archaeology to prepare an Archaeological Testing, Monitoring, and Data Recovery Plan (ATMDRP). The ATMDRP shall require that a qualified archaeologist conduct test trenching on site prior to the commencement of demolition and construction activities. The project applicant shall be responsible for clearing the existing surface parking lot per the ATMDRP to allow test trenching. The ATMDRP shall require that a qualified archaeologist be present	LS

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TABLE 3-1

SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		for all ground-disturbing activities (i.e., excavation, compaction, heavy-equipment operation) that occur on the project site. The ATMDRP shall define how archaeological monitoring will be conducted, the protocol to be followed in the event that significant resources are discovered during monitoring, and where and how data recovery will be conducted for any important archaeological resources discovered. The ATMDRP shall specify that all construction personnel will be alerted to the possibility of buried cultural resources prior to the initiation of ground-disturbing activities. The ATMDRP shall specify that if any cultural resources, such as structural features, unusual amounts of bone or shell, artifacts, human remains, or architectural remains are encountered during any development activities, work shall be suspended within 50 meters (165 feet) of the find. The City of Sacramento Development Services Department shall be immediately notified, and a qualified archaeologist shall develop, as necessary, mitigation measures to reduce archaeological impacts to less-than-significant levels before construction resumes. The final improvement plans shall document any discoveries of cultural resources and the resultant mitigation measures. Any additional mitigation measures that are developed shall be approved by the City prior to implementation.	
5.3-3 The proposed project could disturb human remains, including those interred outside of formal cemeteries.	PS	5.3-3 If human remains are discovered during any phase of archaeological testing or construction, work shall be suspended immediately within 50 meters (165 feet) of the remains and the City of Sacramento Development Services Department and the Sacramento County Coroner shall be notified immediately. If the remains are determined by the county coroner to be Native American, the Native American Heritage Commission (NAHC) shall be notified within 24 hours, and the guidelines of the NAHC shall be adhered to in the treatment and disposition of the remains. The project applicant shall also retain a professional archaeologist with Native American burial experience to conduct a field investigation of the specific site and consult with the Most Likely Descendant, if any, identified by the NAHC. As necessary, the archaeologist may provide professional	LS

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TABLE 3-1

SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		assistance to the Most Likely Descendant, including the excavation and removal of the human remains. The City of Sacramento Development Services Department will be responsible for approval of recommended mitigation as it deems appropriate, taking account of the provisions of state law, as set forth in CEQA Guidelines section 15064.5(e) and Public Resources Code section 5097.98. The project applicant shall implement approved mitigation, to be verified by the City of Sacramento Development Services Department, before the resumption of activities at the site where the remains were discovered.	
5.3-4 The proposed project, in combination with other development in the Sacramento region, could adversely affect unique archaeological resources or historical resources as defined in section 21083.2 of the Public Resources Code and section 15064.5 of the State CEQA Guidelines.	PS	5.3-4 Implement Mitigation Measures 5.3-2 and 5.3-3.	LS
		5.4 Noise	
5.4-1 Construction of the proposed project would temporarily produce noise.	S	5.4-1 The prime contractor shall ensure that the following measures are implemented during all phases of project construction: (a) Erect a solid plywood construction/noise barrier along the exposed project boundaries. The barrier should not contain any significant gaps at its base or face, except for site access and surveying openings. (b) Construction activities shall comply with the City of Sacramento Noise Ordinance, including Section 8.68.060 requiring the use of exhaust and intake silencers for internal combustion engines. (c) Locate fixed construction equipment, such as compressors and generators, as far as possible from sensitive receptors located along N Street. Shroud or shield all impact tools and muffle or shield all intake and exhaust ports on power construction equipment.	SU

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TABLE 3-1

SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		(d) High noise activities, such as pile driving, the use of jackhammers, drills, and other generators of sporadic high noise peaks, shall be restricted to the hours of 8:00 a.m. to 6:00 p.m. Monday through Friday or other such hours satisfactory to the Planning Director and shall not occur on Saturday or Sunday. (e) Prior to issuance of a building permit, the applicant shall submit a plan subject to the satisfaction of the Planning Director demonstrating how the proposed project shall mitigate construction noise to the extent feasible. (f) Designate a disturbance coordinator and conspicuously post this person's number around the project site and in adjacent public spaces. This disturbance coordinator will receive all public complaints about construction noise disturbances and will be responsible for determining the cause of the complaint, and implement any feasible measures to be taken to alleviate the problem.	
5.4-2 Construction activity would temporarily produce ground-borne vibration.	S	5.4-2 The project applicant shall drill pilot holes for piles, to the extent feasible, prior to commencement of impact pile driving. Prior to issuance of a building permit, the project applicant shall submit to the City for approval the anticipated depth to which piles will be drilled and the estimated start date and end date of impact pile driving.	SU
5.4-3 The proposed project could expose sensitive receptors to noise levels that exceed City standards.	S	None feasible.	SU
5.4-4 The proposed project could expose existing non-sensitive receptors to ambient noise levels that exceed City standards.	LS	None required.	NA
5.4-5 The proposed project, in conjunction with planned future development, could expose receptors to increased noise levels.	LS	None required.	NA

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TABLE 3-1

SUMMARY OF IMPACTS AND MITIGATION MEASURES

	Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
	5.5 Public Utilities and Services			
5.5-1	The proposed project could require or result in the construction of new landfills or the expansion of existing facilities.	PS	5.5-1 The project applicant shall submit to the City of Sacramento Solid Waste Division a construction and demolition diversion plan that targets cardboard, wood waste, scrap metal, brick, concrete, asphalt, and dry wall for recovery. As part of this diversion plan, the applicant shall submit to the Solid Waste Division the following information: method of recovery, hauler information, disposal facility, diversion percentage, and weigh tickets documenting disposal and diversion.	LS
5.5-2	The proposed project could generate more than 500 tons of solid waste per year.	LS	None required.	NA
5.5-3	The proposed project, in combination with other development in the City, could require or result in the construction of new landfills or the expansion of existing facilities.	LS	None required.	NA
	5.6 Transportation and Circulation			
5.6-1	Intersections – The project would increase traffic volumes at study area intersections.	S	5.6-1 (a) Intersection of 3rd Street / J Street – Modify the traffic signal phase splits during the a.m. peak period by increasing the phase time for the southbound I-5 off-ramp approach (eastbound) to 40 seconds, maintaining the 50 second phase time for the northbound I-5 off-ramp, and decreasing the north and southbound 3rd Street phase time to 10 seconds. The applicant for the proposed project shall pay a fair share to recover the costs for the City's Traffic Operation Center monitoring and retiming of this intersection. (b) Intersection of 3rd Street / L Street – Modify the westbound approach to provide one left-turn lane, two through lanes (to the northbound I-5 on-ramp), and one right-turn lane. The applicant shall pay fair share toward the City project to improve and re-stripe the intersection.	LS

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TABLE 3-1

SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		(c) Intersection of 3rd Street / P Street – Modify the traffic signal phase splits during the p.m. peak period by increasing the signal phase time to 32 seconds for the westbound P Street approach and decreasing the southbound 3rd Street approach to 18 seconds. The applicant for the proposed project shall pay a fair share to recover the costs for the City's Traffic Operation Center monitoring and retiming of this intersection. (d) Intersection of 15th Street / J Street – Modify the traffic signal phase splits during the p.m. peak period by increasing the phase time for the eastbound J Street approach to 30 seconds, and decreasing the southbound 15th Street signal phase time to 20 seconds. The applicant for the proposed project shall pay a fair share to recover the costs for the City's Traffic Operation Center monitoring and retiming of this intersection.	
5.6-2 Freeway Mainline – The project would increase traffic volumes on the freeway mainline.	S	None available.	SU
5.6-3 Freeway Interchanges – The project would increase traffic volumes at the freeway interchanges.	S	None available.	SU
5.6-4 Freeway Ramp Queuing – The project would increase the length of freeway ramp queues.	S	5.6-4 Implement Mitigation Measure 5.6-1(a).	LS
5.6-5 Bikeways – The project would result in the addition of employees, patrons, and visitors to the site, some of whom would travel by bicycle.	LS	None required.	NA
5.6-6 Pedestrian Facilities – The project would result in the addition of employees, patrons, and visitors to the site.	LS	None required.	NA
5.6-7 Transit Services – The project would increase demand for transit services.	LS	None required.	NA
5.6-8 Parking – The project would increase demand for parking.	LS	None required.	NA
5.6-9 Construction – The construction of the project may include the temporary closure of numerous transportation facilities, including portions of City streets, sidewalks, bikeways, on-street parking, off-street parking, and transit facilities.	S	5.6-9 Prior to beginning of construction, a construction traffic management plan shall be prepared by the applicant to the satisfaction of the City traffic engineer, Regional Transit, and any other affected agency.	LS

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TABLE 3-1

SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
5.6-10 Impacts to study intersection under Near Term Plus Project Condition. (a) 3rd Street / J Street, where the level of service without the proposed projects would be LOS F during the a.m. peak hour and project generated traffic would increase the average vehicle delay by 34.7 seconds.	S	5.6-10(a) At the 3rd Street / J Street intersection, modify the traffic signal phase splits during the a.m. peak period by increasing the phase time for the southbound I-5 off-ramp approach (eastbound) to 40 seconds, maintaining the 50 second phase time for the northbound I-5 off-ramp, and decreasing the north and southbound 3rd Street phase time to 10 seconds. The project applicant shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.	LS
(b) 3rd Street / L Street, where the level of service without the proposed projects would be LOS E during the p.m. peak hour and project generated traffic would increase the average vehicle delay by 43.9 seconds.	S	(b) At the 3rd Street / L Street intersection, modify the westbound approach to provide one left-turn lane, two through lanes (to the northbound I-5 on-ramp), and one right-turn lane. The project applicant shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.	LS
(c) 3rd Street / N Street, where the traffic generated by the project would degrade the level of service from LOS C to LOS D during the a.m. peak hour.	S	(c) At the 3rd Street / N Street intersection, modify the traffic signal phase splits during the a.m. peak period by increasing the southbound 3rd Street signal phase time to 34 seconds, decreasing the eastbound N Street approach to 15 seconds, and maintaining the phase time for the eastbound Tower Bridge approach at 21 seconds. The project applicant shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.	LS
(d) 3rd Street / P Street, where the traffic generated by the project would degrade the level of service from LOS C to LOS D during the p.m. peak hour.	S	(d) At the 3rd Street / P Street intersection, modify the traffic signal phase splits during the p.m. peak period by increasing the signal phase time to 32 seconds for the westbound P Street approach and decreasing the southbound 3rd Street approach to 18 seconds. The project applicant shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.	LS

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TABLE 3-1

SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
(e) 5th Street / L Street, where the traffic generated by the project would degrade the level of service from LOS C to LOS E during the p.m. peak hour.	S	(e) At the 5th Street / L Street intersection, modify the traffic signal phase splits during the p.m. peak period by increasing the signal phase time to 28 seconds for the westbound L Street approach and decreasing the northbound and southbound 5th Street approaches to 42 seconds. The project applicant shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.	LS
(f) 7th Street / L Street, where the traffic generated by the project would degrade the level of service from LOS B to LOS D during the p.m. peak hour.	S	(f) At the 7th Street / L Street intersection, modify the traffic signal phase splits during the p.m. peak period by increasing the signal phase time to 22 seconds for the westbound L Street approach and decreasing the northbound and southbound 5th Street approaches to 28 seconds. This mitigation measure would improve traffic operations to LOS C during the p.m. peak hour and would reduce the near-term cumulative impact to a less-than-significant level. The project applicant shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.	LS
(g) 8th Street / L Street, where the traffic generated by the project would degrade the level of service from LOS B to LOS D during the p.m. peak hour.	S	(g) At the 8th Street / L Street intersection, modify the traffic signal phase splits during the p.m. peak period by increasing the signal phase time to 25 seconds for the westbound L Street approach and decreasing the northbound 8th Street signal phase time to 25 seconds. The project applicant shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.	LS
(h) 9th Street / J Street, where the traffic generated by the project would degrade the level of service from LOS B to LOS E during the p.m. peak hour.	S	(h) At the 9th Street / J Street intersection, modify the traffic signal phase splits during the p.m. peak period by increasing the signal phase time to 28 seconds for the eastbound J Street approach and decreasing the southbound 9th Street signal phase time to 22 seconds. The project applicant shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.	LS

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TABLE 3-1

SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
(i) 10th Street / J Street, where the traffic generated by the project would degrade the level of service from LOS C to LOS E during the p.m. peak hour.	S	(i) At the 10th Street / J Street intersection, modify the traffic signal phase splits during the p.m. peak period by increasing the signal phase time to 28 seconds for the eastbound J Street approach and decreasing the northbound 10th Street signal phase time to 22 seconds. The project applicant shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.	LS
(j) 12th Street / J Street, where the traffic generated by the project would degrade the level of service from LOS C to LOS E during the p.m. peak hour.	S	(j) At the 12th Street / J Street intersection, , modify the traffic signal phase splits during the p.m. peak period by increasing the signal phase time to 22 seconds for the eastbound J Street approach and decreasing the 12th Street signal phase time to 28 seconds. The project applicant shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.	LS
(k) 15th Street / J Street, where the level of service without the proposed projects would be LOS D during the p.m. peak hour and project generated traffic would increase the average vehicle delay by 54.4 seconds.	S	(k) At the 15th Street / J Street intersection, modify the traffic signal phase splits during the p.m. peak period by increasing the phase time for the eastbound J Street approach to 30 seconds, and decreasing the southbound 15th Street signal phase time to 20 seconds. The project applicant shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.	LS
(l) 15th Street / X Street, where the level of service without the proposed projects would be LOS E during the p.m. peak hour and project generated traffic would increase the average vehicle delay by 21.5 seconds.	S	(l) At the 15th Street / X Street intersection, modify the traffic signal phase splits during the p.m. peak period by increasing the phase time for the southbound 15th Street approach to 28 seconds, decreasing the eastbound U.S. 50 off-ramp phase time to 28 seconds, and maintaining 17 seconds for the X Street approach. The project applicant shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.	LS

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TABLE 3-1

SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
(m) 16th Street / H Street, where the traffic generated by the project would degrade the level of service from LOS C to LOS D during the p.m. peak hour.	S	(m) At the 16th Street / H Street intersection, modify the traffic signal phase splits during the p.m. peak period by increasing the phase time for the northbound 15th Street approach to 26 seconds, decreasing the phase times for the eastbound H Street left and through movements to 18 and 24 seconds, respectively, and maintaining 6 seconds for the westbound H Street right-turning movement. The project applicant shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.	LS
5.6-11 Impacts to freeway mainline under Near Term Plus Project Condition.	S	None feasible.	SU
5.6-12 Impacts to freeway merge / diverge / weave areas under Near Term Plus Project Condition.	S	None feasible.	SU
5.6-13 Impacts to freeway ramp queues under Near Term Plus Project Conditions.	S	None feasible.	SU
5.6-14 Impacts to the transit system under Near Term Plus Project Conditions.	LS	None required.	NA
5.6-15 Impacts to bikeways under Near Term Plus Project Conditions.	LS	None required.	NA
5.6-16 Impacts to pedestrian circulation under Near Term Plus Project Conditions.	LS	None required.	NA
5.6-17 Impacts to study intersection under Long Term Plus Project Conditions. (a) 3rd Street / J Street, where the level of service without the proposed project in combination with other downtown projects would be LOS F during the a.m. peak hour and project generated traffic would increase the average vehicle delay by 34.2 seconds; and where the level of service without the proposed project in combination with other downtown projects would be LOS D during the p.m. peak hour and project generated traffic would increase the average vehicle delay by 6.8 seconds.	S	5.6-17(a)3rd Street / J Street intersection, implement the near-term Mitigation Measure 5.6-10(a) (modification of signal phase splits) and also re-stripe the lanes on the southbound I-5 off-ramp approach (eastbound) to provide one combination left-through lane, one through lane, one combination through-right lane, and one exclusive right turn lane. The project applicant shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.	LS

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TABLE 3-1

SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
(b) 3rd Street / L Street, where the level of service without the proposed project in combination with other downtown projects would be LOS E during the p.m. peak hour and project generated traffic would increase the average vehicle delay by 44.1 seconds.	S	(b) 3rd Street / L Street intersection, implement the near-term Mitigation Measure 5.6-10(b) (modification of the westbound approach lanes) and also modify the traffic signal phase splits during the p.m. peak period by increasing the southbound 3rd Street approach to 23 seconds, decreasing the westbound L Street signal phase time to 38 seconds, and decreasing the northbound 3rd Street left-turning movement to 9 seconds. The project applicant shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.	LS
(c) 3rd Street / N Street, where the traffic generated by the proposed project in combination with other downtown projects would degrade the level of service from LOS C to LOS D during the a.m. peak hour.	S	(c) 3rd Street / N Street intersection, implement the near-term Mitigation Measure 5.5-10(c) (modification of signal phase splits). The project applicant shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.	LS
(d) 3rd Street / P Street, where the traffic generated by the proposed project in combination with other downtown projects would degrade the level of service from LOS C to LOS D during the p.m. peak hour.	S	(d) 3rd Street / P Street intersection, implement the near-term Mitigation Measure 5.6-10(d) (modification of signal phase splits). The project applicant shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.	LS
(e) 5th Street / I Street, where the level of service without the proposed project in combination with other downtown projects would be LOS E during the p.m. peak hour and project generated traffic would increase the average vehicle delay by 6.1 seconds.	S	(e) 5th Street / I Street intersection, modify the traffic signal phase splits during the p.m. peak period by increasing the signal phase time to 30 seconds for the northbound and southbound 5th Street approaches and decreasing the westbound I Street approach to 70 seconds. The project applicant shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.	LS
(f) 5th Street / L Street, where the traffic generated by the proposed project in combination with other downtown projects would degrade the level of service from LOS C to LOS D during the p.m. peak hour.	S	(f) 5th Street / L Street intersection, implement the near-term Mitigation Measure 5.6-10(e) (modification of signal phase splits). The project applicant shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.	LS

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TABLE 3-1

SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
(g) 7th Street / L Street, where the traffic generated by the proposed project in combination with other downtown projects would degrade the level of service from LOS B to LOS D during the p.m. peak hour.	S	(g) 7th Street / L Street intersection, implement the near-term Mitigation Measure 5.6-10(f) (modification of signal phase splits). The project applicant shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.	LS
(h) 8th Street / L Street, where the traffic generated by the proposed project in combination with other downtown projects would degrade the level of service from LOS B to LOS D during the p.m. peak hour.	S	(h) 8th Street / L Street intersection, implement the near-term Mitigation Measure 5.6-10(g) (modification of signal phase splits). The project applicant shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.	LS
(i) 9th Street / J Street, where the traffic generated by the proposed project in combination with other downtown projects would degrade the level of service from LOS B to LOS E during the p.m. peak hour.	S	(i) 9th Street / J Street intersection, implement the near-term Mitigation Measure 5.6-10(h) (modification of signal phase splits). The project applicant shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.	LS
(j) 10th Street / J Street, where the traffic generated by the proposed project in combination with other downtown projects would degrade the level of service from LOS C to LOS E during the p.m. peak hour.	S	(j) 10th Street / J Street intersection, implement the near-term Mitigation Measure 5.6-10(i) (modification of signal phase splits). The project applicant shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.	LS
(k) 12th Street / J Street, where the traffic generated by the proposed project in combination with other downtown projects would degrade the level of service from LOS C to LOS E during the p.m. peak hour.	S	(k) 12th Street / J Street intersection, modify the traffic signal phase splits during the p.m. peak period by increasing the eastbound J Street approach to 23 seconds and decreasing the southbound 12th Street and northbound right-turn movement signal phase time to 27 seconds. The project applicant shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.	LS
(l) 15th Street / J Street, where the level of service without the proposed project in combination with other downtown projects would be LOS D during the p.m. peak hour and project generated traffic would increase the average vehicle delay by 52.9 seconds.	S	(l) 15th Street / J Street intersection, implement the near-term Mitigation Measure 5.6-10(k) (modification of signal phase splits). The project applicant shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.	LS

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TABLE 3-1

SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
(m) 15th Street / X Street, where the level of service without the proposed project in combination with other downtown projects would be LOS E during the p.m. peak hour and project generated traffic would increase the average vehicle delay by 20.8 seconds.	S	(m) 15th Street / X Street intersection, implement the near-term Mitigation Measure 5.6-10(l) (modification of signal phase splits). The project applicant shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.	LS
(n) 16th Street / H Street, where the traffic generated by the proposed project in combination with other downtown projects would degrade the level of service from LOS C to LOS D during the p.m. peak hour.	S	(n) 16th Street / H Street intersection, implement the near-term Mitigation Measure 5.6-10(m) (modification of signal phase splits). The project applicant shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.	LS
5.6-18 Impacts to freeway mainline under Long Term Plus Project Conditions.	S	None available.	SU
5.6-19 Impacts to freeway merge / diverge / weave areas under Long Term Plus Project Conditions.	S	None available.	SU
5.6-20 Impacts to freeway ramp queues under Long Term Plus Project Conditions.	S	None available.	SU
Initial Study			
7. Biological Resources			
Would the proposal result in impacts to endangered, threatened or rare species or their habitats (including plants, insects, fish, amphibians, reptiles, birds and mammals)?	PS	Bio-1 To prevent direct impacts on nesting birds, tree removal shall occur between September 16 and February 28. Bio-2 If construction activities would occur during the breeding season (approximately March 1 through September 15), the project applicant, in consultation with the CDFG and USFWS, shall conduct a pre-construction, breeding season survey of the project site during the same calendar year that construction is planned to begin. The survey shall be constructed by a qualified avian biologist to determine if any birds are nesting on or directly adjacent to the project site. If phased construction procedures are planned for the proposed project, the results of the above survey shall be valid only for the season when it is conducted.	LS

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SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		A report shall be submitted to the project applicant and the City of Sacramento, following the completion of the nesting survey that includes, at a minimum, the following information: • A description of methodology including dates of field visits, the names of survey personnel with resumes, and a list of references cited, and persons contacted. • A map showing the location(s) of any nests observed within the project site. Bio-3 The project applicant, in consultation with CDFG and USFWS, shall avoid all active nest sites within the project area while the nest is occupied with adults and/or young. The occupied nest shall be monitored by a qualified avian biologist to determine when the nest is no longer used. Avoidance shall include the establishment of a non-disturbance buffer zone, to be determined in consultation with CDFG, around the nest site, which will be delineated by highly visible temporary construction fencing. Active nest trees that would not be removed but are in close proximity to construction activities shall be monitored weekly to determine if construction activities are disturbing the adult or young birds, until the birds have left the nest. Bio-4 If an active nest site cannot be avoided and would be destroyed, special permits would be required, depending on the bird species. a. For a State-listed bird (i.e. Swainson's hawk), the project applicant shall obtain a Section 2081 permit. Standard mitigation for the loss of an active nest tree generally requires planting 15 trees (a mix of cottonwood, sycamore and valley oaks) and monitoring the success of the trees for five years with a 55% success rate. Locating these trees would likely not be feasible so an alternative approach could be to participate in mitigation deemed appropriate by the CDFG.	

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TABLE 3-1

SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		b. For any bird covered by the Migratory Bird Treaty Act, the project applicant would consult with the USFWS to determine appropriate mitigation measures.	
12. Utilities			
Would the proposal result in the need for new systems or supplies, or substantial alterations to communication systems?	S	Util-1 The project applicant shall install microwave dishes on the proposed project prior to building occupancy. The Public Safety Microwave Network shall be tested prior to building occupancy to ensure that there are no interruptions in service.	LS
14. Cultural Resources			
Would the proposal disturb paleontological resources?	PS	Cult-1 Construction contractors involved in earth-moving activities shall be instructed on indicators that subsurface paleontological resources are present and shall be instructed in procedures to follow in the event that resources are encountered and the following measures shall be incorporated into all construction contracts: a. In the event any paleontological resources, such as fossils, are uncovered during construction, work within 100 feet of the find shall cease and a qualified paleontologist shall be contacted by the by the project proponent to determine if the resource is significant. If the find is determined to be of significance, an excavation plan shall be created and resources shall be donated to an appropriate cultural center. All work products and plans shall be reviewed and approved by the City prior to execution.	LS

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4. LAND USE AND PLANNING

4.0 LAND USE AND PLANNING

INTRODUCTION

This chapter of the EIR provides an overview of the land use and planning effects that may result from development of the 500 Capitol Mall project. This chapter describes existing and planned land uses in and adjacent to the project site, including current land uses, land use designations, and zoning. Section 15125 of the CEQA Guidelines states that the EIR shall discuss "any inconsistencies between the proposed project and applicable general plans and regional plans." Potential inconsistencies between the proposed project and the City of Sacramento General Plan, the Central City Community Plan, the City's Comprehensive Zoning Ordinance, and the Urban Design Guidelines are evaluated in this chapter.

An EIR may provide information regarding land use, socio-economic, population, employment, or housing issues, but CEQA does not recognize these issues as direct physical impacts to the environment. A direct physical change in the environment is a physical change in the environment that is caused by and immediately related to the project (CEQA Guidelines section 15064(d) (1)). Therefore, this chapter does not identify environmental impacts and mitigation measures. Physical impacts on the environment that could result from implementation of the project or project alternatives are not addressed in this chapter, but in the appropriate technical sections of this EIR.

No comments relating to land use or planning issues were raised in comment letters received in response to the NOP.

ENVIRONMENTAL SETTING

The 1.13-acre proposed project site is located at 500 Capitol Mall, occupying the ½ block between 5th and 6th Streets and Capitol Mall and N Street. An unoccupied five-story bank building and attached parking structure currently occupy the project site. The parking structure is located along the south portion of the block, along N Street. The project is located in a developed area of the City of Sacramento within the CBD, which is dominated by mixed-use office and commercial structures.

Structures along Capitol Mall vary in height from five floors (currently occupying the project site) to the 30-floor Wells Fargo Center, which is 423 feet tall and located directly west of the project site across 5th Street. The two 15-story Plaza Five Fifty Five office towers are located immediately north of the proposed project site along Capitol Mall. East of the project site, located across an alley on the same block is the eight-story American River Bank office building. Continuing east along the four blocks leading to the State Capitol, state and federal office buildings are the predominate uses along either side of Capitol Mall. The 15-story Bridgeway Towers apartment building and associated parking garage is located south of the proposed project site, along N Street. Further north of the proposed project site, there are additional office and commercial uses, including Downtown Plaza, an open-air mall consisting of department stores, restaurants, and retail shops located along K Street between 4th and 7th Streets.

Land Use and Zoning Designations

The City of Sacramento General Plan land use designation for the proposed project site is Regional Commercial and Office (RCO). The Central City Community Plan (CCCP) designates the proposed project site as Multi-Use. The proposed project site is currently zoned Central Business District Zone – Special Planning District (C-3-SPD), which is intended for the City's most intense retail,

commercial, and office development (see Figure 2-1 in Chapter 2, Project Description). The zoning in the vicinity of the project site is shown in Figure 4-1.

REGULATORY SETTING

Federal and State

Federal Aviation Administration (FAA)

The Federal Aviation Act of 1958 created the agency under the name Federal Aviation Agency (FAA). The current name was adopted in 1967 when the agency became a part of the Department of Transportation. The FAA is tasked with, among other things, regulation of civil and commercial aviation. The FAA is required to review projects that entail construction or alteration of buildings more than 200 feet above the ground level at the site. The project applicant would be required to submit FAA Form 7460-1 at least 30 days prior to the filing of an application for a construction permit.

Local

City of Sacramento General Plan

The Sacramento General Plan Update (SGPU) was adopted on January 19, 1988. The SGPU replaced the heavily amended 1974 General Plan for Sacramento. The General Plan is a 20-year policy guide for physical, economic, and environmental growth and renewal of the City. A total of nine sections are contained within the SGPU, each of which contains goals and policies intended to guide buildout of the City. Applicable goals and policies from the SGPU are listed below. The City is presently in the process of updating its General Plan, with an anticipated completion in 2007.

Goals and Policies for Commerce and Industry Land Uses

Goal A Maintain and enhance downtown's role as a regional office, retail, and employment center, with special emphasis given to promoting visitor services and cultural/ entertainment uses.

Policies

1 Provide incentives for regional commercial and office development projects locating within the downtown area.

4 Implement the provisions of the Central Business District Urban Design Plan.

Goal B Promote the successful development of mixed-use projects in the Central City.

Policy

1 Actively support and encourage mixed-use commercial, office, and residential development in identified areas of opportunity.

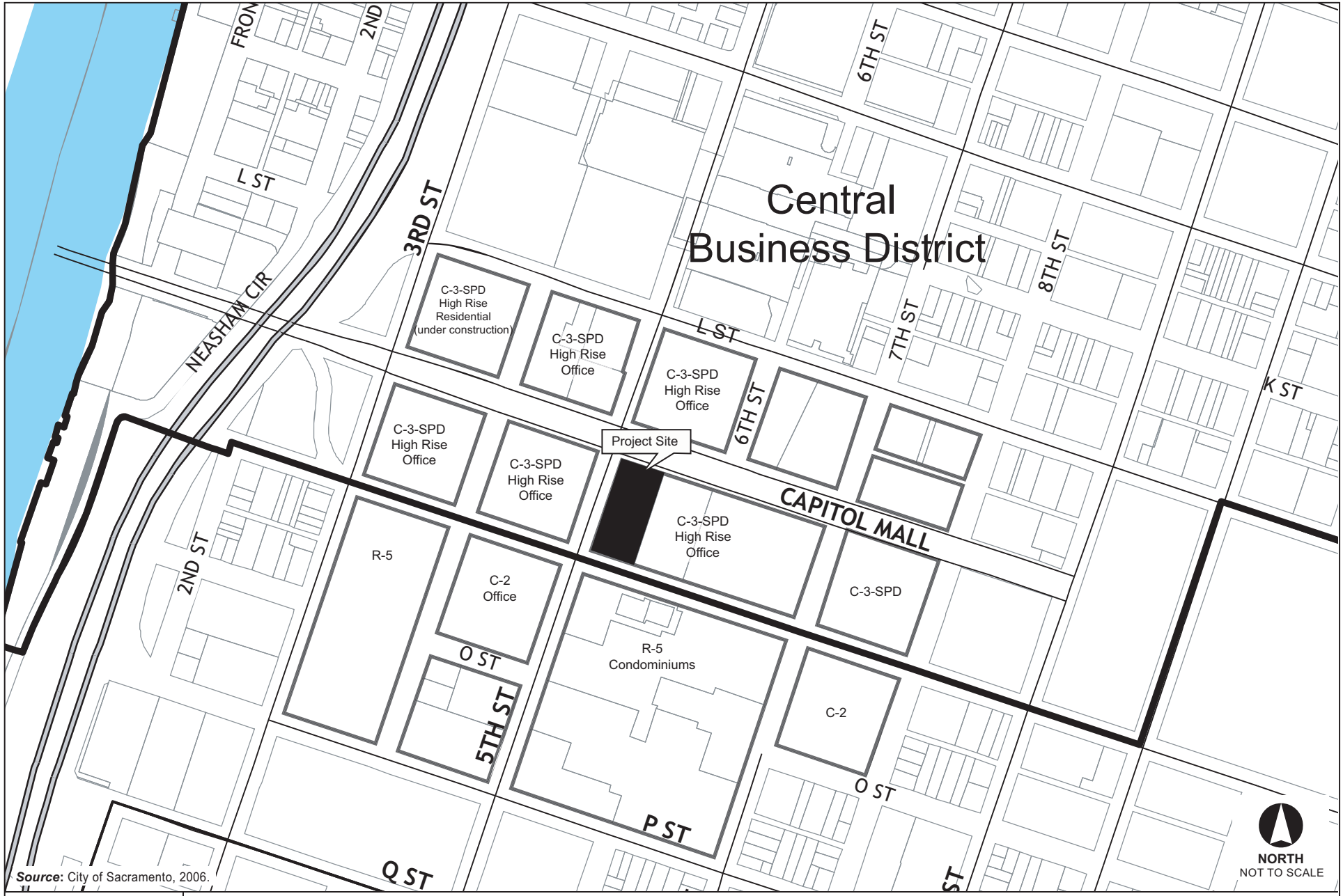
Goal C Maintain and strengthen Downtown's role as a center for governmental office activity.

Policy

1 Encourage leasing of public office space in downtown Sacramento

Policy for Transit Use

8 Where appropriate, maximize project densities and intensities should be encouraged within ¼ mile of light rail stations, consistent with adopted policies of Regional Transit, the recommendations of the Transit for Livable Communities project, and the adopted land use plans and policies of the City.



Source: City of Sacramento, 2006.

EIP ASSOCIATES
A Division of PBSJ

FIGURE **4-1**
Land Use and Zoning

D51121.00

500 Capitol Mall

The land use designations of the SGPU define the appropriate types, densities, and function of uses for each land use designation. The SGPU land use designation for the proposed project site RCO, which is defined below:

> RCO – Includes larger (regional) shopping centers, the Central Business District, and suburban office parks. A grouping of smaller retail centers or office buildings or a single facility with a regional trade area would also fall into this category. The Central Business District is included in this category because of its regional function as an employment, retail trade, service, and office center.

The CBD is typified by mixed-use commercial, retail, residential, and office uses of medium to high density. There are currently no residential structures located along Capitol Mall, and many of the buildings within the project vicinity are occupied by office uses.

Central City Community Plan (CCCP)

The CCCP serves as a development guide for the public and private sector when planning physical improvements in the Central City area. The CCCP includes the area bounded by the Sacramento River to the west, the American River to the north, Sutter's Landing and Alhambra Boulevard to the east, and Broadway to the south. The CCCP includes text and land use diagrams that were adopted by the City of Sacramento City Council in May 1980. Since that time, the Community Plan has been amended numerous times. The CCCP is part of the City's General Plan, and provides a refinement of the goals and objectives of the General Plan to serve as a guideline for development specifically within the CCCP area. The primary goal of the CCCP is to continue revitalization of the Central City to provide a viable living, working, shopping, and cultural environment with a full range of day and night activities for residents, employees, and visitors. The CCCP land use designation for the proposed project site is Multi-Use. Because the Multi-Use designation is not defined in the CCCP, the City relies upon policies and goals of the residential and commercial sections of the CCCP for Multi-Use designations. The following CCCP goals and policies are applicable to the proposed project.

> **Primary Goal**
> The primary goal of the Plan is to continue revitalization of the Sacramento Central City area as a viable living, working, shopping, and cultural environment with a full range of day and night activities.
>
> **Urban Development Goal**
> Provide for organized development of the Central City whereby the many interrelated land use components of the area support and reinforce each other and the vitality of the community.
>
> **Office Goals**
> Provide the opportunity for office development in appropriate areas of the Central City, placing emphasis for development in and around the Central Business District.
>
> Encourage public and private office development, where compatible with the adjacent land uses and circulation system, in the Central Business District, Southern Pacific Railyards and Richards Boulevard Area. (Amended 12-14-93, Resolution No. 93-741)
>
> **Transportation Goals**
> Provide adequate off-street parking to meet the needs of shoppers, visitors and residents.
>
> Restrain the projected increase in parking spaces needed for long-term employee parking by promoting public transit improvements, carpool programs, employer sponsored bus passes and other alternatives to the single occupant car usage.
>
> Reduce the adverse impact of commuter parking on residential streets.

Environmental Goal
Protect and enhance the unique visual features such as entrances into the Central City, attractive arterials, notable landmarks, and access to view of the rivers.

Energy Goal
Encourage implementation of energy saving measures including passive and solar energy devices which will reduce consumption in existing and new buildings.

City of Sacramento Zoning Ordinance

The City of Sacramento Zoning Ordinance (Sacramento City Code Title 17) is intended to encourage the most appropriate use of land, conserve, stabilize, and improve the value of property, provide adequate open space for recreational, aesthetic, and environmental amenities, and control the distribution of population to promote health, safety, and the general welfare of the population of the City (§17.04.020). To achieve this goal, the Zoning Ordinance regulates the use of land, buildings, or other structures for residences, commerce, industry, and other uses required by the community. The Zoning Ordinance also regulates the location, height, and size of buildings or structures, yards, courts, and other open spaces, the amount of building coverage permitted in each zone, and population density. The Zoning Ordinance divides the City into districts of such shape, size, and number best suited to carry out these regulations, and to provide for their enforcement.

The proposed project site is zoned C-3-SPD, which is defined below.

Central Business District Zone-Special Planning District: The Central Business District (CBD or C-3 zone) applies to a 67-block portion of the Central City. The CBD or C-3 zone is the only classification which has no height limit and is intended for the most intense retail, commercial, and office developments in the City. Residential uses are permitted by special permit. The goals of the CBD-SPD are as follows:

A. Accelerate the economic revitalization process by creating a marketplace attractive to private investment;
B. Achieve a plan for long-term economic growth through private sector incentive measures;
C. Enhance the character of Sacramento's downtown and ensure the development of well-designed new projects by adopting the architectural design guidelines;
D. Provide for a pleasant, rich, and diverse pedestrian experience by implementing the streetscape design guidelines;
E. Provide for the humanization of the downtown through promotion of the arts, program of special events and activities, and overall excellence of design. (Ord. 2004-005 § 2; Ord. 99-015 § 5-1.1-A).

Section 17.96.100 of the Zoning Ordinance sets forth guidelines for protecting views of the Capitol Building.

Chapter 17.96 Central Business District Special Planning District
<u>17.96.100 Capitol view protection requirements</u>

A. Purpose. The State Capitol building and the surrounding grounds of Capitol Park provide the city with a unique cultural and open space resource. This section establishes height restrictions, setback requirements and parking regulations for certain areas of the central business district located near the State Capitol building and Capitol Park. These regulations are designed to provide visual protection to and from the Capitol building and Capitol Park.

LAND USE EVALUATION

This section evaluates the proposed project for compatibility with existing and planned adjacent land uses and for consistency with adopted plans, policies, and zoning designations. Physical environmental impacts resulting from the proposed project are discussed in the applicable technical sections in this EIR. This section differs from impact discussions in that only compatibility and consistency issues are discussed, as opposed to environmental impacts and mitigation measures. This discussion complies with section 15125(d) of the CEQA Guidelines, which requires EIRs to discuss inconsistencies with general plans and regional plans as part of the environmental setting.

Compatibility with Existing and Planned Adjacent Land Uses

The existing adjacent land uses along Capitol Mall consist primarily of office buildings and retail space. A residential apartment building is located across N Street south of the project site and there are approved residential buildings planned for construction at 301 Capitol Mall (The Towers) and 601 Capitol Mall (Aura). It is not anticipated that operation of the proposed project would generate excessive noise, light, dust, odors, or hazardous emissions that could be considered incompatible with existing or planned adjacent land uses. The office use of the proposed project is the same as that of the existing building (although it is currently unoccupied), so the proposed project would not introduce a new type of use to the area. Therefore, it is not anticipated that any land use incompatibility with existing and planned adjacent land uses would occur.

Consistency with Adopted Plans, Policies, and Zoning

City of Sacramento General Plan

The project site is designated as RCO in the General Plan. The proposed project would not change the land use designation and would not require any General Plan Amendments in order to be approved by the City.

The General Plan includes specific goals and policies designed to support a balanced system of office and retail facilities throughout the city. The General Plan also encourages high density uses near light rail stations. The nature of the proposed project meets the intent of the General Plan's goal of maintaining and enhancing downtown's role as a regional office and retail center. The project includes office space close to commercial areas and transit opportunities. The project site is situated within one quarter mile of bus routes and two light rail stations at 7th Street and Capitol Mall and 8th Street and Capitol Mall. The project would provide office space with ground floor retail and restaurant opportunities in downtown Sacramento. Therefore, the proposed project would be considered consistent with the intent of the City's goals and policies pertaining to the provision of office and retail facilities.

Central City Community Plan

The primary goal of the CCCP is to continue the revitalization of the Central City. The CCCP also sets forth goals to provide for organized development of the Central City whereby the many interrelated land use components of the area support and reinforce each other and the vitality of the community. The proposed project would increase the amount of office space in downtown. The project's location would enhance the unique visual features of the entrance to the Central City by adding to downtown's skyline. Design of the proposed project would provide adequate off-street parking, thereby reducing the adverse impact of commuter parking on residential streets. The proposed project would also use energy saving devices included in project construction, which would ensure that the project would not result in the wasteful use of non-renewable energy resources. Because the proposed project would meet many of the goals set forth in the CCCP, it would be considered consistent with the intent of the CCCP.

City of Sacramento Zoning Ordinance

The proposed project is located in the Central Business District Zone-Special Planning District (C-3-SPD). Office and retail uses are permitted in the C-3-SPD district. Although the C-3-SPD is intended for the most intense retail, commercial, and office developments in the City, projects over 75,000 gross square feet within the CBD require a special permit. Goals for the special district

include accelerating economic growth and revitalization and enhancing the character of Sacramento's downtown. The proposed project would replace an unoccupied building and bring additional office and retail uses to downtown, thus increasing the economic activity in the area. With the issuance of the required permit for uses over 75,000 gross square feet, the proposed project would be considered consistent with the City's Zoning Ordinance.

As part of the Capitol View Protection Requirements (Sacramento City Zoning Ordinance, Section 17.96.100), height restrictions are imposed on the blocks surrounding the State Capitol building. Height restrictions along Capitol Mall (between K Street and N Street) become more stringent on portions of blocks closer to the Capitol building, ranging from 400 feet on the blocks east of 7th Street to 300 feet on the west half of the blocks east of 8th Street, to 150 feet on the east half of the block west of 9th Street. However, height restrictions along Capitol Mall extend no further west than the block east of 7th Street; there are no height restrictions on the project site. The lack of height limitations in areas of the CBD not immediately adjacent to the Capitol reflects a City policy to encourage high-density, high-rise buildings in the CBD, and to create a prominent skyline of taller buildings in Downtown Sacramento. Therefore, the proposed project would be considered consistent with the Capitol View Protection Requirements contained in the City's Zoning Ordinance.

5. ENVIRONMENTAL ANALYSIS

5.0 Introduction to the Analysis

FORMAT OF THE ENVIRONMENTAL ANALYSIS

ENVIRONMENTAL SETTING

According to Section 15125 of the CEQA Guidelines, an EIR must include a description of the existing physical environmental conditions in the vicinity of the project to provide the "baseline condition" against which project-related impacts are compared. Normally, the baseline condition is the physical condition that exists when the Notice of Preparation (NOP) is published. The NOP for the proposed project EIR was circulated for public review from November 10, 2005 through December 9, 2005 for a 30-story, 455-foot-tall building. The project has since been redesigned, and a new development application was filed with the City of Sacramento on April 4, 2006. A second NOP was released on April 13, 2006, and was circulated for public review from April 13, 2006 through May 12, 2006. CEQA Guidelines recognize that the date for establishing an environmental baseline cannot be rigid. Because physical environmental conditions may vary over a range of time periods, the use of environmental baselines that differ from the date of the NOP is reasonable and appropriate when doing so results in a more accurate or conservative environmental analysis.

For analytical purposes, impacts associated with implementation of the proposed project are derived from two fundamental components of the existing baseline environmental setting—existing conditions at the time the NOP was published and conditions that exist at buildout of the Sacramento General Plan. It is appropriate to evaluate project-level impacts against the conditions that exist when the NOP was published for most issue areas. For issue areas either directly or indirectly related to infrastructure, project-level impacts are more conservatively analyzed against future baseline conditions that consider General Plan and approved growth, because improvements (e.g., roadway widenings, intersection improvements, wastewater distribution and conveyance, solid waste disposal, water supply, electricity and natural gas supplies) must consider and accommodate ultimate demand. The assumptions inherent in the Air Quality and Noise analysis are derived from the Transportation and Circulation analysis (prepared by DKS Associates in coordination with the City of Sacramento); therefore, the baseline year is the same as the other issue areas related to infrastructure.

REGULATORY SETTING

The Regulatory Setting provides a summary of regulations, plans, policies, and laws that are relevant to each issue area.

IMPACTS AND MITIGATION MEASURES

This section is further divided into the following subsections, as described below.

Methods of Analysis

This subsection identifies the methodology used to analyze potential environmental impacts.

Standards of Significance

The CEQA Guidelines define a significant effect on the environment as "a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic and aesthetic significance" (CEQA Guidelines Section 15382). Definitions of significance vary with the physical conditions affected and the setting in which the change occurs. The CEQA Guidelines set forth

physical impacts that trigger the requirement to make "mandatory findings of significance" (CEQA Guidelines, Section 15091). For all environmental issues, this EIR identifies specific standards of significance.

Where explicit quantification of significance is identified, such as a violation of an ambient air quality standard, this quantity is used to assess the level of significance of a particular impact in this EIR. For less easily quantifiable impacts, events or occurrences that would be regarded as significant or potentially significant were identified. For example, growth-inducing impacts would be identified as significant if the project results in a level, rate, or character of growth that (among other criteria) exceeds the capacity of existing infrastructure and services. Where the "substantial" effect of an impact is not identified in the CEQA Guidelines, the criteria for evaluating the significance of potential impacts were determined and identified in this document.

Project-Specific Impacts and Mitigation Measures

This subsection describes the potential environmental impacts of the proposed project and, based upon the thresholds of significance, concludes whether the environmental impacts would be considered significant, potentially significant, or less than significant. Each impact is summarized in an "impact statement," followed by a more detailed discussion of the potential impacts and the significance of each impact before mitigation.

Each impact is provided as a "summary block" prior to the impact discussion to allow for easy reference. The impact number consists of the section of the EIR in which that impact is identified followed by a "-" to indicate the number of the impact in that section. For example, Impact 5.1-1 is the first impact identified in Section 5.1.

Following the description of applicable policies and regulations, as well as mitigation measures, the subsection concludes with a statement regarding whether the impact, following implementation of the mitigation measure(s) or the continuation of existing policies and regulations, would remain significant, and thus would be reduced to a less-than-significant level or be significant and unavoidable.

The analysis of environmental impacts considers both the construction and operational phases associated with implementation of the proposed project. As required by Section 15126.2(a) of the CEQA Guidelines, direct, indirect, short-term, long-term, on-site, and/or off-site impacts are addressed, as appropriate, for the environmental issue area being analyzed.

A "significant effect" is defined by Section 15382 of the CEQA Guidelines as "a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment…[but] may be considered in determining whether the physical change is significant." The EIR uses the following terms to describe the level of significance of impacts identified during the course of the environmental analysis:

- **Significant and Unavoidable Impact (SU)—**Impact that exceeds the defined threshold(s) of significance and cannot be eliminated or reduced to a less-than-significant level through the implementation of feasible mitigation measures.
- **Significant Impact (S)—**Impact that exceeds the defined threshold(s) of significance. For purposes of this document, pre-mitigation impacts that exceed the defined threshold(s) of significance are referred to as significant; however, when the impacts cannot be eliminated

or reduced to a less-than-significant level through the implementation of feasible mitigation measures, these impacts are referred to as significant and unavoidable.

- **Less-Than-Significant Impact (LS)—**Impact that does not exceed the defined threshold(s) of significance. This term is used for impacts for which mitigation measure(s) identified can reduce a pre-mitigation impact to a less-than-significant level.
- **No Impact (NI)**—The project would result in no impact.

Mitigation Measures

This subsection includes feasible mitigation measures that could reduce the severity of the impact. In addition to feasible mitigation measures, it is assumed that the project applicant would continue to comply with all applicable local, State, and federal laws and regulations; however, in some cases these laws and regulations are applied as mitigation measures for the project to allow for monitoring that is consistent with the remainder of the project mitigation measures. It is also assumed that the project applicant will obtain all necessary permits and comply with all required conditions of those permits. In many instances, the actions that are necessary to reduce a project impact are already required by local, State, or federal law. Similarly, established design guidelines or other requirements that the County regularly recognizes and follows for development projects. Nonetheless, these laws or other guidelines may also be applied as mitigation measures, for the reasons discussed above.

Cumulative Impacts and Mitigation Measures

The cumulative setting and impacts for each issue area will be identified, and, If necessary, mitigation measures will be included.

5.1 Aesthetics

5.1 AESTHETICS

INTRODUCTION

This section provides a description of existing visual conditions in the proposed project area and describes changes to those conditions that would result from implementation of the proposed project. Cumulative effects of the proposed project are evaluated in conjunction with other existing and future development in the Central City area.

As discussed in the Initial Study (see Appendix A), the proposed project site is not located in a scenic vista area or within a State scenic highway; therefore, the proposed project would not have a substantial adverse effect on a scenic resource or result in substantial damage to scenic resources visible from a State highway, therefore, these items are not discussed in this section. Capitol Mall is listed as one of the "Protected Views and Vistas" in the Sacramento Urban Design Plan, and potential project impacts on this view corridor are addressed in this section.

Comments received in response to the NOP included concerns regarding the impact glare would have on adjacent uses to the proposed project site. This issue is addressed in this section of the EIR.

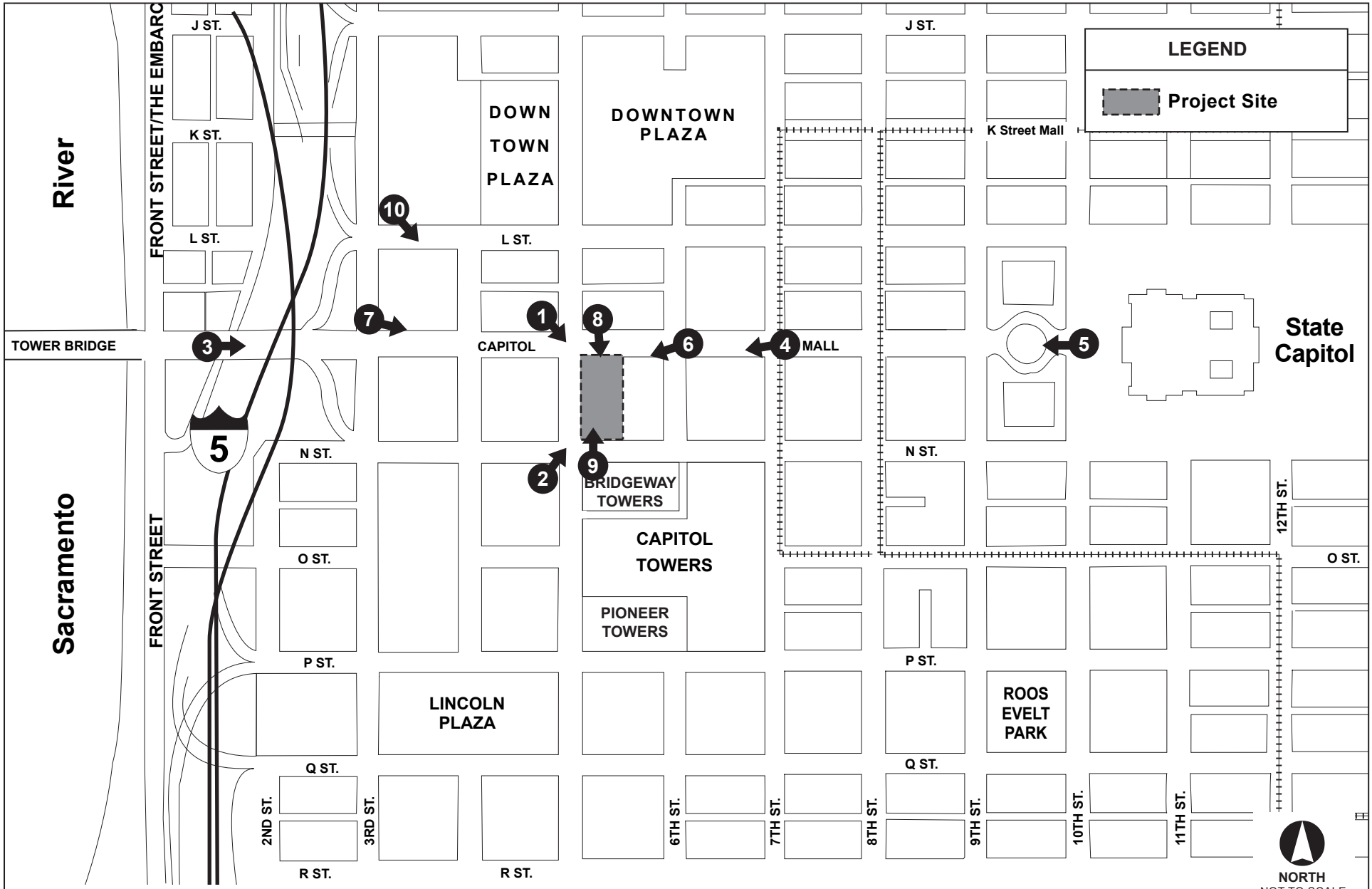
Information to prepare this section was obtained from a site visit in April 2006, review of the City of Sacramento General Plan, the Central City Community Plan, the Sacramento City Code, and the Sacramento Urban Design Plan, as well as a review of project-specific material provided by the project applicant with visual simulations of the proposed project in context with surrounding buildings. Figure 5.1-1 identifies the locations from which photographs for this section were taken.

ENVIRONMENTAL SETTING

Regional Setting

The proposed project site is located in the City of Sacramento Central Business District (CBD) which is within the Central City Community Plan (CCCP) area. The CCCP boundary encompasses the property lying between the Sacramento River on the west, the American River on the north, Alhambra Boulevard on the east, and Broadway on the south. The properties fronting upon the eastern side of Alhambra Boulevard and the southern side of Broadway are also within the Central City. This area includes the CBD, which is characterized by office and commercial uses, parks, and buildings that range in height from two to 30 floors. Office uses include mixed-use one- to three-story buildings, as well as multi-story high-rise buildings.

Sacramento's downtown skyline is visible from miles around the City, including from eastbound I-80 on the Sacramento-Yolo Causeway, from westbound I-80 above the City of Roseville, from northbound I-5 between Elk Grove and Sacramento, from southbound I-5 north of the downtown area, and from westbound US-50 as far east as El Dorado Hills. Distinctive features of the skyline include the Wells Fargo Center, the California Environmental Protection Agency (EPA) building, the U.S. Federal Courthouse, and, by night, the blue light of the Esquire Plaza. The height of these and other notable Sacramento high-rise buildings are listed in Table 5.1-1.



Source: EIP Associates, A Division of PBS&J, 2006.

EIP ASSOCIATES

A Division of PBS&J

FIGURE **5.1-1**

Direction and Location of Photographic Viewpoints

TABLE 5.1-1

DOWNTOWN SACRAMENTO BUILDING HEIGHTS

Name	Address/Cross Streets	Number of Floors	Height (ft.)	Year Built
California State Capitol	9th Street and Capitol Mall	6	210	1874
Capitol Towers Apartments	1500 7th Street	15	N/A	1960
Plaza Five Fifty Five	555 Capitol Mall	16	N/A	1970
Bridgeway Towers	500 N Street	15	163	1980
Westamerica Bank Building	300 Capitol Mall	18	N/A	1984
Renaissance Tower	801 K Street	28	372	1989
Capitol Square	450 Capitol Mall	25	351	1991
One Capitol Mall	Capitol Mall and Front Street	8	N/A	1992
12th and K Tower	1201 K Street	18	240	1992
US Bank Plaza	9th Street and J Street	26	373	1992
Wells Fargo Center	400 Capitol Mall	30	423	1992
Department of Justice Building	1300 I Street	18	226	1995
Ziggurat (City of West Sacramento)	707 Third Street	11	157	1998
U.S. Courthouse and Federal Building	6th Street and I Street	18	350	1999
Esquire Plaza	1211 K Street	22	322	1999
California EPA Building	10th Street and I Street	25	371	2000
Sheraton Grande Hotel	13th Street and J Street	32	318	2001
Embassy Suites Hotel	Capitol Mall and Front Street	8	90	2002
Meridian Plaza 1	14 Street and L Street	12	150	2003
The Towers on Capitol Mall	301 Capitol Mall	53	615	Under construction
Aura Tower	601 Capitol Mall	36	400	Under construction
621 Capitol Mall	621 Capitol Mall	25	400	Under construction
EPIC Tower	12th and I Streets	50	615	Proposed

Source: SkyscraperPage.com, http://skyscraperpage.com/cities/?cityID=116, accessed April 13, 2006; Emporis Buildings website, http://www.emporis.com/en/wm/bu/?id=236203, accessed August 26, 2006. City of Sacramento, Downtown Development, Office Development, http://www.cityofsacramento.org/econdev/down/ 1211_office_development.html#7, accessed January 10, 2005.

Site Characteristics

As previously noted, the proposed project site is located in a developed area of the City of Sacramento within the CBD. The proposed project site currently contains an unoccupied, five-story building fronting Capitol Mall with a three-level parking structure fronting N Street. The north façade of the existing building has a marble base with dark glass paneling above. The south façade, fronting N Street, includes a three-level parking structure, with the upper floors of the office portion containing windows similar to those on the north frontage. The east and west façades of the existing building are composed of concrete with no windows. The site also includes associated landscaping as shown in Figure 5.1-2, Viewpoints 1 and 2.

Capitol Mall

The proposed project site is located along Capitol Mall. The State Capitol building sits at the east end of the Capitol Mall, which is the portion of Capitol Avenue that runs from the Tower Bridge to the State Capitol. The visual character of the area and views in the project vicinity are described below.

Capitol Mall, which offers a unique view of the State Capitol building by providing an uninterrupted view of the Mall and the State Capitol building from the Tower Bridge (see Figure 5.1-3, Viewpoint 3), is listed as one of the “Protected Views and Vistas” in the Sacramento Urban Design Plan. The view is characterized by the roadway, which includes two lanes each of west- and east-bound traffic,

Viewpoint 1: View of the Project Site Looking Southeast from Capitol Mall

Viewpoint 2: View of the Project Site Looking Northeast from N Street

Source: EIP Associates, A Division of PBS&J, 2006.

EIP ASSOCIATES

A Division of PBS&J

FIGURE **5.1-2**

Viewpoints 1 and 2: Views of the Existing Building at 500 Capitol Mall

Source: EIP Associates, A Division of PBS&J 2006.

EIP ASSOCIATES

A Division of PBS&J

FIGURE **5.1-3**

Viewpoint 3: View of Capitol Mall and the State Capitol Building, Looking East from the Tower Bridge

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500 Capitol Mall

divided in the middle with a broad, landscaped median strip. The Capitol building is visible starting from approximately the middle of Tower Bridge, driving east. Also visible from Capitol Mall are the existing skyscrapers: the 18-story Westamerica Bank building, the 25-story Capitol Square building, and the 30-story Wells Fargo Center building, all located on the south side of Capitol Mall between 3rd and 7th Streets. The north side of Capitol Mall includes lower-scale office buildings, with the tallest at Plaza Five Fifty Five on Capitol Mall with two towers at 15 stories each. The State Capitol building is adjacent to Capitol Park, which stretches east to 15th Street. Because Capitol Park is located on the east side of the State Capitol building, the park is not visible from the proposed project site or adjacent areas.

Freeways

As stated above, the Sacramento downtown area is visible from several locations on interstate freeways that transect the City of Sacramento. The existing downtown skyline is visible from northbound and southbound I-5, eastbound and westbound I-80, and westbound I-50. The portions of these interstates that run through the City are not designated as scenic highways.

Public and Residential Uses

Public uses within the vicinity of the proposed project site include Crocker Park and Crocker Art Museum, located at 216 O Street. The State Capitol building is located at 10th Street with Capitol Park to the east of the Capitol. Saint Rose of Lima Park at 705 K Street and Chavez Plaza Park at 910 I Street, are located northeast of the project site. Old Sacramento is located to the west of the proposed project site, across 3rd Street and I-5. Old Sacramento is a State Historic Park and includes office and retail uses, as well as a limited number of residential units, museums, a public boat dock, and bike trails adjacent to the Sacramento River that attract tourists. Portions of several downtown skyscrapers are visible from the streets in Old Sacramento and from the Sacramento River to the west. The buildings in Old Sacramento are approximately 1,800 feet west of the project site, while views from across the river are at a distance of at least 2,500 feet.

Adjacent to the proposed project site to the south across N Street, are multi-family residential buildings - the Capitol Towers and Bridgeway Towers Apartments. Other residential uses in the vicinity of the project include: the Governor's Square West Apartments, located to the southwest along 3rd Street, between N and P Street, across from Crocker Park; the Pioneer House Apartments between O and P Streets from 4th to 5th Street; and the apartments between P and Q Streets from 6th Street stretching to the west and bounded by I-5. There are also a few residential units to the west, across I-5, in the second stories of buildings in Old Sacramento.

Views onto the Project Site

The existing building on the project site is a five-story, unoccupied building with a marble base, and a three-level parking structure fronting N Street. Though there are street trees and landscaping around the project site, the existing building is visible to pedestrians and vehicles on Capitol Mall. The north side of the building is primarily made up of dark glass paneling. The east and west sides of the building have a solid concrete face without windows. At the rear of the building, along N Street, is the entrance to the three-level parking garage, which is also visible on the southern-most sides of the east and west elevations.

Multi-story buildings around the proposed project site are visible from the north- and south-bound lanes of I-5, while the existing building on the project site is not, due to its height. The existing building is easily visible from the north side of Capitol Mall between 3rd Street and 8th Street (see Figure 5.1-4, Viewpoint 4). The building is also visible from the adjacent residential buildings (the

Source: EIP Associates, A Division of PBS&J, 2006.

EIP ASSOCIATES
A Division of PBS&J

FIGURE **5.1-4**

Viewpoint 4: View to the Southwest of the Project Site from 7th Street and Capitol Mall

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500 Capitol Mall

Capitol Towers and Bridgeway Towers Apartments) south of the project site. The existing building on the project site is not visible from areas further south, including Crocker Park.

The existing building is not visible from the west side of Tower Bridge in West Sacramento. Views from the west side of Tower Bridge include taller buildings such as the Wells Fargo Center building, the Capitol Square building, and several other large-scale buildings on the south side of Capitol Mall. Similarly, the existing building is not visible from the east, looking down Capitol Mall towards the Tower Bridge because of the taller office buildings and landscaping on Capitol Mall (see Figure 5.1-5, Viewpoint 5).

Views from the Project Site

The area surrounding the project site is fully developed. Views from the project site consist of a built-up urban environment.

Views to the north include the four-lane Capitol Mall with median and associated landscaping. Across Capitol Mall, views consist primarily of lower-scale office buildings. The tallest of these buildings is Plaza Five Fifty Five, located directly across from the project site on Capitol Mall, which has two high rise towers, each at 15 floors. At its largest width, one tower faces Capitol Mall, while the other faces 6th Street to the east. The buildings are dominated by black-tinted glass paneling. Immediately west of Plaza Five Fifty Five fronting on Capitol Mall is a shorter office building with eight floors. The building is predominantly gray concrete with punched black tinted glass that is inset into the concrete. To the east of Plaza Five Fifty Five on Capitol Mall between 6th and 7th Streets is the project site for the Aura Condominiums and 621 Capitol Mall which are both currently under construction. There is an existing surface parking lot and temporary information building for the condominiums fronting Capitol Mall; the completed Aura Condominiums and 621 Capitol Mall will both be 25 floors.

Immediately to the east of the proposed project site on the same city block between 5th Street and 6th Street, is the eight-story American River Bank office building, fronting onto Capitol Mall. The project site is separated from this building by a narrow alley that provides access to the American River Bank parking structure. The American River Bank building consists primarily of light brown colored concrete with punched black tinted glass windows.

Farther to the east, views include the eight-story John E. Moss Federal Building at 650 Capitol Mall, other existing government and public buildings, and the State Capitol building located on 10th Street. The Capitol is not visible from the project site except from the sidewalk on Capitol Mall or driving on Capitol Mall.

Views to the south, across N Street between 5th and 7th Streets, include the residential buildings of Capitol Towers and Bridgeway Towers Apartments. The Capitol Towers Apartments include 15 floors with additional two-story condominiums at the corner of N and 7th Streets. The Bridgeway Towers Apartments are also 15 stories high with outdoor balconies facing the project site. There is a two-level parking garage for the residential buildings on the corner of 5th and N Streets.

To the southwest, views include the Capitol Square office building at 25 stories. A predominant feature of the Capitol Square building is the black tinted glass on all faces of the building. These buildings make up the majority of the views to the south.

Source: EIP Associates, A Division of PBS&J, 2006.

EIP ASSOCIATES

A Division of PBS&J

FIGURE **5.1-5**

Viewpoint 5: View to the West from the State Capitol on 10th Street

D51121.00

500 Capitol Mall

Views to the west include the 30-story Wells Fargo Center building. The building exterior is constructed of light tan concrete with punched black tinted glass and marble. Further west is the West America Bank building with 18 floors and blue-green colored windows. Further to the west across I-5, is Old Sacramento and the Tower Bridge, which crosses the Sacramento River (see Figure 5.1-5, Viewpoint 5). The Tower Bridge is listed in the National Register of Historic Places and provides vehicular, bicycle, and pedestrian access between the Cities of Sacramento and West Sacramento over the Sacramento River.

Project Components

Visual simulations prepared for the project (see Figure 5.1-6 through 5.1-10) show how the proposed project would appear in the context of other development in the area. The proposed project would result in the construction and operation of a 25-story retail and office building with ground-floor retail uses in a built-up portion of Downtown Sacramento. The upper penthouse floor would be designated for restaurant use. The pedestrian entrance to the building would be located on Capitol Mall.

The proposed project would include concrete foundations and floors, steel columns and beams, and metal decks. The exterior stone would be granite. The horizontal and vertical panels of granite would be predominately beige with streaks of brown and black mottling. The intersection of the horizontal and vertical panels would be accented with rusty red granite with black speckles. The window frames would be aluminum in aluminum color finish. Two different types of glass would be used on the building: spandrel glass, which is used to conceal materials and construction elements from the exterior, and view glass, which would be a ¼-inch, light-blue-tinted, dual-pane insulated assembly.

Existing trees on the project site would be removed to accommodate the project. Landscape features would consist of 48-inch boxed Maidenhair trees along N Street and 5th Street and 36-inch boxed Littleleaf Linden trees along Capitol Mall. The trees would be planted in planter strips along all street frontages (excluding crosswalks, driveways, bus stops, and drop-off areas). The planter strips would also be planted with shrubs and ground cover. The ground surface area between the edge of the planter and the building and the ground area between the ends of the planters would be paved with granite pavers with a coarse surface finish. The granite pavers would be in two colors, creating a ribbon pattern that aligns with the base columns of the building. In addition to the shading from the new trees, there would be canopies that extend out from the building.

Soffit lights under each canopy would illuminate the ground level around the building. Some spotlights located atop the fourth floor roof would illuminate the face of the building along Capitol Mall. Continuous strips of LED lights would be located along the tops of each step in the building façade. A “500 Capitol Mall” sign with backlit chrome or polished-brass characters may be located either on the Capitol Mall building frontage (i.e., the north elevation) or on a monument sign (separated from the building) that would be visible from east- and west-bound Capitol Mall. There would also be street-level signage identifying the various retail users. All signage would be required to comply with the regulations set forth in the Sacramento Municipal Code (section 15.148 (Signs)).

The building would be approximately 94 feet from the center line of Capitol Mall. The lower tower would be approximately 140 feet from the center line, whereas the upper tower would be approximately 145 feet from the Capitol Mall center line. The side street setback would be 14 feet.

View of the Project Site from the North Corner of 6th Street and Capitol Mall

Simulation with the Proposed Project

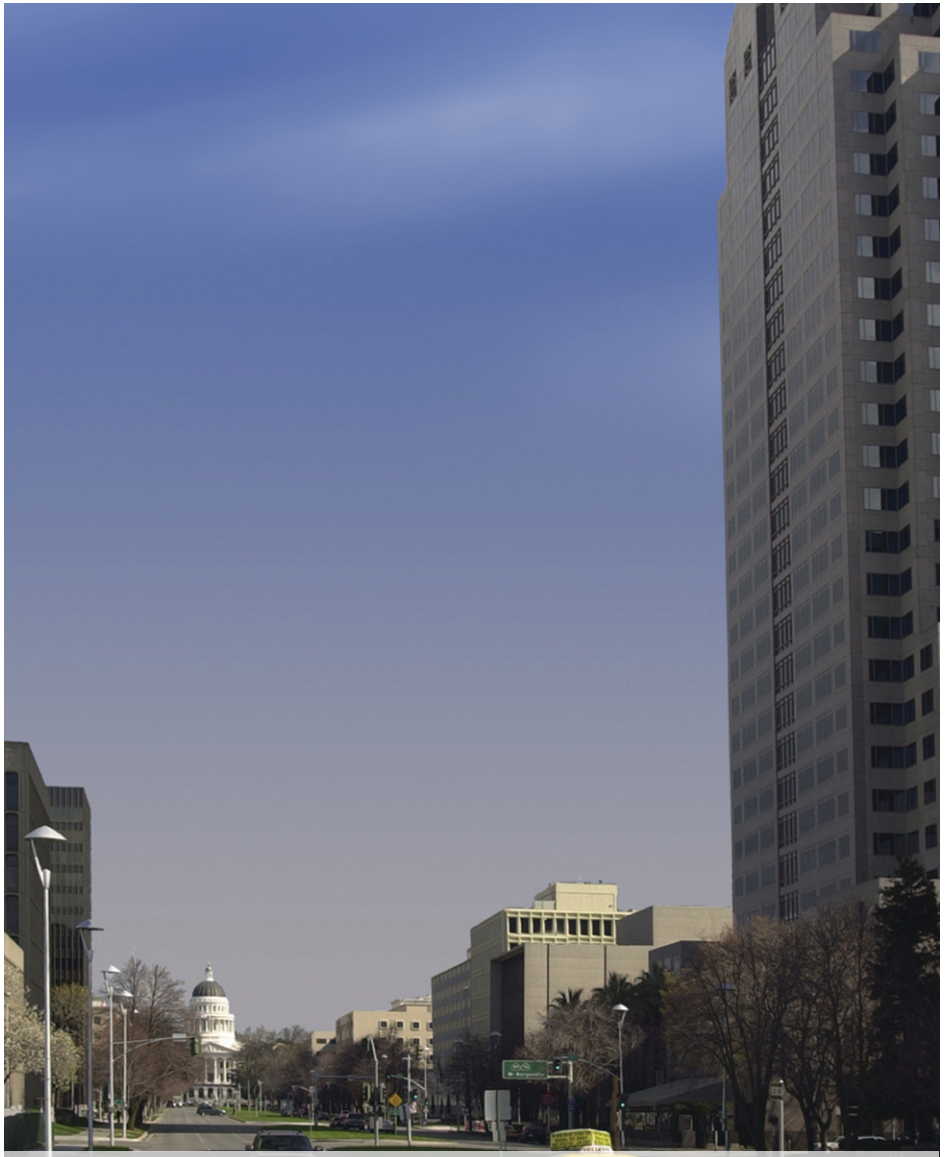
Sources: E.M. Kado Associates - AIA, Inc; EIP Associates, A Division of PBS&J, 2006.

EIP ASSOCIATES

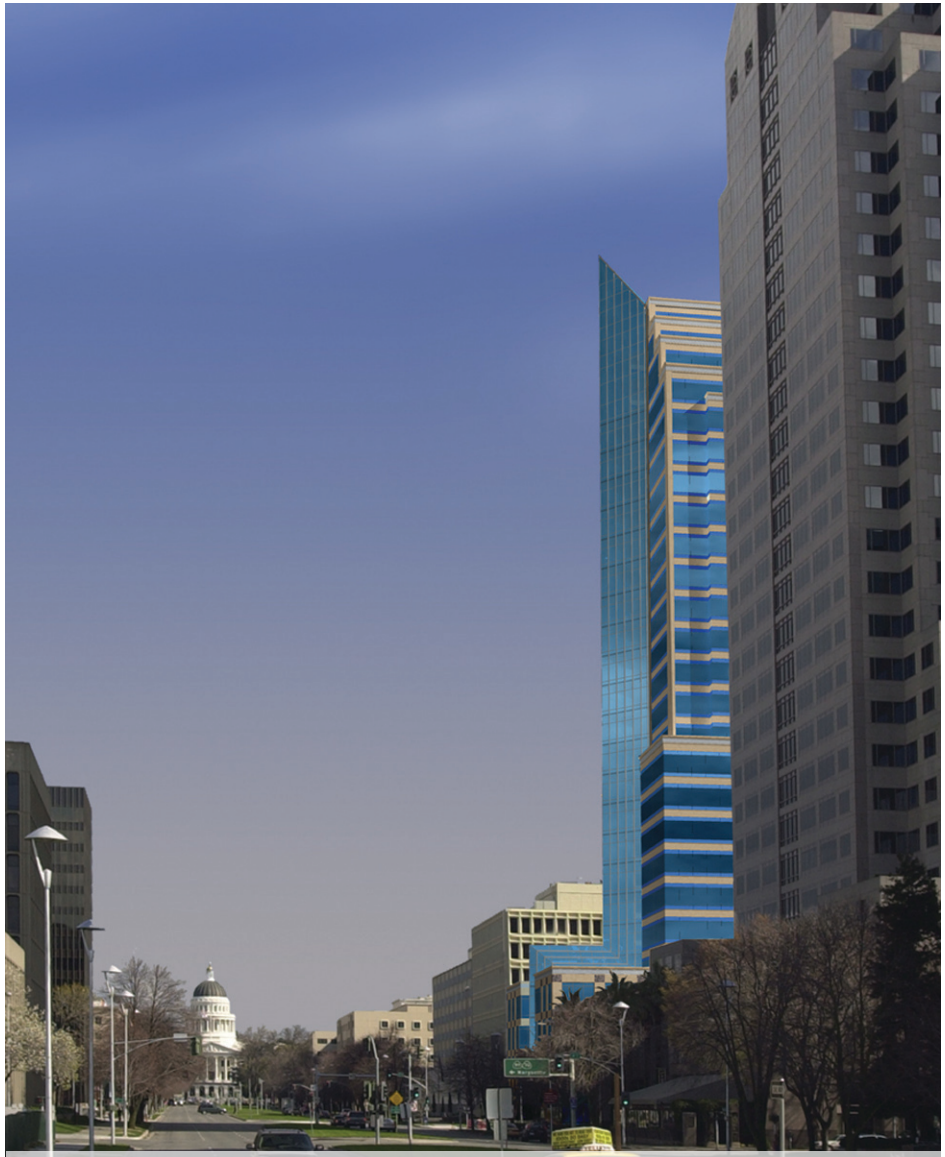
A Division of PBS&J

FIGURE **5.1-6**

Viewpoint 6: Existing and Proposed Views from Northeast of the Project Site



View of the Project Site from the North Corner of 3rd Street and Capitol Mall



Simulation with the Proposed Project

Sources: E.M. Kado Associates - AIA, Inc; EIP Associates, A Division of PBS&J, 2006.

EIP ASSOCIATES

A Division of PBS&J

FIGURE **5.1-7**

Viewpoint 7: Existing and Proposed Views from Northwest of the Project Site

D51121.00

500 Capitol Mall

View of the Project Site from the North Corner of 5th Street and Capitol Mall

Simulation with the Proposed Project

Sources: E.M. Kado Associates - AIA, Inc; EIP Associates, A Division of PBS&J, 2006.

EIP ASSOCIATES

A Division of PBS&J

FIGURE **5.1-8**

Viewpoint 8: Existing and Proposed Views of the Project Site from the North

D51121.00

500 Capitol Mall

View of the Project Site from the South Corner of 5th Street and N Street

Simulation with the Proposed Project

Sources: E.M. Kado Associates - AIA, Inc; EIP Associates, A Division of PBS&J, 2006.

EIP ASSOCIATES

A Division of PBS&J

FIGURE **5.1-9**

Viewpoint 9: Existing and Proposed Views of the Project Site from the South

D51121.00

500 Capitol Mall

View of the Project Site from the Northwest Atop Downtown Plaza Parking Lot

Simulation with the Proposed Project

Sources: E.M. Kado Associates - AIA, Inc; EIP Associates, A Division of PBS&J, 2006.

EIP ASSOCIATES

A Division of PBS&J

FIGURE **5.1-10**

Viewpoint 10: Existing and Proposed Views of the Project Site from L Street

D51121.00

500 Capitol Mall

REGULATORY SETTING

Federal and State

There are no federal or state regulations regarding aesthetics that are applicable to the proposed project.

Local

City of Sacramento General Plan

The following goals from the City of Sacramento General Plan's Residential Land Use Element are applicable to the proposed project:

Section 2: Residential Land Use Element; Overall Goal
Goal A Maintain and improve the quality and character of residential neighborhoods in the City.

Section 2: Residential Land Use Element; Specific Goals, Policies, Actions
Goal A Improve the quality of residential neighborhoods, Citywide by protecting, preserving and enhancing their character.

Section 5: Transit Element

Policy
8. Where appropriate, maximize project densities and intensities should be encouraged within 1/4 mile of light rail stations, consistent with adopted policies of Regional Transit, the recommendations of the Transit for Livable Communities project, and the adopted land use plans and policies of the City.

Central City Community Plan

Environmental Goal
Create an attractive urban setting through the preservation of existing amenities in the Central City and development of an urban design addendum to the Central City Plan.

Sub-goal
- Encourage new residential office and commercial development which is human in scale, sensitive to open space and aesthetic needs and which will minimize air and noise pollution.
- Improve visual qualities, especially signing, building and yard maintenance, commercial developments and overhead utilities.
- Develop urban design standards which provide open space, attractive landscaping, and encourage creative design features which are sensitive to the urban forms, scales, and patterns found in the Central City.
- Protect and enhance the unique visual features such as entrances into the Central City, attractive arterials, notable landmarks, and access to views of the rivers.

Sacramento Zoning Ordinance

Chapter 17.96 Central Business District Special Planning District
17.96.100 Capitol view protection requirements
A. Purpose. The State Capitol building and the surrounding grounds of Capitol Park provide the city with a unique cultural and open space resource. This section establishes height restrictions, setback requirements and parking regulations for certain areas of the central business district located near the State Capitol building and Capitol Park. These regulations are designed to provide visual protection to and from the Capitol building and Capitol Park.

Sacramento Urban Design Plan

The City of Sacramento and Sacramento Housing and Redevelopment Agency adopted the Sacramento Central Business District Urban Design Plan (Urban Design Plan) on February 18, 1987. The Urban Design Plan is organized as a trilogy of documents: the Urban Design Framework,

the Architectural Design Guidelines, and the Streetscape Design Guidelines. Each is a resources document that provides policy guidance to the Design Review/Preservation Board, Sacramento Housing and Redevelopment Commission, Planning Commission, and the City Council. The Guidelines were intended to be used to give direction rather than prescriptive requirements and the Design Review/Preservation Board can interpret individual guidelines. The intent of the Design Guidelines is to ensure that all development in the CBD contributes to making the CBD a unique and special place.[1]

The Capitol Mall massing district Massing Guidelines would also apply to the proposed project. The Massing Guidelines require a 90-foot setback from the centerline of Capitol Mall and a 140-foot setback for the main tower of the building.

The following policies apply to the proposed project:

5.0 Massing Guidelines

5.1 Policies

1. Where important historic buildings are the predominate form giving element in an area, the massing guidelines compliment and "mend" that area.
2. The massing guidelines create a setting that frames and compliments important landmarks.
4. Edges and entries to the downtown are defined and enhanced.

6.0 Building Design Elements – General Requirements

6.1 Color, Texture and Material

- New developments should respond in a compatible manner to the existing color, texture and materials used on surrounding significant buildings.
- All Major Projects should utilize compatible materials on all four sides of the building.
- The street level portion of the all new developments must use durable and quality materials. Examples of these materials include stone (granite, marble), terra cotta or tile, metal (bronze, chrome baked enamel), brick, transparent glass, etc.
- Recommended materials on the tower portion of a building include terra cotta, pre-cast concrete, glass-fiber reinforced concrete (GFRC), brick tile or other equivalent materials.
- Highly reflective mirrored glass walls as the primary design element should be avoided.
- Extensive use of stucco, wood, composites of thin weather resistant skin over non-durable backing and other non-durable materials should be avoided on buildings over three stories.
- More than two colors and materials should be incorporated in a design. Intense colors, if used, should be accents, mono-chromatic schemes are discouraged.
- Graffiti resistant coating should be applied on alley elevations.

6.2 Fenestrations

- New developments should provide for a hierarchy of horizontal and vertical expression. Patterns should reflect changes in form and proportion. This approach tends to unify the buildings street wall (and tower) with other architectural features (i.e., building entry, corner elements, or variations in massing setbacks).
- New developments should avoid relentless grids and "egg crate" fenestration.

6.3 Building Rhythm

- New developments should respect building rhythms of adjacent buildings on the same block-face.
- Facades should employ several related rhythms and avoid repetition of one or very few elements at all levels.

6.4 Off-sets, Insets and Reveals

- New developments should incorporate the use of strong vertical and/or horizontal reveals, off-sets and three-dimensional detail between surface planes to create shadow lines and breakup flat surface areas.
- Large areas of uninterrupted blank surface areas should be avoided.

1 Sacramento Housing and Redevelopment Agency, Sacramento Department of City Planning, *Sacramento Urban Design Plan*, 3.0 Architectural Design Policies, February 18, 1987.

7.0 Pedestrian Edge

7.1 Main Building Entry

- The main access into the building should be prominent in size, use quality materials, and be easily identifiable to reflect as a main building entry. It should face directly on to the main public street.
- The scale of the building entry should relate to the overall width and height of the building base.
- Quality window and door metal hardware, frames, and glass are encouraged. Examples include brass, bronze or chrome door and window hardware and frames and butt-joint plate glass.

7.2 Storefront Entries, Windows and Materials

Storefront Design Policies. Design of storefronts must take into account issues unique to the building's architecture and merchant as well as characteristics of the street or area that make it "work" as a retail place.

7.6 Lighting

- Light fixtures should be located and designed in a manner to prevent vandalism.
- Light fixtures adjacent to public streets or alleys should be high quality and complement the architectural style of the building. Lighting should be oriented to minimize glare on adjacent residential units.

7.7 Signage

New developments should consider the signage program during the building design phase to insure compatibility with the architectural style of the building. Signage should be appropriate in location, design and materials to the building.

11.0 Landscaping

11.1 On-Site Landscaping Guidelines

11.11.1 Ground Level:

- Ground floor building frontage, colonnades, arcades, courtyards and plazas should provide integrated landscape planters when not in conflict with retail space entries and windows.
- Free standing potted plants of varying sizes are encouraged.
- Open plazas and courtyards should provide for a combination of large growing deciduous and evergreen trees planted in the ground to facilitate mature growth.
- A combination of trees and shrubs of varying sizes and ground cover are encouraged in all planting areas.
- Decorative metal tree grates and vertical protective devices for trees are encouraged.

11.1.2 Upper Building Levels:

- Recessed, stepped back portions of the building facade may include planters if appropriate to the design concept.

12.0 Parking Structure

12.1 Ground-Level

- Incorporate retail space on facades fronting public streets.
- Incorporate ground level landscaping when not in conflict with retail entry and windows.

12.2 Upper-Level

- Apply decorative treatment to upper level facades and panels and/or railings. The overall architectural design and quality of parking facilities should be treated in the same manner as other major projects.
- Provide adequate screening of vehicles from street view. Open metal railings or panels which do not adequately screen the vehicles from view should be avoided.
- Incorporate stepped-back design of upper floors if above the street wall level.
- Provide landscape planters to soften visual impact.

16.0 Protected View Corridors

Goals

Sacramento, with its beautiful landscaping and landmark buildings, offers a variety of views and vistas. Protecting views of landmarks and the spatial continuity of streets is essential. Second level walkways, construction over streets, and lowering of roadways damage streets in a variety of ways. Besides disturbing retail continuity by not supporting street level activities, they block views that make Sacramento unique among California cities.

Policies
3. Landscaping and building massing should enhance views of landmarks.

Designated Protected View Corridors: Particular streets have been identified as important view corridors. They include:

- Capitol Mall
- L Street
- 4th Street

The plan protects these streets from development that would in anyway [sic] block views and vistas.

IMPACTS AND MITIGATION MEASURES

Methods of Analysis

A description of the proposed project site was prepared from visits to the site in April 2006. The site plan and visual simulations for the proposed project were used to evaluate the potential effects of project development on the visual character of the project site and the nearby area. The analysis focuses on the manner in which development could change the visual elements or features that exist on the proposed project site.

The visual impacts of the proposed project are analyzed in relation to existing conditions, which are built-up urban and municipal uses. The positive or negative value attached to changes in visual character is largely subjective.

The visual effects of construction activities are not evaluated in this section because they would be intermittent and temporary.

Standards of Significance

For the purposes of this EIR, impacts to aesthetics are considered significant if the proposed project would:

- Substantially degrade the existing visual character or quality of the project site and its surroundings;
- Create a new source of substantial light or glare that would adversely affect day or nighttime views; or
- Conflict with applicable City design guidelines, resulting in a physical impact.

Project-Specific Impacts and Mitigation Measures

5.1-1 The proposed project could substantially degrade the existing visual character or quality of the project site and its surroundings. This is a *less-than-significant* impact.

The perception of a visual impact is personal and subjective: what one person may perceive as a negative impact another may find visually pleasing. Even those experienced in urban design principles and architecture can have differing opinions on the visual "quality" of a particular project. Therefore, because of the subjective nature of interpreting visual impacts, this analysis does not rely upon opinion to make a determination as to the significance of impacts. Rather, the analysis relies upon the judgment of the reviewing bodies of the City of Sacramento to apply the City's Design Guidelines (Guidelines). It is assumed that compliance with the Guidelines, as deemed appropriate by the reviewing bodies, would ensure that a project would be substantially consistent with existing

development and the direction of future development within the City, and, as a result, would not result in significant negative aesthetic effects.

As part of the Capitol View Protection Requirements (Sacramento City Zoning Ordinance, section 17.96.100), height restrictions are imposed on the blocks surrounding the State Capitol building. Height restrictions along Capitol Mall (between K Street and N Street) become more stringent on portions of blocks closer to the Capitol building, ranging from 400 feet on the blocks east of 7th Street to 300 feet on the west half of the blocks east of 8th Street, to 150 feet on the east half of the block west of 9th Street. However, height restrictions along Capitol Mall extend no further west than the block east of 7th Street; there are no height restrictions on the project site. The lack of height limitations in areas of the CBD not immediately adjacent to the Capitol reflects the City's intent to encourage high-density, high-rise buildings in the CBD to create a prominent skyline of taller buildings in Downtown Sacramento and to increase the population of the Central City to stimulate cultural activities to create a more vibrant Central City. In addition, General Plan Transit Policy 8, amended July 2004, encourages maximizing project densities and intensities within ¼ mile of light rail stations. There are two light rail stations within ¼ mile of the project site (at 7th and Capitol Mall and 8th and Capitol Mall), so a project of this scale and intensity is encouraged in the CBD.

Viewers at the foot of the proposed project would experience a physical change from a shorter building made of red marble and dark panel windows to a 25-story high-rise consisting mostly of blue tinted glass (see Figures 5.1-8 and 5.1-9). This would be a change for a viewer standing close to the building; however, it would not change the visual character of the project site or surrounding area. The area has an urban quality because of its location in the CBD surrounded by office buildings of various heights. The downtown urban character of the project site and surrounding area would not be degraded with the addition of the proposed project. For persons viewing the project from within the CBD, but further away from Capitol Mall, the building would appear to be one of several other buildings in the CBD (see Figure 5.1-10).

Viewers would also be able to see the 25-floor building from a distance, but this would not be a substantial change from the existing character of the project area. Viewers from surrounding freeways, for example, would be able to see the physical change of an additional high-rise in the downtown area. The Sacramento skyline would be physically altered with the proposed project. However, because the project vicinity is characterized by several other high-rise buildings up to 30 floors, the addition of the project would contribute to the downtown urban character of the City and would not degrade the existing visual character of the area.

It should also be noted that, while Old Sacramento is a State Historic Park, it is currently not isolated from urban development within the CBD and existing high-rise structures are visible from points in Old Sacramento. Therefore, although the proposed project would also be visible from Old Sacramento, it would not substantially alter the character of the area.

The City has no adopted standards regarding visual quality, but relies upon review of the project design to ensure that projects are in keeping with the vision of the City. The proposed project design would be subject to review by the City, which would include review by the Design Review/Preservation Board, Planning Commission, and/or the City Council. The reviewing bodies would use the criteria listed in the adopted Urban Design Plan in analyzing the proposed project design. The review of the project design is intended to ensure that the design is of the highest quality, commensurate with a project of this magnitude and visibility. Among consideration of project design would be that pedestrian levels would be appropriate in scale and detailing to the surrounding area; that the highest quality materials and detailing would be used on all elevations of the building; and that the proposed project would complement existing downtown high-rise development. Review would also consider the details of fenestration, that massing and planar changes of the building

would create visual interest, and that the overall project provides a distinctive skyline with appropriate detailing and finish at the building top. The construction of a high-rise in downtown Sacramento is not inconsistent with the existing City policy. Further, the design review process would ensure that the proposed project would be of high quality design and that it would not substantially degrade the existing character or quality of the area or the project site. Therefore, this would be a ***less-than-significant impact***.

Mitigation Measure

None required.

5.1-2 The proposed project could create light or glare that could affect adjacent properties. This is a *less-than-significant* impact.

Glare is caused by light reflections from pavement, vehicles, and building materials, such as reflective glass and polished surfaces. During daylight hours, the amount of glare depends on the intensity and direction of sunlight. Glare can create hazards to motorists and nuisances for pedestrians and other viewers. At night, artificial lighting can cause glare or disturb residents.

According to the Sacramento Central Business District Urban Design Plan (Urban Design Plan), buildings in the CBD are subject to a variety of building design guidelines. The design elements state that highly reflective mirrored glass walls as the primary design element should be avoided and that lighting on buildings in the CBD should be oriented to minimize glare on adjacent residential units.

The proposed project would add light-producing fixtures into the downtown area. Soffit lights under each canopy would illuminate the ground level around the building. Some spotlights located atop the fourth floor roof would illuminate the face of the building along Capitol Mall. Continuous strips of LED lights would be located along the tops of each step in the building façade. A “500 Capitol Mall” sign with backlit chrome or polished-brass characters may be located either on the Capitol Mall building frontage (i.e., the north elevation) or on a monument sign (separated from the building) that would be visible from east- and west-bound Capitol Mall. There would also be street-level signage identifying the various retail users. All signage would be required to comply with the regulations set forth in the Sacramento Municipal Code (section 15.148 (Signs)). However, the additional light sources would not significantly affect the ambient nighttime light in the downtown area due to the amount of night lighting that already exists in the area.

The exterior stone of the proposed project would be granite. Window glass would be a ¼-inch, light-blue-tinted, dual-pane insulated assembly. Two different types of glass would be used on the building: spandrel glass, which is used to conceal materials and construction elements from the exterior, and view glass. The window frames would be aluminum in aluminum color finish.

As described above, the proposed project would result in the construction of a 25-story office high rise that would be dominated by a glass surface on each building elevation. Lighting of the project would mostly be on the north elevation of the building facing Capitol Mall and would not significantly affect the ambient nighttime light in the downtown area due to the large amount of night lighting that already exists.

There are existing residential apartments immediately south of the proposed project. Because the sun is typically in the southern sky, there is potential for glare to significantly affect the residents in the Bridgeway Towers and Capitol Towers Apartments during the day. However, while the proposed project would include a substantial amount on glass on the exterior of the building, the glass used

would include the use of Low E coating and would have a 15 percent outside visual reflectance.[2] Therefore, the glass would maintain energy efficiency with a reasonably low reflectivity. Therefore, this would be a ***less-than-significant impact***.

Mitigation Measure

None required.

5.1-3 Implementation of the proposed project could conflict with applicable City policies or design guidelines, resulting in a physical environmental impact. This is a *less-than-significant* impact.

Capitol Mall is designated as a protected view corridor under the Sacramento Urban Design Plan. The Urban Design Plan protects designated streets from development that would block views and vistas to and from the Capitol. The Capitol Mall corridor, adjacent to the north side of the proposed project, provides views of the State Capitol (see Figure 5.1-3). Construction of the proposed project would change the existing view from the west looking down Capitol Mall, but it would not eliminate the existing views of the Capitol from Capitol Mall.

The proposed project would be visible from the west from some locations in Old Sacramento, from northbound and southbound I-5, from I-80, US 50, and from the adjacent streets and buildings. However, none of these other locations currently have an unrestricted view of the State Capitol, and the proposed project would not interfere with existing view corridors due to existing development in the vicinity.

The proposed project site would not be subject to the height restrictions set forth in Chapter 17.96.100 for the Capitol View protection requirements. The height restrictions listed under 17.96.100(B) apply only to the blocks immediately surrounding the State Capitol and Capitol Park.

The intent of the Urban Design Guidelines is to ensure that all development in the CBD contributes to making the CBD a unique and visually pleasing place. The Capitol Mall Massing Guidelines recommend a 90-foot setback from the centerline of Capitol Mall and a 140-foot setback from the centerline of Capitol Mall to the building tower. According to the project plans, the base of the building would be approximately 94 feet from the centerline of Capitol Mall and the mass of the tower would be approximately 140 feet from the centerline of Capitol Mall; however, the angular portion that protrudes on the north face of the building would be less than the 140 foot setback guideline. Because the Urban Design Guidelines are intended to be used to give direction rather than prescriptive requirements, it is the responsibility of the City's Design Review/Preservation Board to decide if general compliance, rather than strict compliance, is consistent with the Guidelines. The proposed project also generally complies with the 15-foot side setback, because the project's side setback is approximately 14 feet. Again, it is the Design Review/Preservation Board's responsibility to determine whether this is an acceptable setback. Although the proposed project is not in strict compliance with the Design Guidelines, the proposed project would not block views to or from the Capitol and there would be no physical impact resulting from the proposed project. Therefore, this would be considered a ***less-than-significant impact***.

2 Viracaon, Inc. website, http://www.viracon.com/products.php?category=40, accessed July 17, 2006. Also, personal communication with Dan Wacek, Engineering Tech Services, Viracon Inc., July 18, 2006: The referenced glass (VRE 5-59) has a low light and heat transmittance level, and is thus energy efficient, while maintaining low levels of "vis-out" reflectance.

Mitigation Measure

None required.

Cumulative Impacts and Mitigation Measures

The Central City is the cumulative context for the evaluation of impacts to aesthetics. The potential for this project, as well as other projects, to have visual impacts on the downtown area is considered in this analysis. The cumulative context for light and glare would be other development that could affect the same sites that would be affected by the light or glare from the proposed project. Also considered in the cumulative analysis are approved projects in the CBD, such as the Towers at 301 Capitol Mall, the Aura Condos at 601 Capitol Mall, and the office high rise at 621 Capitol Mall (see Table 5.1-1).

5.1-4 The proposed project, in combination with cumulative development in the Central City, could substantially degrade the existing visual character or quality of the project site and its surroundings. This is a *less-than-significant* impact.

The Central City is characterized by high-rise structures (see Figures 5.1-3 and 5.1-4). The surrounding area and much of the downtown area of Sacramento is already built out. However, several redevelopment projects have been approved and new proposals are under consideration in the City, such as the development of the State of California's West End project. The West End project would be located between 7th and 8th Streets and N and P Streets and could include up to 1.4 million square feet of office space. It is anticipated that the West End project would include at least one high-rise building that would be as tall as 23 stories. The 25-story Aura Condos, which is currently under construction, has been approved for the block at 6th Street and Capitol Mall. The high-rise approved on the same block, 621 Capitol Mall, would also be 25 floors when completed. At 301 Capitol Mall, two 53-story residential towers are currently under construction. These buildings would be used for residential, hotel, and retail uses.

Future development to the north of the proposed project site includes the redevelopment of the Railyards Specific Plan area and continued redevelopment in the Richards Boulevard Area. Because no specific development plans have been submitted, it is not known at this time what level of development would occur in these locations. Future development in the Central City, and the CBD in particular, would result in changes to the existing visual character. However, as stated above, the Urban Design Plan provides policy guidance to the City's Design Review/Preservation Board, the City Planning Commission, and the City Council. The intent of the Design Guidelines is to ensure that all development in the CBD contributes to making the CBD a unique and special place.

Like the proposed project, all future development would be subject to design review to ensure that projects are in keeping with the vision of the City. The design review process, when applied to future development, would ensure that future development would be of high quality design that is compatible with existing and future development projects, resulting in a positive contribution to the City's character.

As discussed in the project-specific analysis, changes in views of the proposed project would be physically different from the existing building, but the urban character of the project site would not be substantially altered and the proposed project would help maintain the urban downtown character with the addition of a high-rise building. Considering the cumulative effect of other development projects within the Central City, there would be an observable physical change; however, similar to project-specific impacts, the construction of several high-rise development projects in the Central

City would contribute to, not detract from, the urban character. The visual quality would not be degraded.

Because the existing and planned projects in the Central City contribute to the built up and urbanized character of the area, and because the City's Design Review/Preservation Board, the City Planning Commission, and the City Council would be responsible for ensuring compatibility of design, styles, and materials in the CBD, the cumulative change in the visual character of the area associated with the project would not be cumulatively considerable. Therefore, this would be considered a ***less-than-significant cumulative impact***.

Mitigation Measure

None required.

5.1-5 The proposed project, in combination with cumulative development in the Central City, could create cumulative light or glare that could affect adjacent properties. This is a *less-than-significant* impact.

Future development in the City of Sacramento CCCP area and the CBD would be designed to comply with City of Sacramento lighting policies in the Urban Design Plan. As stated above, planned development in the Central City area includes additional high-rise buildings that would introduce new sources of light and glare in the area surrounding the proposed project. Because the design and building materials for the future development are not known at this time, these buildings could contribute to light and glare effects in the City. Therefore, this is a potentially significant cumulative impact. Although the proposed project includes a large amount of glass, the project would not result in substantial glare because the glass proposed for the building would be of relatively low reflectivity, as discussed above. Therefore, the proposed project incremental contribution would not be considerable, and this would be a ***less-than-significant cumulative impact***.

Mitigation Measure

None required.

5.1-6 The proposed project, in combination with cumulative development in the Central City, could conflict with applicable City policies or design guidelines. This is a *less-than-significant* impact.

As stated above, Capitol Mall is designated as a protected view corridor under the Sacramento Urban Design Plan. The Plan protects designated streets from development that would block views and vistas to and from the Capitol. The Capitol Mall corridor provides views of the State Capitol, and this view is available from Capitol Mall, adjacent to the north side of the proposed project.

As previously stated, the Urban Design Guidelines were intended to be used to give direction rather than prescriptive requirements and the City's Design Review/Preservation Board can interpret individual guidelines. The intent of the Urban Design Guidelines is to ensure that all development in the CBD contributes to making the CBD a unique and visually pleasing place. Future development in the CBD would be subject to review by the Design Review/Preservation Board to determine consistency with applicable plans, including the Design Guidelines. Because future projects would be subject to review by the Design Review/Preservation Board, the project's contribution would not be cumulatively considerable resulting in a ***less-than-significant cumulative impact***.

Mitigation Measure

None required.

5.2 Air Quality

5.2 AIR QUALITY

INTRODUCTION

This section assesses the potential air quality effects of the proposed 500 Capitol Mall project (proposed project) and recommends feasible mitigation measures to reduce or eliminate significant impacts. This section describes the climate in the project area; existing air quality conditions in the project area for both criteria air pollutants and toxic air contaminants; and applicable federal, state, and regional air quality standards. The section also analyzes the air quality effects caused by stationary, mobile, and area sources related to construction and operation of the proposed project.

As discussed in the Initial Study (see Appendix A), there are no substantial odor sources in the project vicinity that could adversely affect the proposed project; therefore, the project would not be affected by substantial odors. Odors could be generated from proposed restaurants included within the project, but restaurant odors are generally not considered offensive. Accordingly, this issue is not discussed further in this section.

Public comments received in response to the Notice of Preparation (see Appendix B) included a comment letter from the Sacramento Metropolitan Air Quality Management District (SMAQMD), requesting that potential construction and long-term operation air quality impacts be analyzed using the URBEMIS 2002 emissions modeling program, version 8.7. For significant operational emissions, the SMAQMD recommended an air quality mitigation plan be created to reduce emissions by 15 percent. The district also recommended the development of a Transportation Management Plan (TMP) to promote alternative commute modes. All of these issues and concerns have been addressed in this section.

Major sources reviewed for this section include the SMAQMD Guide to Air Quality Assessment in Sacramento County (Guide), the City of Sacramento General Plan, the California Air Resources Board (CARB) Diesel Risk Reduction Plan, and the CARB web site.

ENVIRONMENTAL SETTING

A region's air quality is influenced by the region's climate, topography, and pollutant sources. The characteristics of the region encompassing the City of Sacramento are such that the area can, at times, have the potential for high concentrations of regional and localized air pollutants.

Climate and Topography

Hot dry summers and mild rainy winters characterize the Mediterranean climate of the Sacramento Valley. During the year the temperature may range from 20 to 115 degrees Fahrenheit with summer highs usually in the 90s and winter lows occasionally below freezing. Average annual rainfall is about 20 inches with snowfall being very rare. The prevailing winds are moderate in strength and vary from moist clean breezes from the south to dry land flows from the north.

The mountains surrounding the Sacramento Valley (Valley) create a barrier to airflow, which can trap air pollutants in the Valley when meteorological conditions are right. The highest frequency of air stagnation occurs in the autumn and early winter when large high-pressure cells lie over the Valley. The lack of surface wind during these periods and the reduced vertical flow caused by less surface heating reduces the influx of outside air and allows air pollutants to become concentrated in a stable volume of air. The surface concentrations of pollutants are highest when these conditions are combined with smoke from agricultural burning or when temperature inversions trap cool air, fog and pollutants near the ground.

The ozone season (May through October) in the Sacramento Valley is characterized by stagnant air or light winds with the delta sea breeze arriving in the afternoon out of the southwest. Usually the evening breeze transports the airborne pollutants to the north out of the Valley. During about half of the days from July to September; however, a phenomenon called the "Schultz Eddy" prevents this from occurring. Instead of allowing for the prevailing wind patterns to move north carrying the pollutants out of the Valley, the Schultz Eddy causes the wind pattern to circle back south. Essentially this phenomenon causes the air pollutants to be blown south toward the Sacramento area. This phenomenon's effect exacerbates the pollution levels in the area and increases the likelihood of violating federal or state standards. The Eddy normally dissipates around noon when the delta sea breeze arrives.[1]

Criteria Air Pollutants

Criteria air pollutants are a group of pollutants for which federal or state regulatory agencies have adopted ambient air quality standards. Criteria air pollutants include ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter (PM_{10} and $PM_{2.5}$), and lead. Most of the criteria pollutants are directly emitted. Ozone, however, is a secondary pollutant that is formed in the atmosphere by chemical reactions between oxides of nitrogen (NO_x) and reactive organic gases (ROG). According to the most recent emissions inventory data for Sacramento County, mobile sources are the largest contributors of both ROG and NO_x.[2]

Criteria air pollutants are classified in each air basin, county, or in some cases, within a specific urbanized area. The classification is determined by comparing actual monitoring data with state and federal standards. If a pollutant concentration is lower than the standard, the area is classified as "attainment" for that pollutant. If an area exceeds the standard, the area is classified as "non-attainment" for that pollutant. If there is not enough data available to determine whether the standard is exceeded in an area, the area is designated "unclassified". Table 5.2-1 lists the health effects associated with these pollutants.

Monitors that collect air quality data are located throughout the Sacramento Valley Air Basin (SVAB). The closest monitoring station to the project site is the Sacramento T Street station, located in downtown Sacramento at 1309 T Street. Due to variations among ambient concentrations in and around downtown, where available, data from the three closest CARB-operated monitoring stations (T Street, Del Paso Manor, and Health Department Stockton Boulevard) was considered in compiling the most recent air quality data summarized in Table 5.2-2.

Existing Attainment Status

The ambient air quality standards and Sacramento County's attainment status for the criteria pollutants are summarized in Table 5.2-3. The criteria air pollutants most relevant to air quality planning and regulation in the air basin include ozone, CO, and particulate matter. Each of the relevant criteria pollutants is briefly described below in the context of the County's attainment status.

Ozone is a gas that is formed when reactive organic gases (ROG) and nitrogen oxides (NO_x) undergo slow photochemical reactions in the presence of sunlight. The type of ozone referred to in this section is called tropospheric ozone (called "bad ozone" by scientists), since it lies very close to the earth's surface (in the troposphere). Ozone concentrations are generally highest during the

1 Guide to Air Quality Assessment in Sacramento County, page 1-7. SMAQMD, July 2005.

2 Sacramento County 2004 Estimated Annual Average Emissions Inventory. CARB website: www.arb.ca.gov/app/emsinv/emssumcat_query. Accessed 1/3/06.

TABLE 5.2-1

HEALTH EFFECTS OF MAIN CRITERIA AIR POLLUTANTS

Pollutant	Adverse Effects
Ozone	- Ozone can irritate lung airways and cause inflammation. Other symptoms include wheezing, coughing, and breathing difficulties during exercise or outdoor activities. People with respiratory problems are most vulnerable, but even healthy people that are active outdoors can be affected when ozone levels are high. - Repeated exposure to ozone pollution for several months may cause permanent lung damage. - Even at very low levels, ground-level ozone triggers a variety of health problems including aggravated asthma, reduced lung capacity, and increased susceptibility to respiratory illnesses like pneumonia and bronchitis. - Ground-level ozone interferes with the ability of plants to produce and store food, which makes them more susceptible to disease, insects, other pollutants, and harsh weather. - Ozone reduces crop and forest yields and increases plant vulnerability to disease, pests, and weather.
Carbon Monoxide	- The health threat from lower levels of CO is most serious for those who suffer from heart disease. For a person with heart disease, a single exposure to CO at low levels may cause chest pain and reduce that person's ability to exercise; repeated exposures may contribute to other cardiovascular effects. - Healthy people can be affected by high levels of CO as well. People who breathe high levels of CO can develop vision problems, reduced ability to work or learn, reduced manual dexterity, and difficulty performing complex tasks. At extremely high levels, CO is poisonous and can cause death. - CO contributes to the formation of ground-level ozone, which can trigger serious respiratory problems.
Particulate Matter	- Particle pollution, especially fine particles, contains microscopic solids or liquid droplets that are so small that they can get deep into the lungs and cause serious health problems. Numerous scientific studies have linked particle pollution exposure to a variety of problems, including: • increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; • decreased lung function, aggravated asthma, development of chronic bronchitis; • irregular heartbeat, nonfatal heart attacks; and • premature death. - Particles can be carried over long distances by wind and then settle on ground or water. The effects of this settling include: making lakes and streams acidic; changing the nutrient balance in coastal waters and large river basins; depleting the nutrients in soil; damaging sensitive forests and farm crops; and affecting the diversity of ecosystems.
Nitrogen Dioxide	- One of the main ingredients involved in the formation of ground-level ozone, which can trigger serious respiratory problems. - Reacts to form nitrate particles, acid aerosols, as well as NO_2, which also cause respiratory problems. - Contributes to formation of acid rain; to nutrient overload that deteriorates water quality; and to atmospheric particles that cause visibility impairment. - Reacts to form toxic chemicals and contributes to global warming.
Sulfur Dioxide	- contributes to respiratory illness, particularly in children and the elderly, and aggravates existing heart and lung diseases. - contributes to the formation of acid rain, which; damages trees, crops, historic buildings, and monuments; and makes soils, lakes, and streams acidic. - contributes to the formation of atmospheric particles that cause visibility impairment, most noticeably in national parks.
Lead	- Lead causes damage to the kidneys, liver, brain and nerves, and other organs. Exposure to lead may also lead to osteoporosis (brittle bone disease) and reproductive disorders. - Excessive exposure to lead causes seizures, mental retardation, behavioral disorders, memory problems, and mood changes. Low levels of lead damage the brain and nerves in fetuses and young children, resulting in learning deficits and lowered IQ. - Lead exposure causes high blood pressure and increases heart disease, especially in men. Lead exposure may also lead to anemia, or weak blood. - Wild and domestic animals can ingest lead while grazing. They experience the same kind of effects as people who are exposed to lead. Low concentrations of lead can slow down vegetation growth near industrial facilities. - Lead can enter water systems through runoff and from sewage and industrial waste streams. Elevated levels of lead in the water can cause reproductive damage in some aquatic life and cause blood and neurological changes in fish and other animals that live there.

Source: Environmental Protection Agency, 2006. http://www.epa.gov/air/urbanair/6poll.html .

TABLE 5.2-2

EXCEEDANCES OF NATIONAL AND STATE AIR POLLUTION STANDARDS IN THE SACRAMENTO AREA

Pollutant	2003	2004	2005
OZONE (1-hour)			
Highest 1-hour (ppm)	0.145	0.118	0.134
Days>0.12 ppm (National)	6	0	4
Days>0.09 ppm (State)	53	35	43
OZONE (8-hour)			
Highest 8-hour (ppm)	0.122	0.102	0.117
Days>0.08 (National)	43	25	35
Days>0.07 (State)[1]	> 43	> 25	> 35
CARBON MONOXIDE			
Highest 8-hour (ppm)	3.40	3.0	3.6
Days>=9.0 ppm (National and State)	0	0	0
PARTICULATE MATTER (PM_{10})			
Highest 24-hour Concentration (ug/m^3)	66	58	77
Days>150 ug/m^3 (National)	0	0	0
Days>50 ug/m^3 (State)	12.3	6.1	29.4
PARTICULATE MATTER ($PM_{2.5}$)			
Highest 24-hour Concentration (ug/m^3)	73.2	58.2	81.4
Days>65 ug/m^3 (National and State)	0	0	5.2
NITROGEN DIOXIDE			
Highest 1-hour (ppm)	0.08	0.07	0.07
Days>.25 ppm (State)	0	0	0
Annual Mean (National) > 0.053 ppm	0	0	0

Notes: 1 – State standard went into effect in early 2006 so no historical data is available.

Source: California Air Resources Board. www.arb.ca.gov site accessed 6/16/06.

TABLE 5.2-3

AIR QUALITY STANDARDS ATTAINMENT STATUS CHART FOR SACRAMENTO COUNTY

Federal Standards		
Pollutant	**Primary Standard**	**Status**
Ozone (O_3) – 8 hour	0.08 ppm	Serious Nonattainment
Carbon Monoxide (CO) – 1 hour 8 hour	 35 ppm 9 ppm	 Attainment Attainment
Nitrogen Dioxide (NO_2) – Annual Arithmetic Mean	 0.053 ppm	 Attainment
Sulfur Dioxide (SO_2) – Annual Arithmetic Mean 24 Hour 3 Hour	 0.030 ppm 0.14 ppm 0.5 ppm	 Attainment Attainment Attainment
Inhalable Particulate (PM_{10}) 24 Hour	 150 µg/m_3	 Moderate Nonattainment*
Inhalable Particulate ($PM_{2.5}$) Annual Arithmetic Mean 24 Hour	 15 µg/m^3 65 µg/m^3	 Attainment/Unclassified Attainment/Unclassified
Lead – Calendar Quarter	1.5 µg/m^3	Attainment
State Standards		
Pollutant	**Primary Standard**	**Status**
Ozone (O_3) – 1 hour 8 hour	 0.09 ppm 0.07 ppm	 Serious Nonattainment Serious Nonattainment
Carbon Monoxide (CO) – 1 hour 8 hour	 20 ppm 9 ppm	 Attainment Attainment
Nitrogen Dioxide (NO_2) – 1 hour	 0.25 ppm	 Attainment
Sulfur Dioxide (SO_2) – 24 Hour 1 Hour	 0.04 ppm 0.25 ppm	 Attainment Attainment
Inhalable Particulate (PM_{10}) Annual Arithmetic Mean 24 Hour	 20 µg/m^3 50 µg/m^3	 Nonttainment Nonttainment
Inhalable Particulate ($PM_{2.5}$) Annual Arithmetic Mean	 12 µg/m^3	 Nonattainment
Lead – 30 Day	1.5 µg/m^3	Attainment
Visibility Reducing **Particles** 8-Hour	 Visibility of ten miles or more	 Unclassified
Sulfates – 24 Hour	25 µg/m^3	Attainment
Hydrogen Sulfide – 1 Hour	0.03 ppm	Unclassified

Source: SMAQMD website – www.airquality.org/aqdata/attainmentstat.shtml Accessed June 1, 2006.
ppm = parts per million
µg/m^3 = micrograms per cubic meter
* Sacramento County air quality currently meets the Federal PM-10 standards, but the SMAQMD must request redesignation to attainment and submit a maintenance plan to be formally designated to attainment.

summer months when direct sunlight, light wind, and warm temperature conditions are favorable. The federal government uses a number of different classifications to describe the extent to which an area is in nonattainment for the federal ozone standard. Sacramento County was formerly classified as being in “severe” nonattainment for the one-hour ozone standard. However, the one-hour standard was revoked by Environmental Protection Agency (EPA) in June 2005 and replaced with a new eight-hour standard which is now the only applicable ozone standard. The EPA has designated the Sacramento area as a “serious” nonattainment area for the new eight-hour standard.

Carbon Monoxide is a colorless, odorless gas that is formed when carbon in fuel is not burned completely. It is a component of motor vehicle exhaust, which contributes about 56 percent of all CO emissions nationwide. Other non-road engines and vehicles (such as construction equipment and boats) contribute about 22 percent of all CO emissions nationwide. Higher levels of CO generally occur in areas with heavy traffic congestion. In cities, 85 to 95 percent of all CO emissions may come from motor vehicle exhaust. Other sources of CO emissions include industrial processes (such as metals processing and chemical manufacturing), residential wood burning, and natural sources such as forest fires. Woodstoves, gas stoves, cigarette smoke, and unvented gas and kerosene space heaters are sources of CO indoors. The highest levels of CO in the outside air typically occur during the colder months of the year when inversion conditions are more frequent. The air pollution becomes trapped near the ground beneath a layer of warm air. Through control measures adopted by state, local, and federal agencies, all areas of the SVAB have attained the state and federal CO standards. However, the potential still exists for incidents of high localized concentrations of CO to occur.

Coarse Particulate Matter (PM_{10}) and **Fine Particulate Matter ($PM_{2.5}$)** consist of extremely small, suspended particles or droplets 10 microns and 2.5 microns or smaller in diameter. Some sources of suspended particulate matter, like pollen and wind blown dust, occur naturally. However, in populated areas, most fine suspended particulate matter is caused by road dust, diesel soot, combustion, abrasion of tires and brakes, and construction activities. Fine particles can remain suspended in the air and travel long distances. For example, exhaust from a diesel truck in Los Angeles can end up over the Grand Canyon.

Monitoring data for the County shows that it is currently in attainment of the federal PM_{10} standard. However, the SMAQMD must request redesignation and submit a PM_{10} maintenance plan to the EPA prior to any redesignation to attainment. Consequently, the EPA has not officially changed the County's designation to attainment for the federal PM_{10} standard. The Sacramento region is officially in nonattainment status for the more stringent state PM_{10} standards. The County also attains the federal $PM_{2.5}$ standards but is in nonattainment of the state annual $PM_{2.5}$ standard.

Toxic Air Contaminants

In addition to the criteria air pollutants, another group of airborne substances, called Toxic Air Contaminants (TACs) are known to be highly hazardous to health, even in small quantities. TACs are airborne substances capable of causing short-term (acute) and/or long-term (chronic or carcinogenic) adverse human health effects (i.e., injury or illness).

TACs can be emitted from a variety of common sources, including gasoline stations, automobiles, dry cleaners, industrial operations, and painting operations. Farms, construction sites, and residential areas can also potentially contribute to toxic air emissions. Due to mounting scientific evidence of adverse health effects, the CARB has recently identified diesel particulate matter as a toxic air contaminant. Regulation of TACs is achieved through federal and state controls on individual sources. The 1990 federal Clean Air Act (CAA) Amendments offer a comprehensive plan for achieving significant reduction in both mobile and stationary source emissions of certain designated Hazardous Air Pollutants (HAP), with a goal of achieving the EPA's one in one million cancer risk from TACs. All major stationary sources of designated HAP's are required to obtain and pay the required fees for an operating permit under Title V of the federal CAA Amendments.

TAC impacts are assessed using a maximum individual cancer risk (MICR) that estimates the probability of a potential maximally exposed individual (MEI) contracting cancer as a result of exposure to toxic air contaminants over a period of 70 years for residential receptor locations. The

CARB and local air districts have determined that any stationary source posing a cancer risk to the general population equal to or greater than ten people out of one million to be excessive. If the risk of such exposure levels meets or exceeds the threshold of ten excess cancer cases per one million people, the CARB and local air district require the installation of best available control technology (BACT) or maximum available control technology (MACT) to reduce the risk threshold. To assess risk from ambient air concentrations, the CARB has conducted studies to determine the total cancer inhalation risk to individuals due to outdoor toxic pollutant levels. According to a map prepared by the CARB showing estimated inhalation cancer risk for TACs in the State of California, the project site has an existing estimated risk that is between 750 and 1500 cancer cases per one million people. This represents the *lifetime* risk that between 750 and 1,500 people in one million may contract cancer from inhalation of toxic compounds at current ambient concentrations. While development of the proposed project would not result in a MICR of ten excess cancer cases per one million, it would expose receptors in the project area to ambient air levels in excess of that risk level.

While toxic air contaminants are produced by many different sources, the largest contributor to inhalation cancer risk in California is diesel particulates. Diesel particulate matter is emitted into the air via heavy-duty diesel trucks, construction equipment, and passenger cars. According to CARB's *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*, the existing average statewide potential cancer risk from diesel particulate matter is over 500 potential cancer cases per one million people. Sources of TAC close to the project site include Interstate 5 (I-5) and Highway 50. These roadways accommodate heavy truck and other vehicle traffic that emits diesel particulate matter, which has been recognized as a TAC by the CARB. In addition to diesel particulate, the CARB's *Air Quality and Land Use Handbook: A Community Health Perspective* (April 2005) cites several recent studies linking concentrations of vehicle-related pollutants to roadway distance. These studies linking traffic emissions with health impacts build on existing data on adverse health effects of ambient air pollution, illuminating the key observation that close proximity to high-volume roadways increases both exposure and the potential for adverse health effects. The following is a list of key health findings from these studies.

- Reduced lung function in children associated with traffic density, especially trucks, within 1,000 feet. That association was strongest within 300 feet.
- Asthma symptoms increased with proximity to roadways; the risk was greatest within 300 feet.
- Increased asthma hospitalizations were associated with living within 650 feet of heavy traffic and heavy truck volume.
- Asthma and bronchitis symptoms in children were associated with proximity to high traffic in a San Francisco Bay Area community with good overall regional air quality.
- A San Diego study found increased medical visits in children living within 550 feet of heavy traffic.

As a result of these findings, the CARB recommends that new sensitive land uses not be cited within 500 feet of a freeway, urban roads with 100,000 vehicles per day, or rural roads with 50,000 vehicles per day.[3] Office uses would not be considered a sensitive use.

3 California Air Resources Board, *Air Quality and Land Use Handbook: A Community Health Perspective*, April 2005.

Sensitive Receptors

Some individuals are considered to be more sensitive than others to air pollution. Reasons for greater sensitivity can include existing health problems, duration of exposure to air pollutants, or certain peoples' increased susceptibility to pollution-related health problems due to factors such as age. Land uses such as primary and secondary schools, hospitals, and convalescent homes are considered to be sensitive receptors to poor air quality because the very young, the old, and the infirm are more susceptible to respiratory infections and other air quality related health problems than the general public. Residential uses are considered sensitive because people in residential areas are often at home for extended periods of time, so they can be exposed to pollutants for extended periods. Recreational areas are considered moderately sensitive to poor air quality because vigorous exercise associated with recreation places a high demand on the human respiratory function.

The immediate vicinity of the proposed project site consists of office, residential, retail, and commercial uses. Sensitive land uses in the surrounding area include apartment complexes, residences, and a senior citizen residential facility.

Existing Emissions Sources and Concentrations

There are many types of air pollutant sources in Sacramento County. These sources can be divided into three categories: mobile, stationary, and "area" sources. Mobile sources consist of vehicles, as well as mobile construction equipment and boats. Stationary sources are pollution sources that do not move. Examples of stationary sources are large industrial or commercial sources where pollutants may be released via a stack. Stationary sources can also be smaller, as in the case of small emergency generators or boilers. Area source emissions are normally produced by processes and products that are individually small, but are numerous and widely dispersed. Normally, these sources are associated with everyday activities such as landscape maintenance, painting, and the use of fireplaces and barbecues.

The CARB maintains an emission inventory of air pollutants within the state's air basins and counties inside those air basins. Table 5.2-4 presents the latest emission inventory of reactive organic gases, nitrogen oxides, sulfur oxides, carbon monoxide, and particulate matter for Sacramento County. The "On-road Mobile Sources" category of the inventory is the primary source of ROG, NO_x, SO_x, and CO in Sacramento County. The "Miscellaneous Processes" category, which includes activities such as paved road dust, earth moving activities, and farming operation, contributes a majority of the particulate matter generated in Sacramento County.

There are few large stationary sources of emissions near the project site, but pollution sources nevertheless do exist. There are large buildings in the area that have boilers for the production of building heat. These buildings may also have emergency backup generators to be used for emergency backup power supply.

REGULATORY SETTING

Air quality in Sacramento County is regulated by the U.S. EPA, the CARB, and the SMAQMD. These agencies develop rules or regulations to meet the goals or directives imposed on them through legislation. Although U.S. EPA regulations may not be superseded, both state and local regulations may be more stringent. In general, air quality evaluations are based on air quality standards developed by the federal and state government.

TABLE 5.2-4

2005 ESTIMATED ANNUAL EMISSIONS FOR SACRAMENTO (tons/day)

Source Category	ROG	CO	NO_x	SO_x	PM_{10}	$PM_{2.5}$
STATIONARY SOURCES						
Fuel Combustion	0.58	3.02	3.16	0.05	0.93	0.91
Waste Disposal	0.24	0.14	0.04	-	0.01	0.01
Cleaning and Surface Coatings	5.39	-	-	-	-	-
Petroleum Production and Marketing	4.21	-	-	-	-	-
Industrial Processes	0.90	0.52	0.29	0.03	1.22	0.60
Total Stationary Sources	*11.31*	*3.68*	*3.49*	*0.08*	*2.16*	*1.52*
AREA-WIDE SOURCES						
Solvent Evaporation	13.17	-	-	-	0.01	0.01
Miscellaneous Processes	4.18	41.00	3.18	0.16	38.71	11.91
Total Area-Wide Sources	*17.36*	*41.00*	*3.18*	*0.16*	*38.72*	*11.92*
MOBILE SOURCES						
On-Road Vehicles	27.39	255.62	51.79	0.48	1.76	1.21
Other Mobile	10.76	89.16	24.85	0.54	1.75	1.55
Total Mobile Sources	*38.15*	*344.78*	*76.64*	*1.02*	*3.51*	*2.76*
NATURAL SOURCES						
Total Natural Sources	*10.18*	*0.18*	*0.01*	*-*	*0.02*	*0.02*
GRAND TOTAL	**77.00**	**389.64**	**83.31**	**1.27**	**44.41**	**16.22**

Source: California Air Resources Board. www.arb.ca.gov/app/emsinv/emssumcat_query Accessed 6/16/06.

Since many air pollution problems are regional in nature, the federal government sometimes designates multi-county areas as "Nonattainment Areas". Because it covers a large area, a nonattainment area can be composed of several different air districts. The "nonattainment area" designation means that these individual local agencies must work together to solve regional air pollution problems. The Sacramento Ozone Nonattainment Area includes all of Sacramento County and parts of Yolo, Solano, Sutter, and Placer counties.

Federal

The U.S. EPA is the federal agency responsible for setting and enforcing the federal ambient air quality standards for atmospheric pollutants. The EPA regulates emission sources that are under the exclusive authority of the federal government, such as aircraft, ships, and certain locomotives. The U.S. EPA also has jurisdiction over emission sources outside state waters (outer continental shelf), and establishes various emissions standards for vehicles sold in states other than California.

As part of its enforcement responsibilities, the U.S. EPA requires each state with nonattainment areas to prepare and submit a State Implementation Plan (SIP) that demonstrates the means to attain the federal standards. The SIP must integrate federal, state, and local plan components and regulations to identify specific measures to reduce pollution in nonattainment areas, using a combination of performance standards and market-based programs.

Clean Air Act

The Federal Clean Air Act (FCAA), as amended, establishes air quality standards for several pollutants. These standards are divided into primary standards and secondary standards. Primary standards are designed to protect public health, and secondary standards are intended to protect public welfare from effects such as visibility reduction, soiling, nuisance, and other forms of damage. The FCAA requires that regional plans be prepared for non-attainment areas illustrating how the federal air quality standards could be met. The CARB approved the most recent revision of the

State Implementation Plan prepared by the SMAQMD in 1994, and submitted it to the U.S. EPA. The SIP, approved by the U.S. EPA in 1996, consists of a list of ROG and NO_x control measures for demonstrating future attainment of ozone standards. The steps to achieve attainment will continue to require significant emissions reductions in both stationary and mobile sources.

State

The CARB, a part of the California EPA, is responsible for the coordination and administration of both federal and state air pollution control programs within California. In this capacity, the CARB conducts research, sets state ambient air quality standards, compiles emission inventories, develops suggested control measures, and provides oversight of local programs. The CARB establishes emissions standards for motor vehicles sold in California, consumer products (such as hairspray, aerosol paints, and barbecue lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions. The CARB also has primary responsibility for the development of California's SIP, for which it works closely with the federal government and the local air districts.

California Clean Air Act

The California Clean Air Act (CCAA) of 1988 requires nonattainment areas to achieve and maintain the state ambient air quality standards by the earliest practicable date and local air districts to develop plans for attaining the state ozone, carbon monoxide, sulfur dioxide, and nitrogen dioxide standards. In compliance with the CCAA, the SMAQMD prepared and submitted the 1991 Air Quality Attainment plan (AQAP) to mainly address Sacramento County's nonattainment status for ozone and carbon monoxide, and although not required, PM_{10}. The CCAA also requires that by the end of 1994 and once every three years thereafter, the districts are to assess their progress toward attaining the air quality standards. The triennial assessment is to report the extent of air quality improvement and the amounts of emission reductions achieved from control measures for the preceding three year period.[4]

Children's Environmental Health Protection Act

The Children's Environmental Health Protection Act (Senate Bill 25) establishes specific requirements to determine if children are adequately protected from the harmful effects of air pollution. The Act requires the CARB and the Office of Environmental Health Hazard Assessment (OEHHA) to review all health based California's Ambient Air Quality Standards to determine whether they adequately protect public health, including infants and children. Those found possibly inadequate would undergo full review and possible revision. The Act also requires CARB to determine if the current air monitoring network established to measure air pollution in California adequately reflects the levels of air pollutants that infants and children are breathing. Additionally, the Act also requires that the state's list of Toxic Air Contaminants be reviewed to identify contaminants that might cause infants and children to be especially susceptible to illness and to institute Air Toxic Control Measures (ATCM) that would be needed to reduce exposures.

Toxic Air Contaminants

Regulation of TACs is achieved through federal and state controls on individual sources. The 1990 federal CAA Amendments offer a comprehensive plan for achieving significant reduction in both mobile and stationary source emissions of certain designated Hazardous Air Pollutants (HAP). All major stationary sources of designated HAP's are required to obtain and pay the required fees for an operating permit under Title V of the federal CAA Amendments.

4 SMAQMD website: www.airquality.org/stateplan. Accessed 3/17/05.

The Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588), California Health and Safety Code Section 44300 et seq., provides for the regulation of over 200 air toxics and is the primary air contaminant legislation in the state. Under the Act, local air districts may request that a facility account for its TAC emissions. Local air districts then prioritize facilities on the basis of emissions, and high priority designated facilities are required to submit a health risk assessment and communicate the results to the affected public. The TAC control strategy involves reviewing new sources to ensure compliance with required emission controls and limits, maintaining an inventory of existing sources of TACs, and developing new rules and regulations to reduce TAC emissions. The purpose of AB 2588 is to identify and inventory toxic air emissions and to communicate the potential for adverse health effects to the public.

Assembly Bill 1807 (AB 1807), enacted in September 1983, sets forth a procedure for the identification and control of TACs in California. The CARB is responsible for the identification and control of TACs, except pesticide use. AB 1807 defines a TAC as an air pollutant that may cause or contribute to an increase in mortality or an increase in serious illness, or which may pose a present or potential hazard to human health. The CARB prepares identification reports on candidate substances under consideration for listing as TACs. The reports and summaries describe the use of and the extent of emissions in California resulting in public exposure, together with their potential health effects.

In 1998, the CARB identified diesel particulate matter as a toxic air contaminant under the AB 1807 program. Diesel particulate matter is emitted into the air via heavy-duty diesel trucks, construction equipment, and passenger cars. In October 2000, the CARB released a report entitled *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*. This plan identifies diesel particulate matter as the predominant TAC in California and proposes methods for reducing diesel emissions.

Recently enacted SB 25, Children's Environmental Protection Act (1999), recognized the special vulnerabilities of children to toxic air emissions. Under the law, the Office of Environmental Health Hazard Assessment (OEHHA) must prioritize action on those air toxics where there is both substantial evidence of a different impact on children versus adults, and where the state's data suggest children are exposed to significant levels. The National Environmental Trust report details, through peer reviewed methodology, the actual risks associated with TACs. The following is a summary of the findings of that report:

Both newborns and adults in the five California air basins exceed EPA's recommended one in one million lifetime risk with less than a year of exposure to California air — newborns by as much as a factor of 30, adults by as much as a factor of 15.

Even if a child or adult moves away from one of the five California air basins after only one year to an area of essentially little or no contaminant concentration, he or she will already have exceeded a lifetime's recommended risk.

A child born in the South Coast air basin has to live there only 12 days before he or she accumulates a lifetime's acceptable cancer risk. Children in the other four California air basins exceed the one in one million risk in 19 to 23 days.

Diesel particulates account for the majority of the potential cancer risk in the California air basins. However, concentrations of the other nine TACs are sufficiently high that both infants and adults will exceed the one in one million recommended lifetime potential cancer risk from these chemicals in significantly less than one year.

- Even if the ambient concentration of each contaminant were reduced so that the cancer risk for each chemical was one in one million over 70 years, a child exposed to those levels of all 10 TACs from birth would still exceed the lifetime acceptable potential cancer risk before age four. For adults, it would take seven years of exposure.

Reducing Particulate Matter in California

As a first step in the implementation of Senate Bill 656 (SB 656, Reducing Particulate Matter in California), the CARB approved a list of the most readily available, feasible, and cost-effective control measures that can be employed by air districts to reduce PM_{10} and $PM_{2.5}$ (collectively referred to as PM) in 2004. The list is based on rules, regulations, and programs existing in California as of January 1, 2004, for stationary, area-wide, and mobile sources. As a second step, air districts must adopt implementation schedules for selected measures from the list. The implementation schedules will identify the appropriate subset of measures, and the dates for final adoption, implementation, and the sequencing of selected control measures. In developing the implementation schedules, each air district will prioritize measures based on the nature and severity of the PM problem in their area and cost-effectiveness. Consideration is also given to ongoing programs, such as measures being adopted to meet national air quality standards or the state ozone planning process. The consideration and adoption of air district rules in their implementation schedules, coupled with ARB's ongoing programs, will ensure continued progress in reducing public exposure to PM and attainment of the State and federal standards.

Local

SMAQMD

The SMAQMD is the primary agency responsible for planning to meet federal and state ambient air quality standards in Sacramento County and the larger Sacramento Ozone Nonattainment Area. In order to demonstrate the area's ability to eventually meet the federal ozone standards, the SMAQMD, along with the other air districts in the Nonattainment Area, maintain the region's portion of the SIP for ozone. The Nonattainment Area's part of the SIP is a compilation of regulations that govern how the region and State will comply with the FCAA requirements to attain and maintain the federal ozone standard. The compilation of rules that comprises the Sacramento Nonattainment Area's portion of the SIP is contained in a document called the Sacramento Area Regional Ozone Attainment Plan. The most recent update of the Plan was adopted on November 15, 1994. Currently, the SMAQMD is working to update the 1994 Plan in recognition of the new federal eight-hour standard for ozone. This process is currently ongoing.

As of June 1, 2006, the SMAQMD established an updated mitigation fee rate of $14,300 per ton of emissions in excess of the SMAQMD NO_x threshold. The mitigation fee is based on the Carl Moyer Memorial Air Quality Standards Attainment Program (Carl Moyer Program) cost effectiveness cap. The Carl Moyer Program was named in honor of Dr. Carl Moyer, who worked to create the program in an effort to improve California's air quality in the name of public interest. The Carl Moyer Program is a grant program, implemented by a partnership of ARB and local air districts that fund the incremental cost of cleaner-than-required engines, equipment, and other sources of pollution. The Carl Moyer Program grants provide early or extra emission reductions. It can also accelerate the development and commercialization of advanced emission control technology, accelerate the turnover rate of old equipment to newer and cleaner equipment, and help reduce costs to the regulated community. Projects to reduce emissions from on-road heavy-duty vehicles, idle reduction technologies, off-road diesel equipment, transportation refrigeration units, off road spark-ignition equipment, marine vessels, locomotives, and agricultural engines have been eligible for grants.

For PM_{10}, the other criteria pollutant of concern for the Sacramento Region, Sacramento currently meets the federal standard, but has not yet been officially re-designated to attainment by the U.S. EPA.

Local Air District Rules

The SMAQMD has several rules that relate to the proposed project, which are summarized below:

Rule 201 – General Permit Requirements: Requires any project that includes the use of certain equipment capable of releasing emission to the atmosphere as part of project operation to obtain a permit from the SMAQMD prior to operation of the equipment. The applicant, developer, or operator of a project that includes an emergency generator, boiler, or heater should contact the SMAQMD to determine if a permit is required. Portable construction equipment with an internal combustion engine over 50 horsepower are required to have a SMAQMD permit or a CARB portable equipment registration.

Rule 403 – Fugitive Dust: Requires a person to take every reasonable precaution not to cause or allow the emissions of fugitive dust from being airborne beyond the property line from which the emission originates, from construction, handling or storage activity, or any wrecking, excavation, grading, clearing of land or solid waste disposal operation.

Rule 442 – Architectural Coatings: Sets VOC limits for coatings that are applied to stationary structures or their appurtenances. The rule also specifies storage and cleanup requirements for these coatings.

Rule 460 – Adhesives and Sealants: Limits VOC from the application of products used for bonding two surfaces. Also regulates the storage and disposal of solvents associated with such applications.

Rule 401 – Ringelmann Chart: Prohibits individuals from discharging into the atmosphere from any single source of emissions whatsoever any air contaminant whose opacity exceeds certain specified limits.

Rule 411 – Boiler NO_X: Sets NO_x and CO emissions from industrial, institutional, and commercial boilers, steam generators, and process heaters.

City of Sacramento General Plan

The City of Sacramento General Plan does not contain an Air Quality Element and there are no specific goals or policies that pertain to air quality. The City of Sacramento is currently updating its General Plan.

Sacramento Central City Community Plan

In addition to the General Plan, the City of Sacramento has also developed plans that are more specific to the various communities in the City. The City's "Central City Community Plan" contains the following sub goal under its environmental goal:

> Provide an environment which is free of annoying noise and continue to reduce air pollution.

IMPACTS AND MITIGATION MEASURES

Methods of Analysis

The analysis in this section focuses on the nature and magnitude of the change in the air quality environment due to construction and operation of the proposed project. Air pollutant emissions would result from construction activities, project operations, and increased traffic volumes.

The SMAQMD has published air quality thresholds of significance for use by lead agencies when making a determination of significance for a project. The SMAQMD thresholds establish standards

for three types of impacts – short-term impacts from construction, long-term impacts from project operation, and cumulative impacts. The net increase in emissions generated by these activities and other secondary sources have been estimated and compared to thresholds of significance recommended by the SMAQMD. The methodology for estimating emissions, as described in the SMAQMD Guide and other guidance documents, was used in this analysis.

Construction

In the absence of an applicant provided equipment list, the SMAQMD recommends using an "acreage equivalency" calculation for multi-story buildings. However, since the applicant provided a list of equipment, modeling of potential emissions was based on project specific information. Using the list of equipment provided by the applicant's construction consultant, the number and type of equipment was input into the URBEMIS 2002 model in order to estimate construction emissions. Construction equipment information was received from the applicant's construction consultant and used in the URBEMIS 2002 emissions model, version 8.7, to estimate emissions. Where applicable, details such as horsepower and load factor were estimated using the best available information. Please refer to Appendix C for the list of equipment and assumptions used in the modeling.

Operational Emissions

Operational emissions refer to the emissions that are generated by the normal day-to-day activity of the project. These activities include the heating and cooling of buildings, landscape maintenance, emissions from increased traffic, and the use of consumer products by employees.

The average daily emission factors for operational emissions of criteria pollutants are estimated by using emission factors in the URBEMIS 2002 emissions model, version 8.7. Emissions from increased vehicle traffic, also known as mobile source emissions, are also calculated using URBEMIS 2002 emissions model and the daily trip generation rates used in the traffic study conducted for the proposed project. Please refer to Appendix C for modeling assumptions and results.

Localized CO Concentrations

The CALINE4 dispersion model for predicting CO concentrations is the preferred method of estimating pollutant concentrations at sensitive receptors near congested roadways and intersections. For each intersection analyzed, CALINE4 adds roadway-specific CO emissions calculated from peak-hour turning volumes to the existing ambient CO air concentrations. For this analysis, CO concentrations were calculated based on a simplified CALINE4 screening procedure developed by the Bay Area Air Quality Management District. The simplified model is intended as a screening analysis in order to identify a potential CO hotspot. This methodology assumes worst-case conditions and provides a screening of maximum, worst-case CO concentrations.

CO concentration levels are highest near crowded or congested intersections where traffic is slow or idling. The proposed project would increase traffic volumes on surrounding roadways, possibly degrading the existing level of service (LOS) and increasing CO concentrations at nearby intersections. Normally, barring other environmental considerations, CO concentrations should be carefully analyzed at intersections classified as LOS "D" or worse, which is usually considered to be "unacceptable" for traffic circulation.

The closest monitoring station to the project site is the T Street station located in midtown Sacramento. This station collects CO data for the 8-hour standard, but not the 1-hour standard. Consequently, monitoring data can be used to determine an 8-hour CO background value. For the 1-hour background, a persistence factor of 80 percent was used. A persistence factor is the ratio

between the 8-hour and 1-hour concentrations. To ensure an adequate margin of safety, the highest 8-hour CO reading for the years 2003 – 2005 from the T Street station was used as the eight-hour background concentration.

Particulate Matter

Operation of the proposed project would generate emissions of particulate matter, mostly through additional vehicular trips associated with people living and working at the project. Particulate emissions are a growing concern among scientists and regulators as study after study details the severe health affects associated with inhalation of particulate matter. In an article in the *New England Journal of Medicine*, the conclusion of a detailed study titled "Fine Particulate Air Pollution and Mortality in 20 U.S. cities, 1987-1994" states that "there is consistent evidence that the levels of fine particulate matter in the air are associated with the risk of death from all causes and from cardiovascular and respiratory illnesses." It is important to understand the emission source when considering particulate matter, since its source determines the general composition of any emissions. Particulate matter from fugitive dust produced primarily from earth moving activities is different from particulate matter produced as a byproduct of combustion. Particulate matter from fugitive dust generating sources is primarily composed of PM_{10} with a relatively small fraction consisting of $PM_{2.5}$. Conversely, particulate matter from combustion sources is primarily composed of $PM_{2.5}$ with a small fraction consisting of PM_{10}.

The CAAQS include a concentration-based threshold for $PM_{2.5}$ and PM_{10}; however, evaluation of the proposed project with respect to these thresholds would require dispersion modeling. In the absence of dispersion modeling, proposed mass emission thresholds are used to gauge the potential for impacts. While $PM_{2.5}$ calculation methodology is still in the draft phase, a significant mass emission rate for $PM_{2.5}$ of 10 tons per year was proposed in 2005 by the EPA. Converting this annual rate into a daily rate produces an operational significance threshold of approximately 55 pounds per day. Methodology used by the South Coast Air District resulted in a mass emission threshold for PM_{10} of 150 pounds per day. Although the EPA and some air districts, including the SMAQMD, have yet to formally adopt the thresholds, it provides a good measure with which to gauge potential significance with respect to the proposed project.

Issues Not Addressed in the Impact Analysis

Toxic Air Contaminants

TACs associated with the project would be generated either by stationary sources on-site or by mobile sources making trips to and from the building. TACs can produce both acute (short-term) non-cancer impacts and chronic (long-term) impacts. Both construction and operational activities would produce TAC, but in quantities well below current significance thresholds. To date, there has not been a formally adopted standard for cancer risk attributed to ambient air exposure. Accordingly, this issue is not addressed in the impact analysis; however, a discussion is provided below.

Diesel particulate has been identified as a TAC by the CARB. Construction of the proposed project could generate toxic emissions through the burning of diesel fuel. While there are some components of diesel particulate that could conceivably cause short-term acute impacts, the biggest concerns regarding diesel impacts are the potential chronic impacts that can occur with long-term exposure.

There are sensitive receptors in the vicinity of the proposed project, the closest being residences along N Street. Construction of the proposed project would occur over a 26-month period, during which diesel-fueled engines would work intermittently. While the proposed project site would be about 75 feet away from the nearest residence, there is the potential that small concentrations of

TACs (including diesel particulate) would be dispersed throughout the surrounding area. Children's exposure to diesel particulate is a topic of great concern due to their elevated breathing rate and relatively small body weight. The estimated cancer risks explained earlier are based on adult breathing rates and body weights and do not necessarily account for physiological differences in children. Even considering greater susceptibility of children to diesel particulate and other TACs, project construction would have a very small impact relative to current existing exposure from surrounding truck traffic, industrial sources, and I-5, all of which contribute to ambient air concentrations.

Once the proposed project is built and occupied, TACs would be generated from project-associated stationary and mobile sources. For instance, it is possible that the proposed project could include backup diesel generators, which emit diesel TAC. Such stationary sources of TAC are regulated by AB 2588, the Air Toxics "Hot Spots" Information and Assessment Act. The Act requires that the SMAQMD compile a list of facilities that emit TACs and prioritize them based on the risk they represent. Facilities with potentially high risk must submit a health risk assessment, while significant-risk facilities must reduce their risks below the level of significance. Generally, manufacturing plants, research and development facilities, and hospitals are identified as high-risk sources. Office and residential buildings are rarely prioritized as high-risk facilities since interior uses do not usually consist of large TAC sources. Even if the proposed project were to incorporate a large TAC source (e.g., a dry cleaning operation) in future plans, a risk reduction and audit plan would have to be prepared by the facility. Furthermore, permitting and operation of any such stationary source would be overseen by the SMAQMD and subject to Rule 904, Air Toxics Control Measures. These measures would ensure that risk from TACs would be reduced to acceptable levels.

According to a report by the National Environmental Trust, the overwhelming majority of cancer risk from air pollution comes from diesel particulate matter and four chemicals: 1,3-butadiene, benzene, carbon tetrachloride, and formaldehyde.[5] Table 5.2-5 shows that the majority of these cancer causing elements are emitted from mobile sources. Mobile sources associated with the proposed project, including diesel-fueled delivery trucks, diesel-fueled automobiles, and gasoline-fueled automobiles, would generate TAC. It is expected that truck volumes would be typical of an urban environment, typically less than ten trucks per day, since the proposed project would not develop truck intensive uses, such as a warehouse.

TABLE 5.2-5

SOURCE OF MAJOR CANCER-CAUSING ELEMENTS IN CALIFORNIA

Source	Diesel PM	1,3 Butadiene	Benzene	Carbon Tetra-chloride	Formaldehyde
Stationary	2%	< 1%	6%	100%	59%
Area-wide	0%	10%	12%	0%	< 1%
On Road Mobile	25%	54%	61%	0%	0%
Other Mobile	73%	33%	21%	0%	41%
Natural	0%	2%	0%	0%	< 1%

Source: National Environmental Trust, *Toxic Beginnings: Cancer Risks to Children From California's Air Pollution,* 2006. p. 17.

The air district has established a standard for stationary source cancer exposure risk of ten in one million. Development of the proposed project would place receptors in a location where ambient air

5 National Environmental Trust, *Toxic Beginnings: Cancer Risks to Children from California's Air Pollution*, 2006.

concentrations are estimated to result in a cancer risk of between 750 and 1,500 per million. Operation of the proposed project would contribute to ambient TAC levels; however, while receptors would be exposed to significant ambient TAC levels, the project itself would not qualify as a significant stationary source of TAC.

Standards of Significance

For the purposes of this EIR, impacts to air quality would be considered significant if the proposed project would:

- Cause a predicted violation of the CO ambient air quality standards (8-hour or 1-hour state standards) due to an increase in project traffic on the local street network on either a project-specific or cumulative level;
- Create emissions of an ozone precursor exceeding the following SMAQMD recommended thresholds of significance:

SMAQMD THRESHOLDS		
Pollutant	**Construction**	**Operation**
ROG	None	65 lbs/day
NO_x	85 lbs/day	65 lbs/day
Source: SMAQMD, 2006.		

- Expose sensitive receptors to pollutant concentrations in excess of the California Ambient Air Quality Standards (CAAQS).

Project-Specific Impacts and Mitigation Measures

5.2-1 Construction of the proposed project would generate emissions of ozone precursors. This is a *significant impact*.

Since ozone has significant adverse health effects, it is important to consider ozone precursors ROG and NO_x when addressing project development impacts. The SMAQMD has not developed a threshold of significance for ROG associated with construction activities because the main source of ROG during construction, architectural coatings, can be effectively regulated by SMAQMD Rule 442, Architectural Coatings. Although some measures address NO_x emissions from heavy-duty diesel construction equipment, the SMAQMD has found it necessary to develop a construction threshold for NO_x of 85 pounds per day.

Following SMAQMD's recommended methodology and assumptions, construction emissions were modeled for the proposed project with the results illustrated in Table 5.2-6. Modeling indicated that NO_x emissions during construction could reach a maximum of 239.07 pounds per day. This would be above the 85 pounds-per-day threshold of significance for construction NO_x, and would be a *significant impact*.

Mitigation Measures

Implementation of the following measures would result in a minimum 20 percent reduction of NO_x construction emissions and a minimum 45 percent reduction in particulate emissions. While the proposed project's impact would be substantially reduced through implementation of these measures, the impact during construction would remain *significant*. In order to reduce the impact to a less-than-significant level, the SMAQMD requires implementation of a one-time NO_x off-site

TABLE 5.2-6

CONSTRUCTION AND OPERATIONAL PEAK POUNDS PER DAY

	ROG	NO_x	CO	SO_2	PM_{10} Total	
					Exhaust	Dust
Construction Phase - Demolition						
Fugitive Dust	-	-	-	-	-	55.19
Off-Road Diesel	5.04	31.45	42.42	-	1.20	-
On-Road Diesel	10.40	207.47	38.37	3.02	4.45	0.77
Worker Trips	0.06	0.15	1.38	-	-	-
Total Demolition	*15.50*	*239.07*	*82.17*	*3.02*	*61.61*	
Exceeds SMAQMD Threshold?	-	***YES***	-			
Construction Phase - Site Preparation						
Fugitive Dust	-	-	-	-	-	33.90
Off-Road Diesel	14.18	90.82	116.92	-	3.39	-
On-Road Diesel	-	-	-	-	-	-
Worker Trips	0.25	0.49	5.25	-	-	0.02
Total Site Grading	*14.43*	*91.31*	*122.17*	-	*37.31*	
Exceeds SMAQMD Threshold?	-	***YES***	-			
Construction Phase - Building Construction						
Building Construction Off-Road Diesel	7.75	52.75	61.97	-	2.15	-
Building Construction Worker Trips	4.97	5.97	107.91	0.06	0.17	0.29
Total Building Construction	*12.72*	*58.72*	*169.88*	*0.06*	*2.61*	
Exceeds SMAQMD Threshold?	-	*No*	-			
Operational Phase						
Mobile Emissions	49.69	80.14	605.87	.33	57.74	
Area Source Emissions	7.18	3.38	2.84	0.00	0.01	
Total Operational Emissions	*56.87*	*83.52*	*608.71*	*0.33*	*57.75*	
Exceeds SMAQMD Threshold?	*No*	***YES***	-			

Source: EIP Associates, a division of PBS&J, 2006.

mitigation fee of $14,300 per ton. Compliance with these measures would reduce the impact to a ***less-than-significant level***.

5.2-1 *The following measures shall be incorporated into construction bid documents as recommended by the SMAQMD:*

a) *The project applicant shall provide a plan for approval by SMAQMD demonstrating that the heavy-duty (>50 horsepower) off-road vehicles to be used in the construction project, including owned, leased, and subcontractor vehicles, shall achieve a project wide fleet-average 20 percent NO_x reduction and 45 percent particulate reduction compared to the most recent CARB fleet average at time of construction.*

b) *The following measure shall be incorporated into construction bid documents: At least one piece of diesel equipment used on the site during the demolition, earthmoving and clearing stages of construction shall be fitted with a level 3 California Air Resources Board verified diesel emission control system.*

c) *The project applicant and/or contractor shall submit to SMAQMD a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that shall be used an aggregate of 40 or more hours during any portion of the construction project. The inventory shall include the horsepower rating, engine production year, and projected hours of use or fuel throughput for each piece of equipment. The inventory shall be updated and submitted monthly throughout the*

duration of the project, except that an inventory shall not be required for any 30-day period in which no construction activity occurs. At least 48 hours prior to the use of subject heavy-duty off-road equipment, the project applicant and/or contractor shall provide SMAQMD with the anticipated construction timeline, including start date and name and phone number of the project manager and on-site foreman.

d) *The project applicant and/or contractor shall ensure that emissions from all off-road diesel powered equipment used on the project site do not exceed 40 percent opacity for more than three minutes in any one hour. Any equipment found to exceed 40 percent opacity (or Ringelmann 2.0) shall be repaired immediately and SMAQMD shall be notified within 48 hours of identification of non-compliant equipment. A visual survey of all in-operation equipment shall be made at least weekly, and a monthly summary of the visual survey results shall be submitted to the SMAQMD throughout the duration of the project, except that the monthly summary shall not be required for any 30-day period in which no construction activity occurs. The monthly summary shall include the quantity and type of vehicles surveyed as well as the dates of each survey.*

e) *Prior to issuance of a grading permit, the project applicant shall provide the City with proof of payment of the NO_x off-site mitigation fee in the amount of $23,375 (as detailed in Table 5.2-7).*

TABLE 5.2-7

NO_x OFF-SITE MITIGATION FEE

Year	Activity Phase		NO_x (lbs/day) unmitigated	NO_x (lbs/day) mitigated*	NO_x over threshold (lbs/day)	Duration (days)	Total significant NO_x (lbs)
2006	Demolition[1]	on-road	207.47	n/a	207.47	16	3,319.52
		off-road	31.60	25.28			
2007	Site Preparation[2]		91.31	73.05	0	17	0
Emissions Calculation				*Total project NO_x over threshold (lbs)*			*3,319.52*
				Total project NO_x over threshold (tons)			*1.66*
				Total Mitigation fee ($14,300/ton)			***$23,375***

Notes: * 'NO_x mitigated' assumes implementation of mitigation to reduce off-road emissions by 20 percent.
1 – Demolition phase used to calculate emissions.
2 – Sitework, Foundation, and Underground Utilities phases used to calculate emissions.
Source: EIP Associates, a division of PBS&J, 2006.

5.2-2 Construction of the proposed project would generate emissions of particulate matter. This is a *less-than-significant impact*.

As noted earlier in this section, particulate matter consists of both $PM_{2.5}$ and PM_{10}, with $PM_{2.5}$ generally referred to as fine particulate matter and PM_{10} referred to as coarse particulate matter. Since $PM_{2.5}$ is a subset of PM_{10}, discussions regarding PM_{10} often implicitly include both particulate sizes. In fact, the URBEMIS 2002 model reports particulate matter only as PM_{10}. While PM_{10} would be generated during construction of the proposed project, $PM_{2.5}$ would compose a percentage of the reported PM_{10} emissions.

PM_{10}

PM_{10} emissions during construction would come from demolition of the existing building, excavation, grading, other earth-moving activities, construction equipment exhaust, and from vehicle exhaust

produced by workers driving to and from the project site. To quantify contributions from these sources, URBEMIS model output was analyzed and compared to the mass emission standards stated under the 'Particulate Matter' heading.

As shown in Table 5.2-6, mass emission levels of dust (in this analysis, the PM_{10} fraction of dust is considered to be 100 percent) are estimated to reach a maximum of 55.96 pounds per day. This number takes into account dust from demolition related activities. To determine the project's contribution of PM_{10} from construction equipment and worker commute vehicle exhaust, a CARB document detailing the particulate size profile of different processes (mostly combustion) was consulted.[6] According to the CARB document, PM_{10} comprises 8 percent of diesel vehicle exhaust and 7.3 percent of gasoline vehicle exhaust (with catalytic converters). For this analysis, 8 percent was used and applied to the reported 'Exhaust' numbers in the demolition phase (since PM emissions would be the greatest during this phase of construction). Considering all sources of PM_{10}, the proposed project would produce a maximum of about 56.41 pounds per day during the demolition phase, which is well below 150 pounds per day.

$PM_{2.5}$

Emissions of $PM_{2.5}$ during construction of the proposed project would primarily come from vehicle exhaust. Since 8 percent of the reported 'Exhaust' numbers was considered to be PM_{10}, 92 percent was assumed to be $PM_{2.5}$. Accordingly, construction activities would produce a maximum of about 5.2 pounds per day. Comparing this to the mass emission standard of 55 pounds per day, $PM_{2.5}$ emissions during construction would not be substantial.

As stated above, the SMAQMD have yet to formally adopt mass emission thresholds for $PM_{2.5}$ and PM_{10}. However, generation of particulate emissions during construction of the proposed project would be substantially below 150 pounds per day of PM_{10} and 55 pounds per day of $PM_{2.5}$. Therefore would be considered ***less than significant***.

Mitigation Measures

None required.

5.2-3 Activities associated with the operation of the proposed project would generate emissions of particulate matter. This is a *less-than-significant impact*.

As shown in Table 5.2-6, operation of the proposed project would generate 57.75 pounds per day of PM_{10}, approximately 53.13 pounds (or 92 percent) of that being $PM_{2.5}$. Natural gas combustion, tire wear particulates, and brake wear particulates would constitute a small portion of the reported PM_{10}, whereas vehicle exhaust would make-up virtually all of the emissions. Utilization of alternate transit modes would serve to decrease the proposed project's impact to potential receptors and curb the contribution to ambient air concentrations. According to the SMAQMD, "at least one study indicated that vehicle trips decrease by 15 percent with a 50 percent transit subsidy when the destination is within 660 feet of a transit station; by 25 percent under the same conditions with a 100 percent transit subsidy." A light rail station is located within 660 feet of the proposed project. Since particulate matter emissions from the project would be below 55 pounds per day, the impact would be considered ***less than significant*.**

6 CARB, http://www.arb.ca.gov/app/emsinv/dist/utltab/lookup/display_tab.php?tname=PMSIZEPROFILE&page=1, Accessed July 20, 2006.

Mitigation Measures

None required.

5.2-4 Operation of the proposed project would contribute to emissions of ozone precursors. This is a *significant impact*.

Once the proposed project is built and occupied, activities associated with various uses in the proposed project would generate ozone precursors ROG and NO_x. These precursors are of chief concern due to their role in the formation of smog, acid rain, particulate matter, toxic chemicals, and their contribution to water quality deterioration. The majority of precursor emissions would be generated by vehicle trips associated with people visiting and working at the proposed project. It has been estimated that over 50 percent of precursor emissions stem from automobiles.[7] Smaller sources of precursors would be generated by fuel-burning equipment (such as that used for the heating and cooling of the building) and by various consumer products (such as paints).

As identified in Table 5.2-6, emissions of ROG would not be above the SMAQMD threshold of significance for operational emissions. While the location of the proposed project would provide a number of elements that would help to reduce operational emissions, such as numerous commercial and retail uses in the vicinity of the project site, an extensive sidewalk network, and the availability of mass transit options, NO_x emissions would still exceed the SMAQMD threshold. Since NO_x emissions would exceed the threshold, the impact of operational emissions of ozone precursors would be considered *significant.*

Mitigation Measures

Preparation and implementation of an Air Quality Mitigation Plan, as required by the SMAQMD, would reduce operational emissions by 15 percent, to approximately 71 pounds per day. Even through the implementation of this plan, operational emissions would remain above the threshold. Consequently, the impact would be considered **significant and unavoidable**.

5.2-4 *Prior to issuance of Certificate of Occupancy, the project applicant shall prepare and receive written endorsement from the SMAQMD of an operational Air Quality Mitigation Plan detailing the measures that shall be employed to reduce the proposed project's operational emissions by at least 15 percent. The project applicant shall obtain the endorsement from the SMAQMD and provide it to the City's Environmental Services Department.*

5.2-5 The proposed project would increase traffic volumes that, in turn, would contribute to CO concentrations near roadways and intersections. This is a *less-than-significant impact*.

A byproduct of motor vehicle fuel combustion is CO, which is a directly emitted pollutant that can have varying localized effects. CO concentration levels are highest near crowded or congested intersections where traffic is slow or idling. To accurately quantify CO concentration levels, ambient air concentrations, or background concentrations, need to be considered along with project specific emissions. To assess background concentrations, data collected at the CARB T Street monitoring station for the past three years was considered and the highest value chosen. As shown in Table 5.2-2, the maximum measured CO 8-hour concentration level over the past three years was 3.6 parts per million (ppm). In order to asses the proposed project's impact, Table 5.4 of the SMAQMD Guide was consulted, reproduced as Table 5.2-8. Peak-hour vehicle volume information

7 Bay Area Air Quality District, http://www.baaqmd.gov/dst/pollutants.htm , Accessed July 20, 2006.

was obtained from Table 5.6-15 of the traffic study (see Section 5.6, Transportation and Circulation) and used to estimate project-related CO concentration levels. According to the traffic study, development of the proposed project would result in an additional 868 peak-hour vehicular trips. As shown in Table 5.2-8, this additional vehicular traffic would equate to an increase of less than 3.0 ppm.

TABLE 5.2-8

PROJECT RELATED CO CONCENTRATION LEVELS

Additional Peak-Hour Cars[1]	Parts per Million CO[2]
100	0.4
200	0.7
300	1.1
500	1.7
1000	3.1
2000	5.6
3000	7.7

Notes:
1. Approximately ten percent of total daily trips
2. Assumes an average speed of fifteen miles per hour. Calculations are based on the CALINE4 computer model.
Source: SMAQMD, *Guide to Air Quality Assessment in Sacramento County*, July 2004. p. 5-13.

Considering ambient air concentrations in addition to project specific levels, it is clear that CO concentration levels would be within established CAAQS thresholds (Table 5.2-3). To ensure that no specific intersection would be disproportionately affected, CO modeling based on the CALINE4 model was completed for those intersections identified in the traffic report as having LOS D or worse, specifically 3rd and J Streets, 3rd and L Streets, 3rd and P Streets, and15th and J Streets. The modeling results of these intersections, summarized in Table 5.2-9, show that CO concentrations would not exceed 5.4 ppm over an 8-hour period. Since this concentration would be below the CAAQS threshold, CO impacts would be considered ***less than significant*.**

TABLE 5.2-9

LOCALIZED CARBON MONOXIDE CONCENTRATIONS (BASELINE PLUS PROJECT)

	Estimated CO Concentrations in Parts per Million (ppm)					
	LOS		25 Feet		50 Feet	
Intersection	A.M.	P.M.	8-hour	1-hour	8-hour	1-hour
3rd Street and J Street	E	B	5.4	6.8	5.0	6.3
3rd Street and L Street	B	D	4.6	5.8	4.4	5.5
3rd Street and P Street	A	D	5.3	6.6	4.9	6.1
15th Street and J Street	B	E	4.9	6.1	4.6	5.7

Source: EIP Associates, a division of PBS&J, 2006. Calculation sheets are provided in Appendix C.

Mitigation Measures

None required.

Cumulative Impacts and Mitigation Measures

The cumulative context depends on the pollutant being analyzed. For localized pollutants such as CO and PM_{10}, the cumulative context would include existing and proposed future development in the immediate vicinity of the proposed project. For ozone, which is a regional pollutant, the cumulative context would be the existing and future development over the entire Sacramento Ozone Nonattainment Area.

5.2-6 Construction of the proposed project would add to cumulative levels of criteria air pollutants. This is a *less-than-significant cumulative impact*.

The SMAQMD Guide contains a direction on determining cumulative impacts. The Guide states: development projects are considered cumulatively significant if the project requires a change in the existing land use designation, and projected emissions (ROG and NO_x) of the proposed project are greater than the emissions anticipated for the site under the existing land use designation. A change in an existing land use designation is important because such a change would alter assumptions used in the AQAP to bring the region into attainment as required by the FCAA. To address the fluid nature of development, the SMAQMD is required to assess their progress towards attainment every three years. The most recent report, April 28, 2005, included updated measures to further reduce ozone precursor emissions on a regional basis. Since the proposed project would not require a general plan amendment or rezone, it is assumed that ROG and NO_x emissions are similar to those estimated in the AQAP. Accordingly, long-term ozone precursor emissions from the operation of the proposed project would also be similar to those estimated in the AQAP. Therefore, this would be considered a ***less-than-significant cumulative impact***.

Mitigation Measures

None required.

5.2-7 Operational activities associated with the proposed project would contribute to cumulative levels of particulate matter. This is a *less-than-significant cumulative impact*.

As stated above, the CARB approved a list of control measures for stationary, area-wide, and mobile sources that can be employed by air districts to reduce PM. Air districts must adopt implementation schedules that identify the appropriate subset of measures, and the dates for final adoption, implementation, and the sequencing of selected control measures, prioritizing measures based on the nature and severity of the PM problem in their area and cost-effectiveness. Districts must also consider ongoing programs, such as measures being adopted to meet national air quality standards or the state ozone planning process. The consideration and adoption of air district rules in their implementation schedules, coupled with ARB's ongoing programs, would ensure continued progress in reducing public exposure to PM and attainment of the State and federal standards. Therefore, due to the on-going programs to reduce PM levels state-wide and because project-related emission levels would be below established thresholds, this would be considered a ***less-than-significant cumulative impact***.

Mitigation Measures

None required.

5.2-8 The proposed project, in conjunction with future development, would contribute to cumulative CO levels. This is a *less-than-significant cumulative impact*.

In Impact 5.2-5, analysis of the proposed project estimated that CO emissions from associated vehicle traffic would be below project-specific significance thresholds. As in Impact 5.2-5, virtually all of the CO emissions under cumulative conditions would come from mobile sources. Concentrations of CO that could violate ambient air quality standards would most likely occur at the busiest and most congested intersections, generally intersections classified LOS D or worse. Modeling based on the CALINE4 CO model was completed for all intersections identified as having LOS D or worse under 2030 conditions. The results of that modeling are shown in Table 5.2-10. Modeling demonstrated that even with a large increase in traffic, CO levels would remain below the significance thresholds. It should be noted that these results do make the fundamental assumption that CO emissions from mobile sources would decrease throughout the years, which is an expected and realistic assumption. Since CO levels are estimated to be below significance thresholds, the cumulative impact would be considered ***less than significant.***

TABLE 5.2-10

LOCALIZED CARBON MONOXIDE CONCENTRATIONS (CUMULATIVE 2030 PLUS PROJECTS1)

	Estimated CO Concentrations in Parts per Million (ppm)					
	LOS		25 Feet		50 Feet	
Intersection	**A.M.**	**P.M.**	**8-hour**	**1-hour**	**8-hour**	**1-hour**
15th Street and J Street	B	D	5.1	6.4	4.7	5.9
15th Street and X Street	C	E	5.0	6.3	4.7	5.9

Notes:
1 – 'Projects' is defined in the traffic study as development of the following projects:
1. 800 K Street
2. 831 L Street
3. Westfield Shoppingtown Downtown Plaza Expansion
4. 500 Capitol Mall
5. Cathedral Square (11th & J)
6. The Metropolitan (10th Street and J Street)
7. Epic Tower (12th Street and I Street)
8. 701 L Street
9. The Library Lofts (8th Street and I Street)

Source: EIP Associates, a division of PBS&J, 2006. Calculation sheets are provided in Appendix C.

Mitigation Measures

None required.

5.3 Cultural Resources

5.3 CULTURAL RESOURCES

INTRODUCTION

This section assesses the potential effects of the proposed 500 Capitol Mall project (proposed project) on cultural resources. Cultural resources are defined as historic architectural resources as well as prehistoric or historic archaeological resources. This section briefly describes the cultural setting of the project area, discusses known cultural resources within the project area, and identifies the cultural resource sensitivity of the project site. Applicable state, federal, and local regulations are identified, followed by impact analysis and mitigation measures, where necessary, to reduce adverse impacts on cultural resources to less-than-significant levels.

One comment was received during the NOP comment period concerning cultural resources. The City of Sacramento Development Services Department specified procedures to be followed in the event that subsurface cultural resources are uncovered during project construction.

As described in the Initial Study (see Appendix A), impacts unique to paleontological resources and unique geologic features were found to be less than significant with mitigation incorporated and are not addressed in the EIR.

Sources reviewed for this section include the City of Sacramento General Plan, the Sacramento Register, archival material in the California Room of the Sacramento Main Public Library, and the cultural resources records search prepared for the project by the North Central Information Center (NCIC) of the California Historic Resources Information System (CHRIS).

ENVIRONMENTAL SETTING

Prehistoric and Ethnographic Periods

The first settlements in the Sacramento Valley likely occurred during the late Pleistocene and early Holocene (14,000 to 8000 B.P.) period. Sacramento's location within a great valley and at the confluence of two rivers, the Sacramento River and the American River, shaped its early and modern settlements. However, the archaeological record of such use is sparse. It is likely that Paleo-Indian populations occupied the area with villages located near watercourses. Archaeological investigations of the region have focused on archival research of Spanish sources, reexamination of earlier work, and archeological investigations at a number of small sites. The sites likely represent satellite encampments or small villages associated with major villages. Detailed studies of faunal materials collected at the sites suggest seasonal occupation and a focus on fish as a food resource.

The project site is located in a geographic region that, at the time of European contact, was occupied by the Valley Nisenan. The Nisenan and their ancestors inhabited the American, Yuba, and Bear River drainages for at least 4,500 years before Euroamerican settlers arrived. Major prehistoric archaeological sites in this portion of Sacramento County tend to be situated on elevated ridges or terraces adjacent to creeks or major watercourses.

Historic Period

Spanish exploration of the Sacramento Valley began in the early nineteenth century. By 1822, the region was a part of Mexican California. John Sutter, a German-born entrepreneur who had been granted Mexican citizenship, arrived at the confluence of the Sacramento and American rivers in 1839, settling in Nisenan territory. The knoll on which Sutter placed his fort was an abandoned Indian mound. Beginning in 1824, under Mexican rule, land in California was divided into large

parcels or Mexican land grants, referred to as ranchos. By 1846, eight land grants were claimed in Sacramento County, including New Helvetia, the first settlement in the Sacramento area, granted to John Sutter in 1839.

In 1848, Sutter hired William Warner to conduct a survey, which imposed a grid pattern on the land east of the Sacramento River with east-west streets designated by letters and north-south streets by numbers. This original grid, which survives today, extended east from the Sacramento River (Front Street) to just beyond Sutter's Fort and south from Sutter's Slough (at approximately 6th and I Street) to where Broadway is today. As the gateway to the gold fields, mining and the business of supplying miners served as a basis for the city's early economy. The railroad played a role in making Sacramento the principal agricultural processing and transportation center for the Central Valley and drew people to the area. In 1854, the State Capital was moved to Sacramento.

Historic Buildings, Historic Districts, and Survey Areas in the Project Vicinity

As Sacramento grew over the decades and the suburbs developed, the residential population of downtown declined as property owners moved to suburbs to the south and east, and there was a general decline in the downtown core. In 1947, the streetcars made their final runs, and in 1948 a redevelopment survey was conducted. In 1950, the City Council designated the first redevelopment area and created the Redevelopment Agency. The Redevelopment Agency targeted "the red-light district near the Capitol for renovation"[1] in the 1950s. Redevelopment Area No. One originally included 60 city blocks and was expanded twice; once in 1951 and again in 1958. The proposed project site was within Redevelopment Area No. One and also within the Capitol Mall Project No. 2-A, a sub-area within the Redevelopment Area No. One. The Capitol Mall Project No. 2-A included an approximately 15-block area that included Capitol Mall (then called Capitol Avenue and previously called M Street) from 4th to 7th Streets. An existing city parking structure was noted at the northeast corner of 6th and Capitol but was not included in the Capitol Mall Project No. 2-A.

Prominent architects involved in the redevelopment effort included Wurster, Bernardi & Emmons, DeMars and Reay, Edward L. Barnes, Leo Daly and Associates, Harry J. Devine, Sr., John S. Bolles, and Dreyfuss and Blackford. A number of buildings were planned along Capitol Mall as a part of the redevelopment effort, including the federal court building, a downtown hotel, the I.B.M. building, the Wells Fargo Bank and Regional Office building (the existing building on the proposed project site), office buildings, and the Crocker-Angelo National Bank. Of those, the federal court building, the I.B.M building, and the Wells Fargo Bank still exist. An existing office building located on the north side of Capitol Mall between 4th and 5th Streets also appears to be from the same era. This office building may have been part of the redevelopment project, but this has not been confirmed. The federal court building (John E. Moss Federal Building) was completed in 1959 and was a collaborative effort between architects Harry J. Devine, Sr., Herbert E. Goodpastor, Raymond R. Franceschi, Dreyfuss and Blackford, and Ricky and Brooks and was a prominent feature of the redevelopment effort. The I.B.M. office building was built circa 1959 and was designed by Dreyfuss and Blackford. The Crocker-Angelo Bank building no longer exists. The Wells Fargo Bank and Regional Office building was built in 1962 and Harry J. Devine, Sr. was the architect. Other downtown redevelopment efforts in the 1950s and 1960s included the K Street Mall and the construction of I-5 through Sacramento.

Today, Sacramento is a major urban center, with state government as a primary employer. A number of state and federal offices flank Capitol Mall west of the State Capitol Building. The area has continued with the trend of redevelopment, with several new buildings constructed within the past two decades, as well as two major high-rise projects currently under development within a few

1 Sacbee.com, *Our Century: How We've Changed 1900-2000* www.sacbee.com/static/archive/news, June 8, 2006.

blocks of the proposed project site. A number of historic resources also exist in the vicinity of the proposed project site and are briefly described below.

Harry J. Devine, Sr.

In 1926, Harry J. Devine, Sr. opened his architectural office at 926 J Street in downtown Sacramento. Devine designed many schools and churches for the Catholic Church.[2] Buildings designed by Devine include Sacred Heart Church (1040 39th St), St. Ignatius Church (3235 Arden Way), Our Lady of Guadalupe Church (711 T St), Christian Brothers High School (4315 Martin Luther King Jr. Boulevard), the Federal Building (801 I Street), the Sacramento County Jail (651 I Street), Mercy Hospital (4001 J Street), and the St. Pius Seminary in Galt. He was also the supervising architect for the Sacramento School District for 15 years.

The Wells Fargo Bank and Regional Office Building

The unoccupied building at 500 Capitol Mall, the proposed project site, is the former Wells Fargo Bank and Regional Office building, designed by Harry J. Devine, Sr. This approximately 155,000-square-foot, five-story office building was constructed in 1962 at the southeast corner of Capitol Mall and 5th Street in downtown Sacramento. An associated parking structure is located south of the main building on the northeast corner of N and 5th Streets. Both the main building and the parking structure have levels below street grade. The main building is Modern in style, with American modernist architect Edward Durell Stone influences seen in the decorative elements of the north façade. The first floor façade of the building is recessed and is sheathed in highly polished granite. The front façade of the second through fifth floors is nearly entirely glass with simple, repetitive decorative bands separating the floors. The side façades on the second through fifth floors are solid panels with no window openings. Narrow bands visually divide both horizontally and vertically these large expanses of solid surface. The north and west façades both contain building entrances with large plate glass windows.

Sacramento City Code 15.124.160 provides for the compilation of Landmarks, Contributing Resources, and Historic Districts into the Sacramento Register. The Sacramento Register includes all listed or surveyed historic resources in the City. This includes a listing of all individually designated City Landmarks and all of the City-designated Historic Districts. The Sacramento Register also includes listings or maps of the properties within two of the City's Special Planning Districts that have been afforded preservation protection by ordinance. Also included are all the properties within the City that are currently listed in the National Register of Historic Places (NRHP) and the California Register of Historical Resources (CRHR) and properties listed in the State of California's Historical Properties Directory.

There are several properties in the vicinity of the proposed project site that are classified on the Sacramento Register as either a Landmark, a Contributing Resource to an Historic District, or Other Protected Property. Historic resources in the project vicinity include the Marshall Hotel at 7th and L Streets, the Men's Warehouse Building at 7th and K Streets, the Masonic Temple at 1123 J Street, the Elks Club Building at 921 11th Street, 921 11th Street, 1329 H Street, and 1115 H Street. Both the Masonic Temple and the Elks Club Building are classified in the Sacramento Register as "appears eligible for listing" on the NRHP." The Elks Club Building at 921 11th Street is listed as a Landmark on the Sacramento Register. There are 40 City of Sacramento Historic Districts and Survey Areas.[3] All of the information concerning these districts and areas was taken from the City of Sacramento Historic Resources document, which was updated in March 2005. The project site is not in any of these districts or areas, but is within close proximity of many of them. The Crocker Art

2 Sacramento Valley Magazine, *First Families*, July/August 1976, page 27.
3 City of Sacramento, *City of Sacramento Historic Resources*, updated March 2005, page 61-62.

Museum, located on O Street between 2nd and 3rd Streets, is listed on the NRHP, and the Old Sacramento National Historic Landmark District is located four blocks from the project site.

The Downtown survey area is noted as being a Survey in Progress (SIP) and is located to the east along with the Capitol, Cathedral Square, [Cesar Chavez] Plaza Park/CBD, and Merchant Street Historic Districts. Key elements of the Capitol Historic District include the State Capitol, Capitol Park, the landscaped circular fountain and roundabout, the Insectary Building, and Office Building One. The Cathedral Square Historic District's most dominating structure is the Cathedral of the Blessed Sacrament built in 1887. Other structures that contribute to the district by supporting the architectural feel or continuing the same architectural quality of the area include the retail and hotel structure facing the Cathedral, the 11th and L Street building, and the Senator Hotel Building. The Cesar Chavez Plaza Park/Central Business District (CBD) Historic District is located to the east. This District represents the core of Sacramento's business district with a period of significance from 1910–1930. "The Merchant Street Historic District is significant as the site of Sacramento's early 20th century banking center."[4] The period of significance for the district ranges from 1868 for Pioneer Hall to 1921 for the Merchant's National Bank Building. City-adopted Historic Districts and Surveys in Progress are shown on Figure 5.3-1.

NCIC Records Search

The search area for the NCIC records search included the project site and a ¼-mile radius around the project site. The records search included an examination of the official records and maps for archaeological sites and surveys in Sacramento, as well as a review of the *National Register of Historic Places*, the *California Register of Historical Resources*, the *California Inventory of Historic Resources*, *California State Historical Landmarks*, *California Points of Historical Interest*, the *Historic Property Directory* (Office of Historic Preservation 2005), *Caltrans State and Local Bridge Surveys*, and secondary sources pertaining to state and local prehistory and history.

Prehistoric Resources

The NCIC search revealed five records of archaeological studies conducted within or adjacent to the project site, none of which resulted in the discovery of prehistoric archaeological sites within the project area. However, given the well-documented and intensive use of the project area by prehistoric peoples, there is a moderate to high potential for the presence of prehistoric or ethnographic-period sites in the project area (NCIC search area).[5]

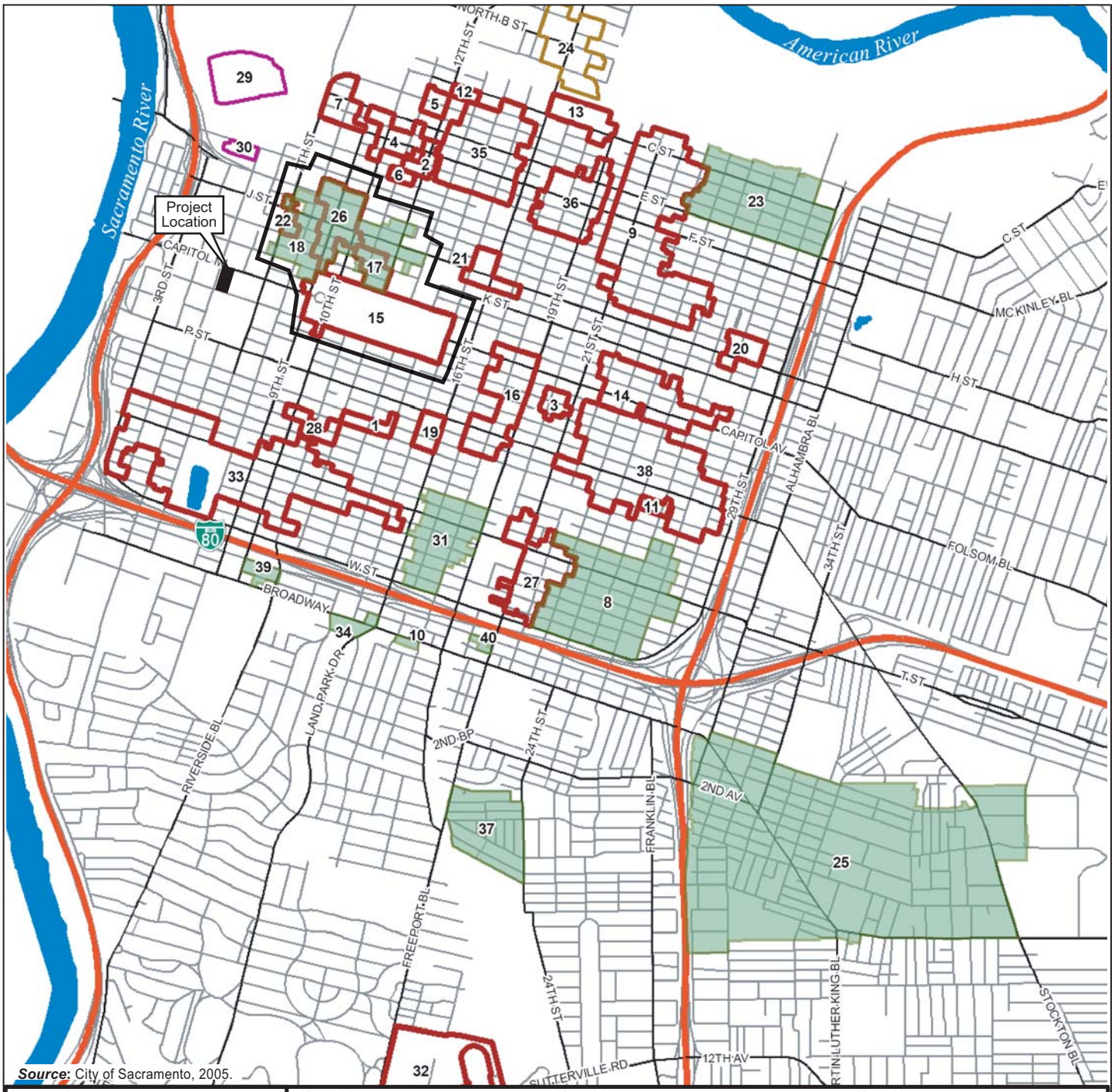
Historic Resources

The project site contains an unoccupied office building and a parking structure. No historic evaluation for this site was noted in the NCIC letter. State and Federal inventories list four historic properties (buildings, structures, or objects) within the proposed project area (NCIC search area) including a portion of the Adopted Historic Capitol District.[6] There are several known historic-period resources, individual buildings as well as districts, within close proximity to the project site. The buildings and districts are all discussed above in the Environmental Setting. Given the recorded

4 City of Sacramento, *City of Sacramento Historic Resources*, updated March 2005, page 110.

5 North Central Information Center, Records Search Results for 500 Capitol Mall Project (NCIC File No. SAC-06-04), January 5, 2006, page 1.

6 North Central Information Center, Records Search Results for 500 Capitol Mall Project (NCIC File No. SAC-06-04), January 5, 2006, page 1.



Source: City of Sacramento, 2005.

Legend

Historic Districts

- Adopted (AHD)
- Special Study Areas (SSA)
- Survey Adopted (SA)

Survey Areas

- Survey In Progress (SIP)

0 1,000 2,000 4,000 Feet

Development Services Department | January, 2005
O:\GIS_Projects\....Historic_Districts_Survey_Areas

ID	Name	ID	Name	ID	Name
1	1200-1300 Q Street (AHD)	15	Capitol (AHD)	29	Railyards (SSA)
2	12th Street Commercial (AHD)	16	Capitol Avenue (AHD)	30	Railyards (SSA)
3	20th and N Street (AHD)	17	Cathedral Square (AHD)	31	Richmond Grove (SIP)
4	Alkali Flat Central (AHD)	18	Downtown (SIP)	32	Sacramento City College (AHD)
5	Alkali Flat North (AHD)	19	Fremont Park (AHD)	33	South Side (AHD)
6	Alkali Flat South (AHD)	20	Marshall Park (AHD)	34	Tower (SIP)
7	Alkali Flat West (AHD)	21	Memorial Auditorium (AHD)	35	Washington (AHD)
8	Booth (SIP)	22	Merchant Street (AHD)	36	Washington School (AHD)
9	Boulevard Park (AHD)	23	New Era (SIP)	37	West Curtis Oaks (SIP)
10	Broadway and 17th (SIP)	24	North 16th Street (SA)	38	Winn Park (AHD)
11	Bungalow Row (AHD)	25	Oak Park (SIP)	39	Yale (SIP)
12	C Street Commercial (AHD)	26	Cesar Chavez Plaza Park/CBD (AHD)	40	Yale 2000 (SIP)
13	C Street Industrial (AHD)	27	Poverty Ridge (AHD)		
14	Capital Mansions (AHD)	28	R Street (AHD)		

NORTH
NOT TO SCALE

EIP ASSOCIATES
A Division of PBS&J

FIGURE **5.3-1**

City of Sacramento Historic Districts and Survey Areas in the Proposed Project Vicinity

D51121.00 500 Capitol Mall

resources and the known patterns of local historic land use, there is a high potential for identifying historic-period cultural resources within the project site.[7]

Native American Consultation

On December 28, 2005, EIP cultural resources staff requested the Native American Heritage Commission (NAHC) to search its sacred lands database to determine if any Native American cultural resources are located on or near the project site. The NAHC response letter stated that the search of the sacred lands database failed to indicate the presence of Native American resources in the immediate project area. The NAHC letter included a list of Native American organizations and individuals who may have knowledge of cultural resources in the project area. Letters that included a brief description of the project and a project map were sent to each organization/individual identified on the NAHC list. As of the printing of this document, EIP has received no responses from tribal representatives indicating the presence of Native American cultural resources in the project area. However, the absence of site-specific information in the sacred lands file or through correspondence with tribal representatives does not indicate the absence of cultural resources on the project site or in the immediate vicinity. Copies of Native American correspondence are included in Appendix D.

REGULATORY SETTING

Federal, state, and local governments have developed laws and regulations designed to protect significant cultural resources that may be affected by actions they undertake or regulate. The National Historic Preservation Act (NHPA) and CEQA are the basic federal and state laws governing the preservation of historic and archaeological resources of national, regional, state and/or local significance.

Federal

Federal regulations for cultural resources are primarily governed by section 106 of the NHPA of 1966, which applies to actions taken by federal agencies. The goal of the section 106 review process is to offer a measure of protection to sites that are determined eligible for listing on the NRHP. The criteria for determining NRHP eligibility are found in 36 Code of Federal Regulations (CFR) Part 60. Section 106 of the NHPA requires federal agencies to take into account the effects of their undertakings on historic properties and affords the federal Advisory Council on Historic Preservation a reasonable opportunity to comment on such undertakings. The Council's implementing regulations, "Protection of Historic Properties," are found in 36 CFR Part 800. The NRHP criteria (contained in 36 CFR 60.4) are used to evaluate resources when complying with NHPA section 106. Those criteria state that eligible resources comprise districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and

a) are associated with events that have made a significant contribution to the broad patterns of our history; or
b) are associated with the lives of persons significant in our past; or
c) embody the distinctive characteristics of a type, period, or method of construction, or that possess high artistic values, or that represent a significant distinguishable entity whose components may lack individual distinction; or
d) have yielded or may be likely to yield, information important to history or prehistory.

7 North Central Information Center, Records Search Results for 500 Capitol Mall Project (NCIC File No. SAC-06-04), January 5, 2006, page 1.

Archaeological site evaluation assesses the potential of each site to meet one or more of the criteria for NRHP eligibility based upon visual surface and subsurface evidence (if available) at each site, information gathered during the literature and records searches, and the researcher's knowledge of and familiarity with the historic or prehistoric context associated with each site.

The American Indian Religious Freedom Act, Title 42 United States Code, section 1996, protects Native American religious practices, ethnic heritage sites, and land uses.

State

Under CEQA, public agencies must consider the effects of their actions on both "historical resources" and "unique archaeological resources." Pursuant to Public Resources Code, section 21084.1, a "project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment."

"Historical resource" is a term of art with a defined statutory meaning (see Public Resources Code, section 21084.1 and CEQA Guidelines section 15064.5 (a) and (b)). The term embraces any resource listed in or determined to be eligible for listing in the California Register of Historical Resources (CRHR). The CRHR includes resources listed in or formally determined eligible for listing in the NRHP, as well as some California State Landmarks and Points of Historical Interest.

Properties of local significance that have been designated under a local preservation ordinance (local landmarks or landmark districts) or that have been identified in a local historical resources inventory may be eligible for listing in the CRHR and are presumed to be "historical resources" for the purposes of CEQA unless a preponderance of evidence indicates otherwise (Public Resources Code, section 5024.1; California Code of Regulations, Title 14, section 4850). Unless a resource listed in a survey has been demolished, lost substantial integrity, or there is a preponderance of evidence indicating that it is otherwise not eligible for listing, a lead agency should consider the resource to be potentially eligible for the CRHR.

In addition to assessing whether historical resources potentially impacted by a proposed project are listed or have been identified in a survey process, lead agencies have a responsibility to evaluate them against the CRHR criteria prior to making a finding as to a proposed project's impacts on historical resources (Public Resources Code, section 21084.1; CEQA Guidelines, section 15064.5 (a)(3)). In general, an historical resource, under this approach, is defined as any object, building, structure, site, area, place, record, or manuscript that:

a) is historically or archeologically significant; or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political or cultural annals of California; and
b) meets any of the following criteria:
    1. is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
    2. is associated with the lives of persons important in our past;
    3. embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
    4. has yielded, or may be likely to yield, information important in prehistory or history.

Special (Criteria) Considerations are laid out in the California Register specifically to address historical resources that have achieved significance within the past fifty years. "A resource less than

fifty years old may be considered for listing in the California Register if it can be demonstrated that sufficient time has passed to understand its historical importance."[8]

For historic structures, CEQA Guidelines section 15064.5 (b) (3) indicates that a project that follows the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings, or the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings (1995), shall mitigate impacts to a level of less than significant. Potential eligibility also rests upon the integrity of the resource. Integrity is defined as the retention of the resource's physical identity that existed during its period of significance. Integrity is determined through considering the setting, design, workmanship, materials, location, feeling, and association of the resource.

As noted above, CEQA also requires lead agencies to consider whether projects will impact "unique archaeological resources." Public Resources Code, section 21083.2 (g) states that "unique archaeological resource" means an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
2. Has a special and particular quality such as being the oldest of its type or the best available example of its type.
3. Is directly associated with a scientifically recognized important prehistoric or historic event or person (Public Resources Code, section 21083.2 (g)).

Treatment options under section 21083.2 of the Public Resources Code include activities that preserve such resources in place in an undisturbed state. Other acceptable methods of mitigation under section 21083.2 include excavation and curation or study in place without excavation and curation (if the study finds that the artifacts would not meet one or more of the criteria for defining a "unique archaeological resource").

Advice on procedures to identify cultural resources, evaluate their importance, and estimate potential effects is given in several agency publications, such as the series produced by the Governor's Office of Planning and Research (OPR). The technical advice series produced by OPR strongly recommends that Native American concerns and the concerns of other interested persons and corporate entities, including but not limited to, museums, historical commissions, associations and societies, be solicited as part of the process of cultural resources inventory. In addition, California law protects Native American burials, skeletal remains, and associated grave goods regardless of their antiquity and provides for the sensitive treatment and disposition of those remains.

Section 7050.5 (b) of the California Health and Safety code specifies protocol when human remains are discovered. The code states:

> In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains are discovered has determined, in accordance with Chapter 10 (commencing with section 27460) of Part 3 of Division 2 of Title 3 of the Government Code, that the remains are not subject to the provisions of section 27492 of the Government Code or any other related provisions of law concerning investigation of the circumstances, manner and cause of death, and the recommendations concerning treatment and disposition of the human remains have been made to

8 Office of Historic Preservation, Department of Parks and Recreation, *California Office of Historic Preservation: Technical Assistance Series # 6, California Register and National Register: A Comparison (for purposes of determining eligibility for the California Register)*, May 23, 2001, page 3.

the person responsible for the excavation, or to his or her authorized representative, in the manner provided in section 5097.98 of the Public Resources Code.

CEQA Guidelines section 15064.5 (e) requires that excavation activities be stopped whenever human remains are uncovered and that the county coroner be called in to assess the remains. If the county coroner determines that the remains are those of Native Americans, the NAHC must be contacted within 24 hours. At that time, the lead agency is required to consult with the appropriate Native Americans as identified by the NAHC and directs the lead agency (or applicant), under certain circumstances, to develop an agreement with the Native Americans for the treatment and disposition of the remains.

Local

City of Sacramento

City of Sacramento General Plan

The City of Sacramento General Plan contains the following goal and policy that pertains to the protection and management of archeological resources. The City of Sacramento is currently in the process of updating the 1988 General Plan.

Goal D Work with the County of Sacramento to identify, protect, and enhance physical features and settings that are unique to the area to the maximum extent feasible.

Policy

2. Work with all interested parties to protect ancient burial grounds threatened by development activity and preserve their artifacts, either on-site or at a suitable relocation, to the extent feasible. Ancient Indian tribes used various locations within the City limits and influence area for burial grounds. These burial grounds are a unique heritage. When threatened by development, these sites should evaluate for their content and uniqueness. The sites should either be preserved or their contents removed and preserved at a new location depending upon an analysis of the site and the development factors involved.

Preservation Element

The City of Sacramento adopted a Preservation Element into its General Plan on April 25, 2000. The City's overall preservation objectives are to identify, protect, and encourage preservation of Sacramento's historic and cultural resources throughout the city. The Preservation Element establishes the policy framework to guide the City's achievement of its preservation objectives. The following goal of the Preservation Element applies to the proposed project:

Goal B To protect and preserve important historic and cultural resources that serve as significant, visible reminders of the City's social and architectural history.

Historic Preservation Ordinance

The City of Sacramento's historic preservation program began in 1975 with the enactment of the City's first Historic Preservation Ordinance (Preservation Ordinance). The current Preservation Ordinance (No. 2001-027) was enacted in June 2001. The purpose of the Preservation Ordinance is to identify, protect, and encourage the preservation of significant resources; maintain an inventory and ensure the preservation of these resources; encourage maintenance and rehabilitation of the resources; encourage retention, preservation, and re-use of the resources; safeguard City resources; provide consistency with state and federal regulations; protect and enhance the City's attraction to tourists; foster civic pride in the City's resources; and encourage new development to be aesthetically compatible. There are five factors to be considered in determining whether to place a

nominated resource on the Sacramento register as a landmark. These factors, as stated in the Historic Preservation code (15.124.170 A.2) are:

a. A structure removed from its original location is eligible if it is significant primarily for its architectural value or it is the most important surviving structure associated with a historic person or event.
b. A birthplace or grave is eligible if it is that of a historical figure of outstanding importance and there is no other appropriate site or structure directly associated with his or her productive life.
c. A reconstructed building is eligible if the reconstruction is historically accurate, if the structure is presented in a dignified manner as part of a restoration master plan; and if no other original structure survives that has the same association.
d. Properties that are primarily commemorative in intent are eligible if design, age, tradition or symbolic value invests such properties with their own historical significance.
e. Properties achieving significance within the past fifty (50) years are eligible if such properties are of exceptional importance.

Design Review and Preservation Board

The Preservation Ordinance established a Design Review and Preservation Board (Preservation Board). The Preservation Board has authority to regulate the approval of building permits, structure relocation, and structure demolition relevant to inventoried structures or historic districts.

Sacramento Register

The Preservation Ordinance amends Chapter 15.124 of Title 15 of the Sacramento City Code. The City Code provides for the compilation of Landmarks, Contributing Resources, and Historic Districts into the Sacramento Register. The Sacramento Register includes all listed or surveyed historic resources in the City of Sacramento. This includes a listing of all individually designated City Landmarks and all of the City designated Historic Districts. The Sacramento Register also includes listings or maps of the properties within two of the City's Special Planning Districts that have been afforded preservation protection by ordinance. Also included are all the properties within the City that are currently listed in the NRHP and the CRHR and properties listed in the State of California's Historical Properties Directory.

The Sacramento Register, like the California Register, makes allowances for resources less than fifty years old. "Properties achieving significance within the past fifty (50) years are eligible if such properties are of exceptional importance."[9]

IMPACTS AND MITIGATION MEASURES

Methods of Analysis

A records search was performed by the NCIC on January 3, 2006. The records search included an examination of the official records and maps for archaeological sites and surveys in Sacramento, as well as a review of the *National Register of Historic Places*, the *California Register of Historical Resources*, the *California Inventory of Historic Resources*, *California State Landmarks*, *California Points of Historical Interest*, the *Directory of Properties in the Historical Resources Inventory* (Office of Historic Preservation 2005), *Caltrans Local Bridge Surveys*, and secondary sources pertaining to state and local prehistory and history. Requests were mailed to Native American organizations and individuals provided by the NAHC regarding information on known Native American cultural resources in the project area (see Appendix D). As of the printing of this document, EIP has received no responses from tribal representatives indicating the presence of Native American cultural resources in the project area.

9 Sacramento Municipal Code, Chapter 15.124.170 Criteria and requirements for placement on, and deletion from, the Sacramento register.

EIP cultural resources staff conducted a site visit and performed archival research at local repositories to gather information about the existing building on the project site. A Department of Parks and Recreation Department (DPR) Form 523, which contains an evaluation on the building's potential significance as a historic resource, is attached as Appendix E.

Standards of Significance

For the purposes of this EIR, impacts on cultural resources are considered significant if the proposed project would:

- Cause a substantial adverse change in the significance of a historical resource as defined in section 15064.5 of the State CEQA Guidelines;
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to section 15064.5 of the State CEQA Guidelines; or
- Disturb any human remains, including those interred outside of formal cemeteries.

Project-Specific Impacts and Mitigation Measures

5.3-1 The proposed project could cause a substantial adverse change in the significance of a historical resource as defined in section 15064.5 of the State CEQA Guidelines. This is considered a *less-than-significant impact*.

A five-story, unoccupied building (formerly offices of Wells Fargo Bank) and attached parking structure currently occupy the project site. The building has not previously been listed or determined eligible for any historic register. Analysis of the building included an evaluation to determine the building's potential eligibility for the NRHP, CRHR, or the Sacramento Register, either individually or as a contributing structure to a potential district. The evaluation was completed with reference to three possible significance contexts. First, the architect of the building was Harry J. Devine, Sr., a prominent local architect. Second, the building was constructed as part of a large redevelopment effort that occurred in the downtown area, specifically the development of Capitol Mall and its transformation in the 1950s and 1960s to a regional business and commercial center. The third significance context is the potential effect of removing the building and replacing it with a new high-rise structure on the Capitol Historic District.

As discussed in the Environmental Setting section above, Harry J. Devine, Sr. was a prominent local architect with many buildings in the Sacramento area to his credit — primarily churches. Many of these buildings, including the Sacred Heart Church (1040 39th Street), St. Ignatius (3235 Arden Way), Our Lady of Guadalupe (711 T Street), Christian Brothers High School (4315 Martin Luther King Jr. Boulevard), as well as the Federal Building on Capitol Mall, still exist. Devine's architectural firm, which opened in 1926, was run by his son, Harry J. Devine, Jr., after his death in 1963. The firm continued to construct schools and commercial buildings in the Sacramento area.

If eligible, the former Wells Fargo building would most likely qualify for listing on the NRHP under Criterion C or on the CRHR under Criterion 3. Therefore, it was against these criteria that the building was evaluated. While the building does display some typical Mid-Century Modern characteristics and is representative of late 1950s and early 1960s commercial architecture in Sacramento, it does not embody distinctive characteristics of a type, period, region, or method of construction. Also, while Harry J. Devine, Sr. was a prominent local architect, the Wells Fargo Building does not represent a particularly significant work of a master. Therefore, it would not be eligible for inclusion in either the NRHP or the CRHR under the criteria identified above. As stated previously, the Wells Fargo Building and associated parking structure were constructed in 1962,

making the structures 44 years old. Potential historic resources are usually evaluated when they are at 45 years old. The City of Sacramento Historic Preservation Ordinance (15.124) provides factors to be considered when evaluating resources for inclusion on the Sacramento Register, including allowances for properties "achieving significance within the past fifty (50) years." Properties less than fifty years old must be of "exceptional importance" to be listed as Sacramento landmarks. Harry J. Devine, Sr. was a prominent local architect who practiced in Sacramento from 1926 until his death in the early 1960s; however, other significant examples of his work with exceptional significance still exist, including the Federal Building located one block east along Capitol Mall. The Federal Building was a prominent component of the Capitol Mall redevelopment and was the first building constructed. He is also better known for his churches and schools, many of which still exist. Therefore, the Wells Fargo Building is not considered to be of exceptional importance, as is required of a building less than 50 years old, as a work of Harry J. Devine, Sr. and therefore would not be eligible for individual listing on the Sacramento Register.

It has also been suggested that the Wells Fargo Building could be a contributing structure to a commercial district as a major work on Capitol Mall. Prior to its redevelopment, Capitol Mall was named M Street and was developed with a multitude of smaller, primarily wood-frame structures that were typical of late nineteenth and early twentieth century architecture. Redevelopment documents note the blighted "Victorian" structures in the area. Capitol Mall was not developed as a regional commercial center until the late 1950s and early 1960s. The majority of the buildings along Capitol Mall between the State Capitol building and the Sacramento River were built from the early 1960s to the present. The redevelopment of parcels along Capitol Mall continues today, with two sites currently under construction. Considering that construction of the State Capitol building took place from 1860–1874 and that Capitol Mall has been evolving as a regional commercial center for the past several decades, it is difficult to ascertain a period of significance for such a district. The majority of the buildings west of the State Capitol building were built in the last 50 years, so the district would have to be of "exceptional importance" to be listed, as required by the Sacramento Register. With the wide range of building construction dates along Capitol Mall and the small number of structures remaining from the 1950s and 1960s redevelopment, it is unlikely that a cohesive district exists.

Another area of concern would be the impact on nearby historic districts, specifically the Capitol Historic District, which is four blocks east of the project site. The Capitol Historic District, as discussed above in the Environmental Setting, is comprised of the State Capitol, Capitol Park, the landscaped circular fountain and roundabout, the Insectary Building, and Office Building One. None of these structures or features would be directly affected by the proposed project. The nature of Capitol Mall is an active, evolving business area that has experienced almost constant alteration over the past 50-plus years. Therefore, the removal of the existing building at 500 Capitol Mall and the addition of a new high-rise building on this constantly-evolving street would have no impact on the significance of the Capitol Historic District.

No listed or eligible historic resources would be affected by construction or operation of the proposed project through modification or demolition, and the existing building has been deemed ineligible for the NRHP, CRHR, or the Sacramento Register, either individually or as a part of a district. The proposed project would not affect the nearby Capitol Historic District. Therefore, the impact on historic resources would be ***less than significant.***

Mitigation Measure

None required.

5.3-2 The proposed project could cause a substantial adverse change in the significance of an archaeological resource pursuant to section 15064.5 of the State CEQA Guidelines. This is considered a *potentially significant impact*.

The NCIC search revealed five records of archaeological studies conducted within or adjacent to the project site, none of which resulted in the discovery of prehistoric archaeological sites within the project area. However, given the well-documented and intensive use of the project area by prehistoric and ethnographic-period peoples, there is a moderate to high potential for the presence of prehistoric or ethnographic-period sites in the project area. In addition, known patterns of local historic land use create high potential for historic-period cultural resources in the project area. Consequently, ground-disturbing project construction activities could cause significant adverse impacts on previously unknown subsurface prehistoric, ethnographic, and/or historic-period archaeological resources. This would be considered a *potentially significant impact*.

Mitigation Measure

Implementation of the following mitigation measure would reduce this impact to a ***less-than-significant level***.

5.3-2 *Prior to the issuance of grading or construction permits, the project applicant shall retain an archaeologist with knowledge of prehistoric and historic-period archaeology to prepare an Archaeological Testing, Monitoring, and Data Recovery Plan (ATMDRP). The ATMDRP shall require that a qualified archaeologist conduct test trenching on site prior to the commencement of demolition and construction activities. The project applicant shall be responsible for clearing the existing surface parking lot per the ATMDRP to allow test trenching. The ATMDRP shall require that a qualified archaeologist be present for all ground-disturbing activities (i.e., excavation, compaction, heavy-equipment operation) that occur on the project site. The ATMDRP shall define how archaeological monitoring will be conducted, the protocol to be followed in the event that significant resources are discovered during monitoring, and where and how data recovery will be conducted for any important archaeological resources discovered. The ATMDRP shall specify that all construction personnel will be alerted to the possibility of buried cultural resources prior to the initiation of ground-disturbing activities. The ATMDRP shall specify that if any cultural resources, such as structural features, unusual amounts of bone or shell, artifacts, human remains, or architectural remains are encountered during any development activities, work shall be suspended within 50 meters (165 feet) of the find. The City of Sacramento Development Services Department shall be immediately notified, and a qualified archaeologist shall develop, as necessary, mitigation measures to reduce archaeological impacts to less-than-significant levels before construction resumes. The final improvement plans shall document any discoveries of cultural resources and the resultant mitigation measures. Any additional mitigation measures that are developed shall be approved by the City prior to implementation.*

5.3-3 The proposed project could disturb human remains, including those interred outside of formal cemeteries. This is considered a *potentially significant impact*.

The NCIC records search identified no recorded prehistoric archaeological sites within the ¼-mile radius of the project site. The NAHC search of the sacred lands database failed to indicate the presence of Native American resources in the immediate project area, and, as of the printing of this document, there have been no responses from tribal representatives indicating the presence of Native American cultural resources in the project area. However, there is a possibility that human

remains, including those interred outside of formal cemeteries, exist on the project site that could be disturbed during grading, excavation, and other earth-moving activities during construction. This would be considered a *potentially significant impact*.

Mitigation Measure

Implementation of the following mitigation measure would reduce this impact to a ***less-than-significant level***.

5.3-3 *If human remains are discovered during any phase of archaeological testing or construction, work shall be suspended immediately within 50 meters (165 feet) of the remains and the City of Sacramento Development Services Department and the Sacramento County Coroner shall be notified immediately. If the remains are determined by the county coroner to be Native American, the Native American Heritage Commission (NAHC) shall be notified within 24 hours, and the guidelines of the NAHC shall be adhered to in the treatment and disposition of the remains. The project applicant shall also retain a professional archaeologist with Native American burial experience to conduct a field investigation of the specific site and consult with the Most Likely Descendant, if any, identified by the NAHC. As necessary, the archaeologist may provide professional assistance to the Most Likely Descendant, including the excavation and removal of the human remains. The City of Sacramento Development Services Department will be responsible for approval of recommended mitigation as it deems appropriate, taking account of the provisions of state law, as set forth in CEQA Guidelines section 15064.5(e) and Public Resources Code section 5097.98. The project applicant shall implement approved mitigation, to be verified by the City of Sacramento Development Services Department, before the resumption of activities at the site where the remains were discovered.*

Cumulative Impacts and Mitigation Measures

The cumulative analysis for impacts to cultural resources considers a broad cultural and regional system of which the resources are a part. The cumulative context for the cultural resources analysis for the proposed project includes Sacramento region as a whole.

5.3-4 The proposed project, in combination with other development in the Sacramento region, could adversely affect unique archaeological resources or historical resources as defined in section 21083.2 of the Public Resources Code and section 15064.5 of the State CEQA Guidelines. This is considered a *potentially significant impact*.

Based upon previous cultural resource surveys and research, the Sacramento region has been inhabited by prehistoric and historic-period peoples for thousands of years. The proposed project, in combination with other development in the Sacramento region, could contribute to the loss of significant cultural resources, unidentified prehistoric- and historic-period resources and historic-period structures. Because all significant cultural resources are unique and non-renewable members of finite classes, all adverse effects or negative impacts erode a dwindling resource base. For example, the loss of any one archaeological site affects all others in a region because these resources are best understood in the context of the entirety of the cultural system of which they are a part. The boundaries of an archaeologically important site often extend beyond the boundaries of a project site. As a result, a meaningful approach to preserving and managing cultural resources must focus on the likely distribution of cultural resources, rather than on project or parcel boundaries. The cultural system is represented historically and archaeologically by the total inventory of all sites, features, structures, and other cultural remains in the region. Proper planning and appropriate mitigation can help to capture and preserve knowledge of such resources and can provide

opportunities for increasing our understanding of the past environmental conditions and cultures by recording data about sites discovered and preserving artifacts found. Federal, state, and local laws are also in place, as discussed above, that protect these resources. Nevertheless, development projects in the Sacramento region have the potential to adversely affect significant cultural resources that are unique and non-renewable members of finite classes. Therefore, the cumulative impact is potentially significant. Because the proposed project has the potential to adversely affect cultural resources, the project's contribution would be cumulatively considerable, resulting in a *potentially significant cumulative impact*.

Mitigation Measure

Compliance with the following mitigation measures would ensure the project's cumulative contribution could be reduced to a less-than-considerable level, rendering the cumulative impact ***less than significant***.

5.3-4 *Implement Mitigation Measures 5.3-2 and 5.3-3.*

5.4 Noise

INTRODUCTION

This section describes the existing noise environment in the area of the proposed project site, and the potential of the proposed project to significantly increase noise levels due to project construction and operation. The analysis included in this section was developed based on a field investigation to measure existing noise levels, noise standards in the City of Sacramento General Plan, and the Federal Highway Administration (FHWA) Highway Traffic Noise Prediction model. Traffic inputs for the noise prediction model were provided by the transportation consultant.

As discussed in the Initial Study (see Appendix A), the proposed project site is not located within an airport land use plan area or within two miles of an airport or private airstrip; therefore, development of the project site would not expose people to excessive airport noise levels. This issue is not discussed further in the EIR.

Comments received during the NOP comment period included concerns about vibrational impacts due to pile driving and noise impacts to surrounding offices and residences during construction. These concerns are addressed in this section.

ENVIRONMENTAL SETTING

Fundamentals of Environmental Sound and Noise

Sound can be described in terms of amplitude (loudness) and frequency (pitch). The standard unit of sound amplitude measurement is the decibel (dB). The decibel scale is a logarithmic scale that describes the intensity of the pressure vibrations that make up a sound. The pitch of the sound is correlated to the frequency of the sound's pressure vibration. Because humans are not equally sensitive to a given sound level at all frequencies, a special scale has been devised that specifically relates noise to human sensitivity. The A- weighted decibel scale (dBA) does this by placing more importance on frequencies that are more noticeable to the human ear.

Noise is typically defined as unwanted sound. Typically, noise in any environment consists of a base of steady "background" noise made up of many distant and indistinguishable noise sources. Superimposed on this background noise is the sound from individual local sources. These sources can vary from an occasional aircraft or train passing by to virtually continuous noise from traffic on a major highway. Table 5.4-1 lists representative noise levels.

Several rating scales have been developed to analyze the adverse effect of noise on people. Since environmental noise fluctuates over time, these scales consider that the effect of noise upon people is largely dependent upon the volume of the noise, as well as the time of day when the noise occurs. Those that are applicable to this analysis are as follows:

- L_{eq}, the equivalent energy noise level, is the average acoustic energy content of noise for a stated period of time. Thus, the L_{eq} of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during the day or the night.
- L_{dn}, the Day Night Average Level, is a 24-hour average L_{eq} with a 10 dBA "weighting" added to noise during the hours of 10:00 P.M. to 7:00 A.M. to account for noise sensitivity in the nighttime.

TABLE 5.4-1

NOISE RANGES OF COMMON ACTIVITIES

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	--110--	Rock Band
Jet Fly-over at 100 feet		
	--100--	
Gas Lawnmower at 3 feet		
	--90--	
		Food Blender at 3 feet
Diesel Truck going 50 mph at 50 feet	--80--	Garbage Disposal at 3 feet
Noisy Urban Area during Daytime		
Gas Lawnmower at 100 feet	--70--	Vacuum Cleaner at 10 feet
Commercial Area		Normal Speech at 3 feet
Heavy Traffic at 300 feet	--60--	
		Large Business Office
Quiet Urban Area during Daytime	--50--	Dishwasher in Next Room
Quiet Urban Area during Nighttime	--40--	Theater, Large Conference Room (background)
Quiet Suburban Area during Nighttime		
	--30--	Library
Quiet Rural Area during Nighttime		Bedroom at Night, Concert Hall (background)
	--20--	
		Broadcast/Recording Studio
	--10--	
Lowest Threshold of Human Hearing	--0--	Lowest Threshold of Human Hearing

Source: California Department of Transportation, 1998.

Noise caused by natural sources and human activities is usually well represented by median noise levels during the day, night, or over a 24-hour period. Environmental noise levels are generally considered low when the L_{eq} is below 60 dBA, moderate in the 60 to 70 dBA range, and high above 70 dBA. Examples of settings with low daytime background noise levels are isolated, natural settings that can provide noise levels as low as 20 dBA and quiet, suburban, residential streets that can provide noise levels around 40 dBA. Noise levels above 45 dBA at night can potentially disrupt sleep. People may consider louder environments adverse, but most people living or working in urban residential or residential-commercial areas (60 to 75 dBA) or dense urban or industrial areas (65 to 80 dBA) accept the higher noise levels commonly associated with these land uses.

Noise levels from a particular source decline as distance to a receptor increases. The weather and even the makeup of intervening terrain can also help intensify or reduce noise levels at any given location. A commonly used rule of thumb for roadway noise is that for every doubling of distance from the source, the noise level is reduced by about 3 dBA at acoustically “hard” locations (i.e., the area between the noise source and the receptor is nearly complete asphalt, concrete, hard-packed soil, or other solid materials) and 4.5 dBA at acoustically “soft” locations (i.e., the area between the source and receptor is normal earth or has vegetation, including grass). Noise from stationary or point sources is reduced by about 6 to 7.5 dBA for every doubling of distance at acoustically hard and soft locations, respectively. Noise levels may also be reduced by intervening structures, such as a row of buildings, a solid wall, or a berm located between the receptor and the noise source. California homes built prior to 1970 generally provide an exterior-to-interior noise level reduction up to about 20 dB with closed windows. Homes built within the last 30 years generally provide an exterior-to-interior reduction up to about 30 dB with closed windows.

Fundamentals of Ground-borne Noise and Vibration

Vibration is sound radiated through the ground. The rumbling sound caused by the vibration of room surfaces is called ground-borne noise. The ground motion caused by vibration is measured in the U.S. as vibration decibels (VdB). The background vibration velocity level in residential and educational areas is usually around 50 VdB. Most perceptible indoor vibration is caused by sources within buildings, such as the operation of mechanical equipment, movement of people, or the slamming of doors. Typical outdoor sources of perceptible ground-borne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the ground-borne vibration from traffic is rarely perceptible. The range of interest is from approximately 50 VdB, which is the typical background vibration velocity level, to 100 VdB, which is the general threshold where damage can occur in fragile buildings.

Accurate estimates of ground-borne vibration are complicated due to the many factors that influence vibration levels at potential receivers. Main factors that have significant effects on levels of ground-borne vibration are:

Geology: Soil conditions are known to have a strong influence on the levels of ground-borne vibration. Among the most important factors are the stiffness and internal damping of the soil and the depth to bedrock. Experience has shown that vibration propagation is more efficient in clay soils as well as areas with shallow bedrock. The latter condition seems to channel or concentrate the vibration energy close to the surface, resulting in ground-borne vibration problems at large distances from the source. Factors such as layering of the soil and depth to water table can also have significant effects on the propagation of ground-borne vibration.

Receiving Building: Ground-borne vibration problems occur almost exclusively inside buildings. Therefore, the characteristics of the receiving building are a key component in the evaluation of ground-borne vibration. Vibration may be perceptible to people who are outdoors, but it is very rare for outdoor vibration to cause complaints. The vibration levels inside a building depend on the vibration energy that reaches the building foundation, the coupling of the building foundation to the soil, and the propagation of the vibration through the building structure. The general guideline is that the more massive a building is, the lower its response to incident vibration energy in the ground.[1]

The human response to different levels of ground-borne noise and vibration is described in Table 5.4-2. The first column lists vibration velocity levels, and the subsequent two columns list the corresponding noise levels assuming that the vibration spectrum peaks at either 30 hertz or 60 hertz. A hertz (Hz) is a measurement for the frequency of any periodic (repeating) event meaning “one per second.” For instance, the ticking of a clock could be expressed as 1 Hz or one tick per second. Similarly, the human heart might be said to beat at 1.2 Hz or 1.2 beats per second. Generally, the A-weighted noise level will be approximately 40 dB less than the vibration velocity level if the spectrum peak is around 30 Hz, and 25 dB lower if the spectrum peak is around 60 Hz. Achieving either the acceptable vibration or acceptable noise levels does not guarantee that the other will be acceptable. For example, the noise caused by vibrating structural components may be very annoying even though the vibration cannot be felt.

1 U.S. Department of Transportation Federal Railroad Administration, *High-Speed Ground Transportation Noise and Vibration Impact Assessment*, October 2005, p. 6-7.

TABLE 5.4-2

HUMAN RESPONSE TO DIFFERENT LEVELS OF GROUND-BORNE NOISE AND VIBRATION

Vibration Level	Noise Level		Human Response
	Low-Frequency[1]	Mid-Frequency[2]	
65 VdB	25 dBA	40 dBA	Approximate threshold of perception for many humans. Low-frequency sound usually inaudible, mid-frequency sound excessive for quiet sleeping areas.
75 VdB	35 dBA	50 dBA	Approximate dividing line between barely perceptible and distinctly perceptible. Many people find vibration at this level unacceptable. Low-frequency noise acceptable for sleeping areas, mid-frequency noise annoying in most quiet occupied areas.
85 VdB	45 dBA	60 dBA	Vibration acceptable only if there are an infrequent number of events per day. Low-frequency noise unacceptable for sleeping areas, mid-frequency noise unacceptable even for infrequent events with institutional land uses such as schools and churches.

Notes:
1 – Approximate noise level when vibration spectrum peak is near 30 Hz.
2 – Approximate noise level when vibration spectrum peak is near 60 Hz.
Source: Department of Transportation Federal Railroad Administration, *High-Speed Ground Transportation Noise and Vibration Impact* Assessment, October 2005, p. 6-8.

Existing Conditions

Existing Noise Receptors

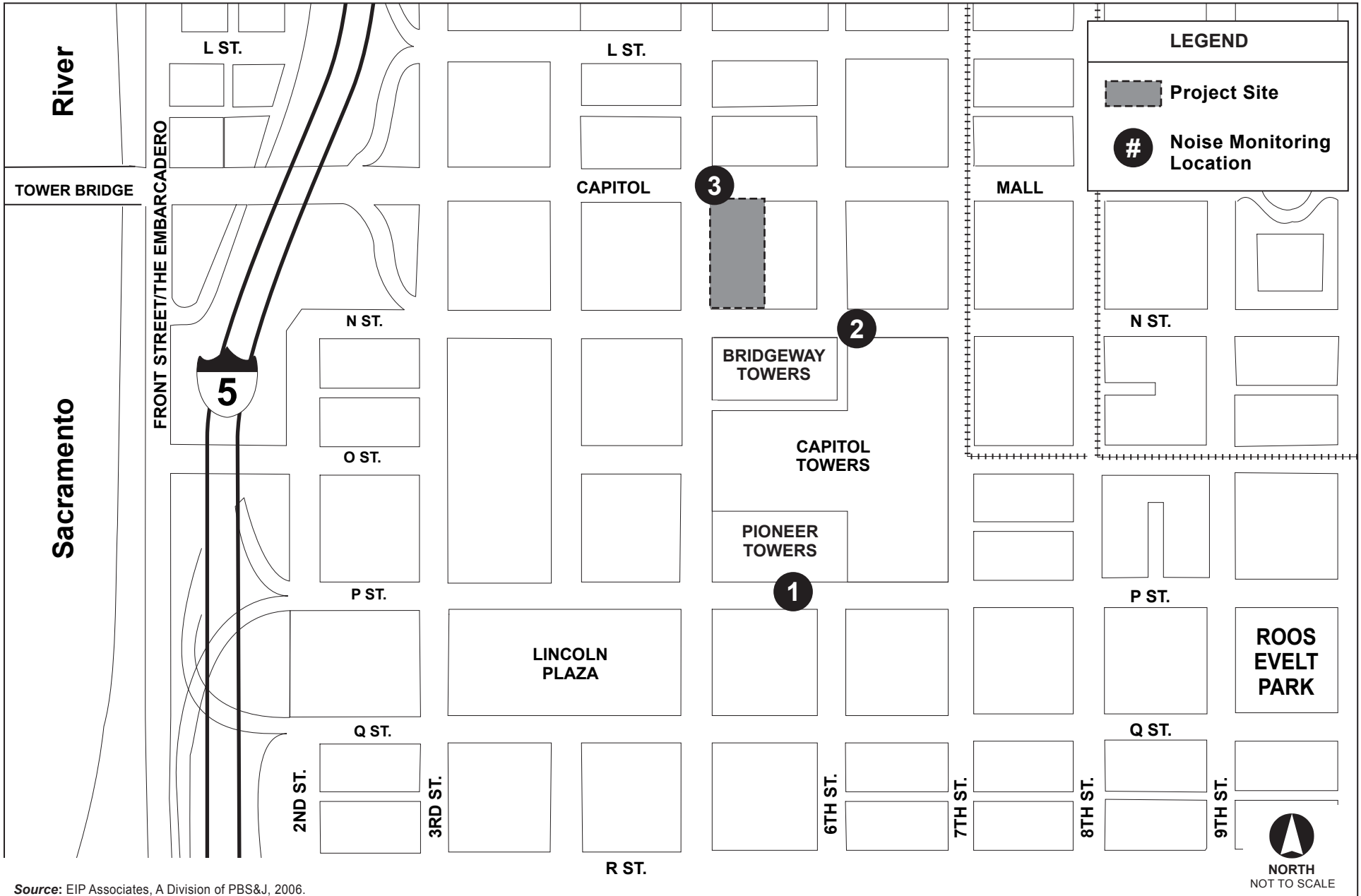
Some land uses are more sensitive to noise than others. These sensitive uses are commonly referred to as "sensitive receptors", and normally include residences, hospitals, churches, libraries, schools, and retirement homes. Noise sensitive land uses are typically given special attention because activities at these uses require relatively quiet environments.

The proposed project would be developed on land where there is currently an empty bank building. The project site is located within the City's Central Business District and is surrounded by dense urban uses. Office buildings, retail, commercial, and residential uses predominate in the area around the site. A light rail line runs down 7th Street, approximately one and a half blocks from the project site (about 500 feet). Interstate 5 (I-5), a major freeway, is located approximately 1,000 feet from the proposed site. Nearby existing residential uses include Bridgeway Towers (across N Street to the south, approximately 50 feet), Capitol Towers (across N Street to the south and southeast, approximately 50 feet), Pioneer Towers (across N Street to the south, approximately 200 feet), and Governor's Square (across N Street to the southwest, approximately 400 feet).

Existing Ambient Daytime Noise Levels

The scientific instrument used to measure noise is a sound level meter. Sound level meters can accurately measure environmental noise levels to within about plus or minus 1 dBA.

Existing ambient daytime noise levels were measured at three selected locations over 15 minute periods in and around the project site on January 5, 2006 and March 23, 2006. These locations are identified in Figure 5.4-1. The noise levels were measured using a Larson-Davis Model 720 precision sound level meter, which satisfies the American National Standards Institute (ANSI) for general environmental noise measurement instrumentation. The average noise levels and sources of noise measured at each location are identified in Table 5.4-3. At each monitoring location, the primary source of noise was the nearest roadway. Measurements were taken approximately 38 feet from the center of the nearest roadway.



Source: EIP Associates, A Division of PBS&J, 2006.

EIP ASSOCIATES
A Division of PBS&J

FIGURE **5.4-1**
Noise Monitoring Locations

TABLE 5.4-3

EXISTING DAYTIME NOISE LEVELS AT SELECTED LOCATIONS

Noise Measurement Location	Distance from Centerline (feet)	Primary Noise Sources	Estimated Noise Levels 15-minute L_{eq}
#1 – In front of Pioneer Towers (along P Street)	38	Roadway noise from P Street.	64.5
#2 – In front of Capitol Towers (along N Street)	38	Roadway noise from N Street.	63.1
#3 – In front of 500 Capitol Mall	46	Roadway noise from Capitol Mall.	65.1

Source: EIP Associates, a division of PBS&J, 2006.

Existing Roadway Noise

The project site is surrounded by dense urban development. Consequently, a fairly heavy volume of traffic operates on the surrounding local streets throughout the day. The local roadways that contribute the most to noise levels at the project site are those directly adjacent to the site, namely 5th Street, Capitol Mall, and N Street.

Existing Ground-borne Vibration

Usually, the most likely existing source of ground-borne vibration at a project site is roadway truck and bus traffic. Trucks and buses typically generate ground-borne vibration velocity levels of around 63 VdB, but could reach 72 VdB where trucks and buses pass over bumps in the road. Loaded trucks can create even higher levels of VdB. Truck and bus traffic is intermittently present on all roads bordering the project site. Also, a light rail line runs down 7th Street, about 500 feet from the project site. Light rail trains running north and south pass by the intersection of 7th Street and Capitol Mall at approximately 10 to 15 minute intervals. These trains produce some ground-borne vibration.

REGULATORY SETTING

Federal

Code of Federal Regulations

The Code of Federal Regulations (CFR) is the codification of the general and permanent rules published in the Federal Register by the executive departments and agencies of the Federal Government. It is divided into 50 titles that represent broad areas subject to Federal regulation. Each volume of the CFR is updated once each calendar year and is issued on a quarterly basis.

Occupational Safety and Health Administration

The Occupational Safety and Health Administration (OSHA) aims to ensure worker safety and health in the United States by working with employers and employees to create better working environments. With regard to noise exposure and workers, OSHA regulations set forth accepted criteria to protect the hearing of workers exposed to occupational noise. Noise exposure regulations are listed in 29 CFR Section 1910.95. Most applicable to this project, 1910.95(c)(1) states that an employer shall administer a hearing conservation program whenever noise exposure levels equal or exceed an 8-hour time-weighted average sound level of 85 dB measured on the A scale.

State

Department of Industrial Relations

The Division of Occupational Safety and Health (DOSH) protects workers and the public from safety hazards through its CAL/OSHA program. The Cal/OSHA Program is responsible for enforcing California laws and regulations pertaining to workplace safety and health and for providing assistance to employers and workers about workplace safety and health issues. DOSH enforces noise standards in the workplace in conjunction with OSHA through the CAL/OSHA program

Local

City of Sacramento General Plan

The California Government Code requires that a noise element be included in the general plan of each county and city in the state. The purpose of the noise element is to ensure that noise control is incorporated into the planning process. The noise element can help city planners achieve and maintain consistent noise levels for existing and proposed land uses.

The City is currently in the process of updating its General Plan, but the existing City of Sacramento General Plan contains goals, policies, and information related to noise that are included in the Health and Safety element of the General Plan. This element establishes maximum acceptable exterior noise level criteria for new development, which are shown in the Community Noise Exposure Levels found in Figure 3 of the City of Sacramento General Plan on page 8-27 (reproduced in this section as Figure 5.4-2)

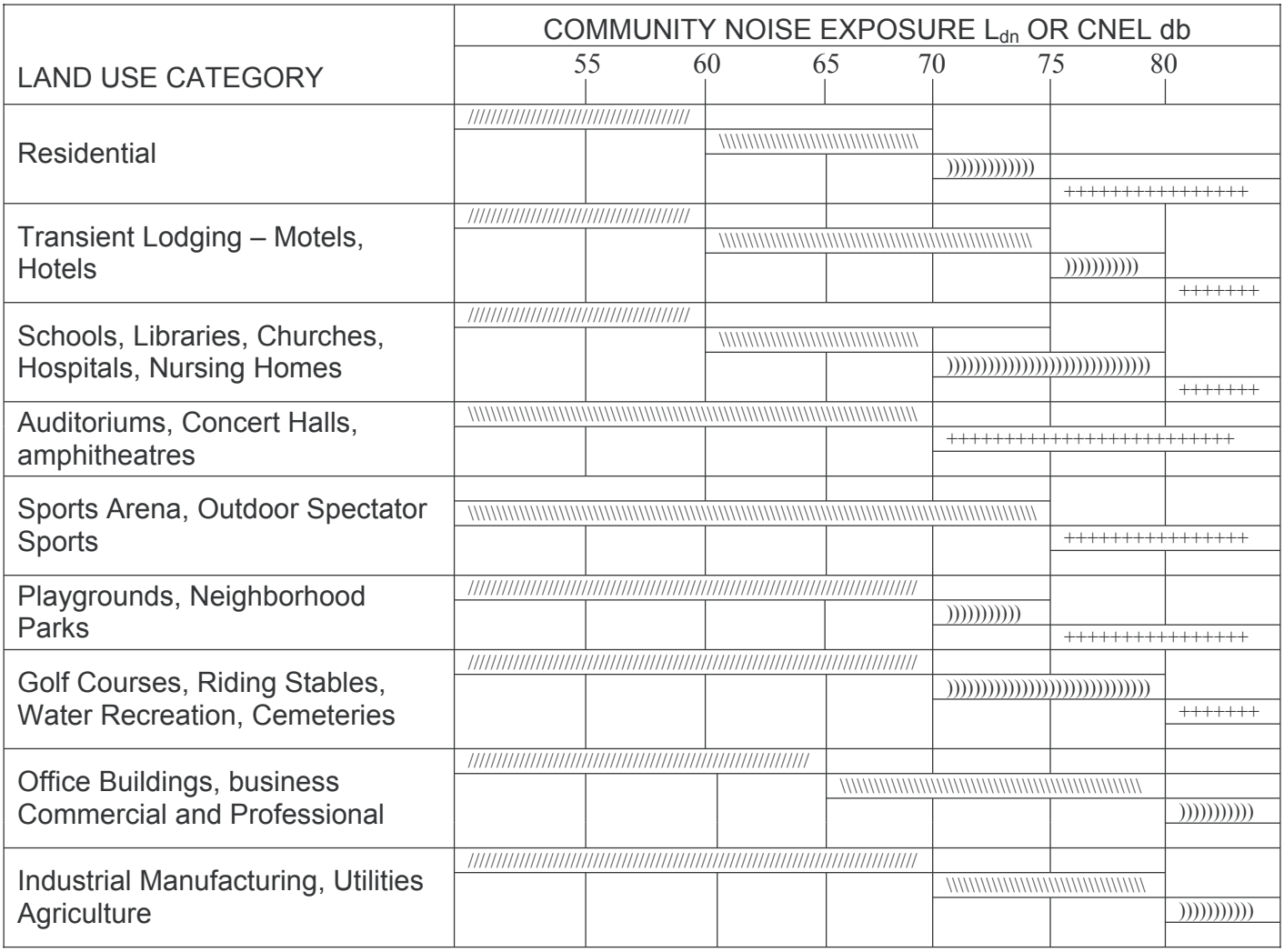
The General Plan identifies five goals concerning noise in its Health and Safety element. Each goal is implemented by a number of corresponding policies:

Goal A Future development should be compatible with the projected year 2016 noise environment.

Policies

1. Require an acoustical report for any project which would be exposed to noise levels in excess of those shown as normally acceptable in Figure 3. The contents of the acoustical report shall be as described in the Noise Assessment Report Guidelines. No acoustical report shall be required where City staff has an existing acoustical report on file which is applicable.
2. Require mitigation measures to reduce noise exposure to the "Normally Acceptable Levels" (Figure 3) except where such measures are not feasible. It is recognized that there are many areas within the City for which it is not feasible to provide further noise mitigation. It is also recognized that some projects, because of their location, design, or size may not be able to incorporate mitigation measures that are feasible for larger projects or for projects in different locations. Specifically, around McClellan Air Force Base, there are areas where the noise contours indicate that it may be clearly infeasible to achieve the "Normally acceptable" noise level. Projects in these areas may be allowed to exceed the maximum acceptable noise level. However, each project shall be subject to mitigation measures to the maximum extent feasible.
3. Land uses proposed where the exterior noise level would be below the "normally acceptable" limit may be approved without any requirement for interior or exterior mitigation measures.
   Where the exterior noise is below the "normally acceptable" limit, it is assumed that any buildings involved are of normal conventional construction without any special interior noise provisions. This will, under normal circumstances, provide an acceptable interior noise level.
   "Maximum acceptable" interior noise levels have not been established for land use categories in Figure 3. The types of interior use in these categories vary substantially. As a general rule, acceptable noise mitigation will be that which provides for interior noise levels comparable to the noise levels that would exist in buildings where the exterior noise is below the "normally acceptable" standard.

Goal C Eliminate or minimize the noise impacts of future development on existing land uses in Sacramento.



INTERPRETATION

//////////////	NORMALLY ACCEPTABLE	))))))))))))))	NORMALLY UNACCEPTABLE
Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise requirements		New construction or development shouldbe discouraged. If new construction ordevelopment does proceed, a detailed analysis of the noise reduction requirement must be made and needed noise insulation features included in the design.	
\\\\\\\\\\\\\\\	CONDITIONALLY ACCEPTABLE	++++++++	CLEARLY UNACCEPTABLE
New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design.		New construction or development clearly should not be undertaken.	

Source: Sacramento General Plan,1988.

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FIGURE **5.4-2**

Land Use Compatibility for Community Noise Environments

D51121.00

500 Capitol Mall

Policies

1. Review projects that may have noise generation potential to determine what impact they may have on existing uses. Additional acoustical analysis may be necessary to mitigate identified impacts.
   There are areas of the City which are considered relatively quiet (ambient levels below "normally acceptable" noise levels). While new development in these areas might not cause the "normally acceptable" noise level for existing development to be exceeded, it is recognized that such new development might cause an increase in ambient noise considered significant in terms of impacts on existing uses.
   Enforce the Sacramento Noise Ordinance as the method to control noise from sources other than transportation sources.

Goal D Reduce noise levels in areas where noise exposure presently exceeds the standards established in Figure 3.

Policies

1. Continue to enforce the provisions of sections 27-150 and 27-151 of the State Motor Vehicle Code. These sections require that all vehicles be equipped with a properly maintained muffler and that exhaust systems not be modified.
2. Encourage the incorporation of the latest noise control technologies in all projects.

Sacramento Central City Community Plan

In addition to the General Plan, the City of Sacramento has also developed plans that are more specific to the various communities in the City. The City's Central City Community Plan contains the following sub goal under its environmental goal:

Sub-goal

- Provide an environment which is free of annoying noise and continue to reduce air pollution.

Sacramento Municipal Code

The Sacramento Municipal Code also contains regulations concerning noise. These noise regulations are found in Title 8 – Health and Safety, Chapter 8.68 – Noise Control. Of the regulations in Chapter 8.68, not all are applicable to the proposed project. Of the applicable regulations, section 8.68.060 sets standards for cumulative exterior noise levels at residential and agricultural properties. Section 8.68.190 generally prohibits any person from making "any loud, unnecessary or unusual noise which disturbs the peace and quiet of any neighborhood or which causes discomfort or annoyance to any reasonable person of normal sensitiveness residing in the area." However, section 8.68.060 exempts certain activities from Chapter 8.68, including "noise sources due to the erection (including excavation), demolition, alteration or repair of any building or structure" as long as these activities are limited to between the hours of 7 a.m. and 6 p.m. Monday through Saturday, and between the hours of 9 a.m. and 6 p.m. on Sunday. Section 8.68.060 also requires the use of exhaust and intake silencers for internal combustion engines, and provides for construction work to occur outside of the designated hours if the work is of urgent necessity and in the interest of public health and welfare for a period not to exceed three days.

IMPACTS AND MITIGATION MEASURES

Methods of Analysis

Traffic Noise Impact Assessment Methodology

The analysis of the existing and future noise environments presented in this analysis is based on noise level monitoring, noise prediction modeling, and empirical observations. Existing noise levels were monitored by EIP Associates at selected locations within the project vicinity using a Larson-Davis Model 814 precision sound level meter, which satisfies the American National Standards Institute (ANSI) for general environmental noise measurement instrumentation.

Noise modeling focuses on the noise resulting from traffic on roadways in the vicinity of a project. Modeling procedures involve the calculation of existing and future vehicular noise levels along individual roadway segments in the project vicinity. This task was accomplished using the FHWA Highway Noise Prediction Model (FHWA RD 77 108), which calculates the average noise level at specific locations based on traffic volumes, average speeds, roadway geometry, and environmental site conditions. The average vehicle noise rates (energy rates) utilized in the FHWA Model were modified by Caltrans to reflect average vehicle noise rates identified for California. The Caltrans data show that California automobile noise is 0.8 to 1.0 dBA higher than national levels and that medium and heavy truck noise is 0.3 to 3.0 dBA lower than national levels. Traffic volumes utilized as data inputs in the noise prediction model were provided by the project traffic engineer. Noise modeling results are included as Appendix F.

Construction Noise and Vibration Impact Methodology

Construction noise was analyzed using data compiled by the US Environmental Protection Agency that lists typical noise levels at 50 feet for construction equipment and various construction activities. Vibration from construction was evaluated using data from the Federal Transit Administration that lists typical vibration decibels at various distances for common construction equipment.

Standards of Significance

For the purposes of this EIR, noise impacts are considered significant if the proposed project would:

- Permanently expose nearby sensitive uses to excessive ground-borne vibration levels. While CEQA states that the potential for any excessive ground-borne vibration levels must be analyzed, it does not define “excessive”, and there are no federal, state, or local standards for ground-borne vibration. Consequently, this analysis uses the Federal Railway Administration’s vibration impact thresholds for sensitive buildings, residences, and institutional land uses. These thresholds are 80 VdB at residences and buildings where people normally sleep (e.g., nearby residences) and 83 VdB at institutional buildings;
- Create vibration that would cause structural damage to existing buildings;
- Cause non-transportation maximum noise levels at any surrounding residential uses to exceed the noise performance standards specified in Section 8.68.060 of the City of Sacramento Municipal Code;
- Place new development in an area where noise levels exceed or are projected to exceed the Community Noise Exposure Levels found in Figure 3 of the City of Sacramento General Plan on page 8-27 (reproduced in this section as Figure 5.4-2); or
- Expose persons to a substantial temporary or periodic increase in ambient noise levels that exceed City standards.

Project-Specific Impacts and Mitigation Measures

5.4-1 Construction of the proposed project would temporarily produce noise. This is a *short-term significant impact.*

During construction of the proposed project, noise levels would be produced by the operation of heavy-duty equipment and various other construction activities, including demolition. According to the project applicant, pile driving would be used in conjunction with drilling for establishing the building foundation or “founding” the building. The current program for founding the building would employ drilling to a certain depth, followed by pile driving.

Construction noise would affect surrounding uses to varying degrees throughout the construction schedule, approximately 26 months. As discussed in the environmental setting, there are sensitive

uses surrounding the project site, specifically residential uses to the south and southwest, although the majority of uses in the project vicinity are office and commercial. Construction noise would be noticeable at residential, office, and commercial uses in the area, but construction would occur during the daytime when most residents would be at work. It should be noted that Pioneer Towers is a senior facility and, as such, residential units would likely be occupied during construction activities, thereby increasing the possibility of an adverse community reaction. However, it is unlikely that residents would be subject to significant levels of construction noise due to distance and the presence of intervening structures. The Sacramento Municipal Code, Title 8 - Health and Safety, Chapter 8.68 – Noise Control, requires that construction activity take place between the hours of 7 a.m. and 6 p.m. Monday through Saturday. Construction is also limited to the hours between 9 a.m. and 6 p.m. on Sunday. The City director of building inspections may also permit work to be done outside of these hours in the case of urgent necessity and in the interest of public health and welfare for a period not to exceed three days. Since typical sleeping hours fall outside of the time during which construction must occur, construction noise would not be expected to disturb the sleep of nearby residents. Office and commercial uses in the vicinity of the project site would be open during the day when construction would occur. The noise from construction could disturb people working in these buildings, making it difficult to concentrate. Older California building standards (pre-1970) generally provide a reduction of exterior-to-interior noise levels up to about 20 dB with closed windows; newer buildings generally provide a reduction up to about 30 dB. Therefore, the noise levels produced by the equipment (shown in Table 5.4-4) are higher than what would actually be experienced within residential units in the vicinity of the project.

The Sacramento Municipal Code includes an exemption for noise produced by construction activities between the hours of 7 a.m. and 6 p.m. on weekdays; however, a 1990 Notice of Decision and Finding of Fact for the Wells Fargo Center includes the condition that high noise activities be restricted to the hours between 8 a.m. and 6 p.m. on weekdays (or other such hours satisfactory to the Planning Director), with no high-noise construction activities allowed on Saturday or Sunday. Because of the proximity of the proposed project site to the Wells Fargo Center, that mitigation is included here. Although Mitigation Measure 5.4-1 would reduce construction noise impacts, surrounding residents and businesses would be affected by development of the proposed project. Therefore, this would be considered a *short-term significant impact*.

Mitigation Measures

Implementation of the following mitigation measures would contribute to a reduction in construction noise; however, it is likely that construction activities would still adversely affect surrounding receptors during the day. This impact would be considered ***significant and unavoidable.***

5.4-1 *The prime contractor shall ensure that the following measures are implemented during all phases of project construction:*

a) *Erect a solid plywood construction/noise barrier along the exposed project boundaries. The barrier should not contain any significant gaps at its base or face, except for site access and surveying openings.*

b) *Construction activities shall comply with the City of Sacramento Noise Ordinance, including Section 8.68.060 requiring the use of exhaust and intake silencers for internal combustion engines.*

TABLE 5.4-4

ESTIMATED CONSTRUCTION NOISE LEVELS AND SUGGESTED CRITERIA (IN DBA)

Construction Equipment	1-hour L_{eq}	Suggested Criteria	8-hour L_{eq}	Suggested Criteria	Noise Reduction Resultant from Mitigation
DEMOLITION					
Track Hoe	86.5		86.5		
Crane	84.5		81.5		
SITE WORK					
Crawler Tractor	81.5		78.5		
Grader	81.5		81.5		
Loader	81.5		78.5		
Compactor	78.5		75.5		
FOUNDATION					
Backhoe	76.5		76.5		
Loader	81.5		78.5		
Forklift	75.5		72.5		
Pile Driver	97.5		94.5		
UTILITIES					
Back Hoe	76.5		73.5		
Water Truck	84.5		81.5		5 dB – 30 dB (depending on location of receptor)
Forklift	75.5	**90**	72.5	**80**	
SLAB ON GRADE					
Skip Loader	78.5		78.5		
Bobcat Tractor	80.5		80.5		
Forklift	75.5		72.5		
STEEL ERECTION					
Crane	84.5		84.5		
Air Compressor	77.5		77.5		
Generator	77.5		77.5		
Forklift	75.5		75.5		
DECKING/SLABS					
Generator	77.5		77.5		
Forklift	75.5		75.5		
Concrete Pump	78.5		72.5		
COMPLETION					
Forklift	75.5		75.5		

Notes:
Noise levels calculated from equations defined by the Federal Transit Administration's *Transit Noise and Vibration Impact Assessment* document, pp. 12-2 to 12-7.
Source: EIP Associates, a division of PBS&J, 2006.

c) *Locate fixed construction equipment, such as compressors and generators, as far as possible from sensitive receptors located along N Street. Shroud or shield all impact tools and muffle or shield all intake and exhaust ports on power construction equipment.*

d) *High noise activities, such as pile driving, the use of jackhammers, drills, and other generators of sporadic high noise peaks, shall be restricted to the hours of 8:00 a.m. to 6:00 p.m. Monday through Friday or other such hours satisfactory to the Planning Director and shall not occur on Saturday or Sunday.*

e) *Prior to issuance of a building permit, the applicant shall submit a plan subject to the satisfaction of the Planning Director demonstrating how the proposed project shall mitigate construction noise to the extent feasible.*

f) *Designate a disturbance coordinator and conspicuously post this person's number around the project site and in adjacent public spaces. This disturbance coordinator will receive all public complaints about construction noise disturbances and will be responsible for determining the cause of the complaint, and implement any feasible measures to be taken to alleviate the problem.*

5.4-2 Construction activity would temporarily produce ground-borne vibration. This is a *significant impact*.

In addition to noise, construction activity can also produce vibration. Construction-related vibration is normally associated with impact equipment, such as jackhammers and pile drivers, and the operation of some heavy-duty construction equipment, such as trucks and bulldozers. Table 5.4-5 shows typical vibration levels for construction equipment.

TABLE 5.4-5

TYPICAL UPPER RANGE VIBRATION LEVELS FOR CONSTRUCTION EQUIPMENT

Construction Equipment	Approximate VdB				
	25 Feet	50 Feet	60 Feet	75 Feet	100 Feet
Large Bulldozer	87	81	79	77	75
Loaded Trucks	86	80	78	76	74
Jackhammer	79	73	71	69	67
Pile Driver (Impact)	112	106	104	102	100
Small Bulldozer	58	52	50	48	46

Source: Derived from Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*, April 1995, p. 12-9.

Construction-related vibration has two potential impacts. First, vibration at high enough levels can disturb people trying to sleep. Thresholds for this land use have been developed by the Federal Transit Administration, which has determined that infrequent events producing vibration levels in excess of 80 VdB can result in a significant impact at places where people sleep. Second, ground-borne vibration over 102 VdB can potentially damage the foundations and exteriors of existing, fragile structures. For extremely fragile buildings, the vibration damage threshold is approximately 90 VdB. Ground-borne vibration that can cause this kind of damage is typically limited to impact equipment, especially pile-drivers. No fragile or extremely fragile buildings have been identified near the proposed project site. Table 5.4-6 presents criteria for acceptable ground-borne vibration for different land uses.

TABLE 5.4-6

GROUND-BORNE VIBRATION CRITERIA

Land Use Category	Ground-Borne Vibration Impact Levels (VdB referenced to 1 micro inch/sec)	
	Frequent Events[1]	Infrequent Events[2]
Category 1: Buildings where low ambient vibration is essential for interior operations.	65 VdB	65 VdB
Category 2: Residences and buildings where people normally sleep.	72 VdB	80 VdB
Category 3: Institutional land uses with primarily daytime uses.	75 VdB	83 VdB

Notes:
1 – 'Frequent Events' is defined as more than 70 vibration events per day.
2 – 'Infrequent Events' is defined as fewer than 70 vibration events per day.
Source: Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*, April 1995, p. 8-3.

As discussed earlier in the section, there are residential and office uses directly adjacent to the proposed project site. The closest residential and office uses to the project site are approximately 75 feet away. As shown in Table 5.4-6, this distance could potentially expose people to levels in excess of 80 VdB during pile driving activity. Since construction would occur during daylight hours, sleep disturbance would likely not occur. Pile driving would produce the highest vibration levels, but would only occur for a brief amount of time (relative to the overall construction length), approximately 50 days. Equipment used after the pile driving phase would expose receptors to levels less than 80 VdB, and these levels would be intermittent. Residents and office employees may be able to feel ground-borne vibration produced during construction, but most likely only during pile driving. The extent to which these receptors would be affected depends largely on soil conditions, building design and materials, and the particular floor the receptors are on. While construction related vibration would be limited to the duration of the construction schedule, due to the close proximity of existing receptors during pile driving, vibrational impacts would be considered *significant*.

Mitigation Measures

While implementation of the following measure would reduce vibrational impacts to surrounding receptors, pile driving could still affect nearby residents. Accordingly, impacts would be considered ***significant and unavoidable***.

5.4-2 *The project applicant shall drill pilot holes for piles, to the extent feasible, prior to commencement of impact pile driving. Prior to issuance of a building permit, the project applicant shall submit to the City for approval the anticipated depth to which piles will be drilled and the estimated start date and end date of impact pile driving.*

5.4-3 The proposed project could expose sensitive receptors to noise levels that exceed City standards. This is a *less-than-significant impact.*

Sensitive noise receptors are those uses that are more likely to be adversely affected by an increase in ambient noise levels. This includes uses such as schools, hospitals, retirement homes, and residences. Sensitive noise receptors that would be affected by development of the proposed project are those residential uses located in Bridgeway Towers, Capitol Towers, Governor's Square, and Pioneer Towers. Most of the existing noise to which these residences are exposed to is traffic noise on the surrounding roads and noise from the nearby light rail. Increases in ambient noise associated with development of the proposed project would be related to traffic. It should be noted that the proposed project includes a car exiting warning device for the parking garage. This device would be similar to existing devices along N Street and 5th Street and would not substantially affect the noise environment.

The results of traffic noise modeling for roads in the vicinity of the proposed project are shown in Table 5.4-7 (noise levels shown in the table represent traffic noise generated at ground level). As shown in the table, traffic noise levels outside Bridgeway Towers could be as high as 66.2 dBA L_{dn} (along N Street) and as high as 69.0 dBA L_{dn} (along P Street) outside Capitol Towers, Governor's Square, and Pioneer Towers.

The Sacramento General Plan specifies an acceptable exterior noise level for common outdoor areas at multi-family uses of 60 dB L_{dn}. While the previously listed residential buildings all have balconies, balconies are considered private space and are not subject to the 60 dB L_{dn} General Plan standard. Outdoor balconies would be subjected to traffic related noise, but due to the varying height of receptors, not every floor would be exposed to the same noise level. Outdoor gathering areas, such as a pool or picnic area, are present at Capitol Towers and Governor's Square and

TABLE 5.4-7

BASELINE[1] TRAFFIC NOISE LEVELS AND IMPACT CRITERIA

Roadway	Segment	Noise Levels (L_{dn}) 50 Feet From Centerline (dBA)		
		Baseline No Project	Baseline Plus Project	Increase
7th Street	J Street to N Street	64.9	65.4	0.5
5th Street	J Street to Q Street	66.3	66.9	0.6
3rd Street	J Street to Q Street	66.0	66.0	0.0
Capitol Mall	3rd Street to 7th Street	68.2	68.3	0.1
N Street	3rd Street to 7th Street	64.4	66.2	1.8
P Street	16th Street to 3rd Street	68.9	69.0	0.1
Q Street	3rd Street to 16th Street	68.9	69.1	0.2

Notes:
1 – 'Baseline' is defined in the traffic study as development of the following projects:
1. Crocker Art Museum Expansion
2. 301 Capitol Mall
3. 601 Capitol Mall
4. Metro Place Office / Residential
5. 15th and L Streets Hotel
6. CalPERS Headquarters Expansion
7. Sutter Medical Center Expansion
8. Trinity Cathedral Expansion
9. CADA East End Gateway Residential
10. Capitol West End Project Central Plant Renovation
11. Conversion of 3rd Street to two-way operations between I and J Streets
12. Amtrak / Folsom Corridor Light Rail Extension – Amtrak Extension (Regional Transit)

Source: EIP Associates, a division of PBS&J, 2006.

would be subject to the City's standard. Traffic noise is considered a line source and, generally speaking, the sound pressure level for a line source is reduced by 3 dB for every doubling of distance. The common outdoor areas identified at these locations are approximately 100 feet from the street and are shielded by buildings and walls that would most likely attenuate noise to levels below the General Plan standard. While outdoor areas would most likely not be subjected to noise levels in excess of the General Plan standard, it is necessary to quantify the projected increase in order to fully evaluate the proposed project's impact.

With the exception of the N Street segment, project-related traffic would contribute to an increase of 0.1, 0.2, 0.5, or 0.6 dBA L_{dn} to surrounding roadway noise levels. As shown in Table 5.4-8, development of the proposed project would increase baseline noise levels along N Street, where levels would be increased by up to 1.8 dBA L_{dn}. According to the City of Sacramento General Plan DEIR noise impact criteria, an increase of 3.0 dB would constitute a significant increase.[2] Project-related traffic along N Street would not result in an impact along that segment. Noise levels at multi-family outdoor activity areas are estimated to be below the General Plan Standard of 60 dB L_{dn}. Consequently, this would be considered a ***less-than-significant*** impact.

Mitigation Measures

None required.

5.4-4 The proposed project could expose existing non-sensitive receptors to ambient noise levels that exceed City standards. This is a *less-than-significant impact.*

2 City of Sacramento, *City of Sacramento General Plan Update Draft Environmental Impact Report, SCH#86101310*, prepared by Jones and Stokes Associates, March 1987, page AA-48.

Increased noise levels would affect surrounding businesses as a result of project development. However, since office buildings in the immediate vicinity are multi-story buildings, any potential noise increase would be perceived differently depending on the floor and location of the particular receptor. It is clear that project-related traffic would not result in any impact to surrounding office buildings. Since the estimated noise level increases are all well below the allowable noise exposure thresholds, this impact is considered ***less than significant***.

Mitigation Measures

None required.

Cumulative Impacts and Mitigation Measures

The cumulative context for noise impacts associated with the proposed project consists of the existing and future noise sources that could affect the project or surrounding uses, which are primarily from traffic. Development assumptions used in the cumulative analysis are from the traffic report. Noise generated by project construction, including vibration, would be temporary, and would not add to the permanent noise environment, so it is not considered as part of the cumulative context.

5.4-5 The proposed project, in conjunction with planned future development, could expose receptors to increased noise levels. This is a *significant cumulative impact.*

As shown in Table 5.4-8, cumulative traffic noise affecting surrounding residential buildings could increase from current levels by up to 3.4 dB along N Street and up to 2.2 dB along 7th Street to 67.8 dB L_{dn} along N Street and 67.1 dB L_{dn} along 7th Street. This is considered a *significant cumulative impact*. As discussed in Impact 5.4-3, the proposed project would contribute to the traffic noise levels along each of the study segments, but none to a level that exceeds the City's 3dB standard. Therefore, the project's contribution would be *less-than-cumulatively considerable*, so this would be considered a ***less-than-significant cumulative impact.***

Mitigation Measures

None required.

TABLE 5.4-8

CUMULATIVE 2030 TRAFFIC NOISE LEVELS COMPARED TO BASELINE[1]

Roadway	Segment	Noise Levels (L_{dn}) 50 Feet From Centerline (dBA)		
		Baseline	Cumulative[1]	Increase
7th Street	J Street to N Street	64.9	67.1	2.2
5th Street	J Street to Q Street	66.3	67.4	1.1
3rd Street	J Street to Q Street	66.0	66.7	0.7
Capitol Mall	3rd Street to 7th Street	68.2	68.9	0.7
N Street	3rd Street to 7th Street	64.4	67.8	3.4
P Street	16th Street to 3rd Street	68.9	69.4	0.5
Q Street	3rd Street to 16th Street	68.9	69.6	0.7

Notes:
1 – 'Projects' is defined in the traffic study as development of the following projects:
1. Crocker Art Museum Expansion
2. 301 Capitol Mall
3. 601 Capitol Mall
4. Metro Place Office / Residential
5. 15th and L Streets Hotel
6. CalPERS Headquarters Expansion
7. Sutter Medical Center Expansion
8. Trinity Cathedral Expansion
9. CADA East End Gateway Residential
10. Capitol West End Project Central Plant Renovation
11. Conversion of 3rd Street to two-way operations between I and J Streets
12. Amtrak / Folsom Corridor Light Rail Extension – Amtrak Extension (Regional Transit)
13. EPIC Tower

2 – As defined on page A-5 of the Federal Transit Administration's *Transit Noise and Vibration Impact Assessment* document.
Source: EIP Associates, a division of PBS&J, 2006.

5.5 Public Services

5.5 PUBLIC UTILITIES

INTRODUCTION

This section addresses the demand for public utilities and services generated by the 500 Capitol Mall Project (proposed project) and the ability of current systems to accommodate that demand. Impacts to solid waste, wastewater, storm drainage, and water supply are discussed in this section.

The solid waste section identifies the existing condition of the landfills that could serve the project, estimates the amount of solid waste generated by the proposed project and compares projected solid waste generated to landfill capacity. Information for this analysis was obtained from the Sacramento General Plan, the California Integrated Waste Management Board (CIWMB), and City staff.

The wastewater and storm drainage section discusses the existing condition of the City's wastewater and stormwater collection and treatment systems and estimates the amount of wastewater and drainage generated by the proposed project. Information for this analysis was obtained from the Sacramento General Plan, City staff, and other City environmental documents, including *The Towers on Capitol Mall DEIR, May 2005 (SCH# 2004122137)* and the *Combined Sewer System Rehabilitation and Improvement Plan DEIR*.

The Water Supply section of the EIR describes the water supply that would serve the proposed project in relation to overall water supplies for the City of Sacramento. In addition, this section assesses the anticipated water demand resulting from the proposed project, evaluates the effects of the proposed project on existing and future water infrastructure, and recommends mitigation measures where appropriate. There were no comments in response to the Notice of Preparation regarding water supply. Information in this section is based on the *Urban Water Management Plan Prepared for the City of Sacramento*, Maddaus Consulting (2000), Sacramento River Water Reliability Study (March 2005), and City staff. The Water Supply Assessment prepared for the proposed project is included as Appendix G of this EIR.

The Initial Study (see Appendix A) prepared for the project determined that impacts on the following utilities and public services would be less than significant: law enforcement, schools, libraries, parks, fire protection, energy and natural gas, and telecommunications. Therefore, these issue areas are not addressed in the EIR analysis.

Comments received in response to the NOP (see Appendix B) included concerns regarding water quality and recycling. Both of these issues are addressed in this section, while comments regarding fire department requirements are addressed in the Initial Study (see Appendix A).

SOLID WASTE

ENVIRONMENTAL SETTING

Within the City of Sacramento, commercial waste collection is performed by both City and permitted private haulers. Residential and commercial solid waste collected by the City is transported to the Sacramento Recycling and Transfer Station (8491 Fruitridge Road) and is then transported to Lockwood Landfill, near Sparks, Nevada. Commercial waste collected by private companies is disposed at a variety of facilities including the Sacramento County Keifer Landfill, the Yolo County Landfill, Forward Landfill, L and D Landfill, and several privately run transfer stations.[1] Private haulers can deliver waste to the landfill of their choice; they typically select the most cost-efficient option.

In 2000, the City of Sacramento disposed of a total of 500,291 tons (34 percent household waste and 66 percent business waste). Of this total, the City exported 210,862 tons (42 percent) out of state for disposal. The City of Sacramento achieved a diversion rate of 45 percent in 2000.[2]

There are two large volume transfer stations - Sacramento Recycling and Transfer Station, owned by BLT Enterprises, and North Area Transfer Station, owned by the County of Sacramento Public Works Department - that would generally serve the project site. Currently, the Sacramento Recycling and Transfer Station is permitted for a maximum daily disposal of 2,000 tons.[3] The North Area Transfer Station accepts up to 2,400 tons per day of construction/demolition, industrial, and green materials, tires, wood waste, and mixed municipal waste.[4]

The Lockwood Regional Landfill is a Class I landfill on a total of 3,700 acres, 500 of which are currently used. The landfill currently accepts an average of between 8,000 and 9,000 tons per day. Approximately 200,000 tons per year (approximately 550 tons per day) are accepted from the City of Sacramento. Lockwood Landfill currently has enough remaining capacity to operate for 20 years, although staff is currently working on an expansion that would add an additional 800 acres and 100 years of life. The expansion is expected to be completed by 2008.[5]

Kiefer Solid Waste Landfill, operated by the County Department of Public Works, is the primary municipal solid waste disposal facility in Sacramento County. Kiefer Landfill, categorized as a Class III facility, accepts waste from the general public, businesses, and private waste haulers. More specifically, wastes accepted include: construction/demolition, mixed municipal, and sludge (biosolids). The facility is on a 1,084-acre site near the intersection of Kiefer Boulevard and Grantline Road. The permitted capacity for the landfill is 117,400,000 cubic yards (10,815 tons/day) and, as of 2000, the landfill had a remaining capacity of 86,163,462 cubic yards (73 percent).[6] The landfill has an estimated closure date of 2064.[7]

1 City of Sacramento, *General Plan*, 1988, Page 7-10.
2 CIWMB, *Jurisdiction Profile*, www.ciwmb.ca.gov, Accessed January 3, 2006.
3 CIWMB, *Transfer Station Profile*, www.ciwmb.ca.gov, Accessed January 3, 2006.
4 CIWMB, *Facility/Site Summary Details*, www.ciwmb.ca.gov, Accessed May 3, 2006.
5 Chris Thomas, Waste Management, Lockwood Landfill, personal communication, April 25, 2006.
6 CIWMB, *Active Landfills Profile*, www.ciwmb.ca.gov, Accessed January 3, 2006.
7 CIWMB, *Active Landfills Profile*, www.ciwmb.ca.gov, Accessed January 3, 2006.

Other landfills that could receive solid waste from the proposed project if a private hauler is selected for waste disposal include the Yolo County Landfill in Davis, Forward Landfill in Manteca, and L and D Landfill in Sacramento. If the project is served by a private waste disposal company, the waste could be delivered to a variety of landfills, depending on market conditions and capacity.

REGULATORY SETTING

Federal

Resource Conservation and Recovery Act

Volume 40 of the Code of Federal Regulations, Part 258 (Resource Conservation and Recovery Act (RCRA, Subtitle D)) contains regulations for municipal solid waste landfills and requires states to implement their own permitting programs incorporating the federal landfill criteria. The federal regulations address the location, operation, design, groundwater monitoring, and closure of landfills.

State

Assembly Bill 939

In 1989, the California Legislature passed AB 939 requiring California cities to implement plans designed to reduce waste deposited in landfills by 50 percent per person by December 31, 2000. As part of AB 939, cities and counties were required to develop a Source Reduction and Recycling Element (SRRE).

Local

Sacramento Regional Solid Waste Authority (SWA)

The Sacramento Regional Solid Waste Authority (SWA) is a joint powers authority consisting of a board of supervisors representing Sacramento County and the cities of Sacramento and Citrus Heights. The SWA enforces its ordinances to regulate commercial solid waste collection, permit franchised haulers, and promote recycling programs.

Ordinance 8

Ordinance 8 was established to regulate the transport, transfer, disposal, and recycling of commercial solid waste kept or accumulated within the SWA region. The ordinance was put into place for the purposes of ensuring the orderly operation of solid waste transport and disposal, and also to minimize adverse effects on human health and the local environment. Sections 24 and 25 of Ordinance 8 specify that commercial franchisees must divert 30 percent of their commercial solid waste for recycling, and establishes a recycling incentive fee for tonnage shortfall of waste diversion. Section 35 provides restrictions for solid waste disposal, including prohibiting the dumping of solid waste on any property, road, or highway not designated by the ordinance for solid waste disposal or dumping.

City of Sacramento General Plan

The City's current General Plan policies related to solid waste are provided below. The City is presently updating its General Plan, which is anticipated to be completed in 2007.

Goal **Provide adequate solid waste disposal facilities and services for collection, storage and reuse of refuse.**

Source Reduction Recycling Element

The California Integrated Waste Management Act of 1989 (Assembly Bill 939, noted above) mandates that each city shall prepare, adopt, and submit a SRRE. AB 939 required all cities to achieve a minimum diversion of 25 percent of the City's waste stream from landfilling by the year 1995 and 50 percent diversion by the year 2000. The City of Sacramento's Final Draft SRRE, approved in 1995, pledges to exceed the requirements of AB 939, where feasible, in an effort to achieve a 70 percent landfill avoidance goal adopted by City Council in August 1989. In order to achieve this goal, the City has implemented a number of programs, including curbside recycling, drop-off and buy-back centers, and compost programs. The City has met the 50 percent diversion mandated by AP 939 every year since 2000 and is currently looking into ways to increase solid waste diversion rates to up to 75 percent.[8]

Sacramento Municipal Code

Chapter 17.72 of the City of Sacramento Municipal Code outlines the recycling and solid waste disposal regulations. These regulations are necessary in order to lengthen the lifespan of landfills, encourage recycling, and meet State mandated goals for waste reduction and recycling, specifically AB 939. These policies provide guidelines regarding the location, size and design features of recycling and trash enclosures in a manner by which adequate, convenient space for the collection, storage, and loading of recyclable and solid waste material is provided. In addition, developers are required to submit a "statement of recycling information" to the City's solid waste manager. The requirement for this statement includes: a site plan which includes design specifications, plans for demolition and construction, and any details of proposed education/public relations programs.[9]

IMPACTS AND MITIGATION MEASURES

Methods of Analysis

The analysis uses the following solid waste generation rates, provided by the City of Sacramento:[10]

- Office = 1 lb/100 sf/day[11]
- Restaurant = 5 lbs/100 sf/day[12]
- Retail = 2.5 lbs/100 sf/day

8 Tyler Stratton, Solid Waste Division, Department of Utilities, City of Sacramento, personal communication, May 31, 2006.

9 City of Sacramento, Municipal Code, Chapter 17.72, *Recycling and Solid Waste Regulations*, http://ordlink.com/codes/sacramento/index.htm, Accessed January 9, 2006.

10 Michael Root, Program Analyst, Solid Waste Division, Department of Utilities, City of Sacramento, personal communication, April 25, 2006.

11 lb/sf/day = pounds per square foot per day

12 The generation rate for restaurant uses was converted from 1 cubic yard per 5,000 sf per day assuming a rate of 250 lbs per cubic yard for mixed commercial trash, based upon USFWS Division of Contracting and General Services, Conversion Table for Recycled Materials, December 31, 1996, www.fws.gov/policy/Es561fw15.html. This rate was then divided by 50 to make it consistent with the other generation rates, making a final restaurant solid waste generation rate of 5 lbs per 100 sf per day. From:

Standards of Significance

For the purposes of this EIR, impacts to solid waste are considered significant if the proposed project would:

- Require or result in the construction of new landfills or the expansion of existing facilities to accommodate the project's solid waste disposal needs; or
- Generate more than 500 tons of solid waste per year.

Project-Specific Impacts and Mitigation Measures

5.5-1 The proposed project could require or result in the construction of new landfills or the expansion of existing facilities. This is a *less-than-significant impact*.

The proposed project would result in the addition of 406,384 sf of office, 15,836 sf of retail, and 11,288 sf of restaurant uses on a site previously used for office space. The proposed uses would be more intensive than the previous office use and generate more solid waste.

Waste from operation of the proposed project could be disposed of at a variety of locations, depending on the solid waste collection service provider the project would use. It is unknown, at this time, which service provider the proposed project would use. However, if disposal services are provided by the City, the solid waste would likely be sent to the Lockwood Regional Landfill located in Sparks, Nevada. As discussed in the Environmental Setting, Lockwood Landfill currently accepts between 8,000 and 9,000 tons per day and has enough remaining capacity to remain operational for at least 20 years. The facility is currently undergoing an expansion which would add an additional 100 years of life to the landfill.

As shown in Table 5.5-1, the project would generate up to 2.5 tons of solid waste per day, depending on whether restaurant or office use would occupy the top two floors of the proposed project. If the top two floors are used for office instead of restaurant uses, the solid waste generation would be slightly lower. In either case, the solid waste generated by the proposed project would constitute 0.03 percent increase in solid waste accepted at the Lockwood Landfill on a daily basis.

TABLE 5.5-1

SOLID WASTE GENERATION

Use	Square footage	Generation Rate (lbs/day)	Solid Waste (lbs/day)
With Restaurant in Penthouse			
Office	406,384 sf	1 lb/100 sf/day	4,064 lbs/day
Restaurant/bar	11,288 sf	5 lbs/100 sf/day	564 lbs/day
Retail	15,836 sf	2.5 lbs/100 sf/day	360 lbs/day
		TOTAL WITH RESTAURANT	**4,988 lbs/day (910 tons/year)**
With Office in Penthouse			
Office	417,672 sf	1 lb/100 sf/day	4,177 lbs/day
Retail	15,836 sf	2.5 lbs/100 sf/day	360 lbs/day
		TOTAL WITH OFFICE	**4,537 lbs/day (828 tons/year)**

Source: EIP Associates, a division of PBS&J, 2006.

If the project is served by a private waste disposal company, the waste could be delivered to a variety of landfills, depending on market conditions and capacity. This mechanism would ensure the

waste is disposed of at a facility with adequate capacity. Operation of the proposed project would not substantially shorten the life of a landfill; therefore, operational impacts of the proposed project related to solid waste would be *less than significant*.

Construction and demolition (C&D) activities can generate significant amounts of solid waste associated with demolition of the existing building and construction of the new building. The CIWMB or the City does not have a specific generation rate for C&D waste; however, demolition and construction of the proposed project would generate a significant amount of waste for a short period of time. Required recycling programs would ensure that a majority of the C&D waste would be recycled to minimize the amount of waste to be disposed of at the landfill. The C&D waste could be disposed of at a variety of landfills including Lockwood Landfill and/or Keifer Landfill, as well as other landfills chosen by private haulers. As discussed in the Environmental Setting, these landfills have adequate capacity and accept C&D waste that would result from the proposed project.[13]

The proposed project would be required to submit a statement of recycling information to the City's solid waste manager, which would include a site plan and design specifications including the materials to be recycled, a demolition and construction plan, and description of proposed education/public relations programs. Although significant amounts of C&D waste could be generated by the demolition and construction of the proposed project, much of the waste could be recycled or diverted to landfills that could accept the waste that have adequate capacity. Therefore, this is a ***less-than-significant impact***.

Mitigation Measure

None required.

5.5-2 The proposed project could generate more than 500 tons of solid waste per year. This is a *less-than-significant impact*.

As discussed above, the proposed project would generate approximately 2.25 to 2.5 tons of solid waste per day, as shown in Table 5.5-1. This would produce approximately 820 to 915 tons per year. Recycling programs can significantly reduce the amount of solid waste going to landfills. The City currently requires a diversion rate of 50 percent, but would encourage the applicant to divert 60 to 70 percent, which would be considered an aggressive program.[14]

In accordance with Sacramento City Code 17.72, the proposed project would be required to provide a recycling program that demonstrates the amount of solid waste that could be recycled. The developer must submit a "statement of recycling information" to the City's solid waste manager that must include a demolition and construction plan to specify any proposed recycling of building material in the demolition of any structure on the site and to specify any recycled material to be used in the construction of the proposed development.

The statement of recycling information must also include the location and design specifications of proposed recycling and trash enclosure(s) and receptacle(s) that shall meet the volume and material requirements (see Table 5.5-2) and the development standards and identify materials to be recycled. The recycling volume requirements for the proposed project totals approximately 14 cubic yards. According to the City, the proposed project has been designed to exceed 17 cubic yards of recycling

13 CIWMB, http://www.ciwmb.ca.gov, Accessed January 2006.

14 Michael Root, Program Analyst, City of Sacramento, Utilities Department, personal communication, April 25, 2006.

capacity.[15] The plan must also detail education and outreach efforts to inform users of the project of the benefits of recycling and how to recycle. According to the City, a recycling program for the project has been submitted by the project applicant and approved by the City. All the requirements have been met.[16]

TABLE 5.5-2

REQUIRED RECYCLING VOLUME

Use	Square footage	Recycling Volume Required	Required Recycling (cubic yards)
With Restaurant in Penthouse			
Office and general commercial	406,384 sf	1 cubic yard/40,000 sf	10.2 cubic yards/day
Restaurant/bar	11,288 sf	1 cubic yard/5,000 sf	2.25 cubic yards/day
Retail services	15,836 sf	1 cubic yard/10,000 sf	1.6 cubic yards/day
		TOTAL WITH RESTAURANT	**14 cubic yards/day**
With Office in Penthouse			
Office and general commercial	417,672 sf	1 cubic yard/40,000 sf	10.4 cubic yards/day
Retail services	15,836 sf	1 cubic yard/10,000 sf	1.6 cubic yards/day
		TOTAL WITHOUT RESTAURANT--	**12 cubic yards/day**

Source: Sacramento City Code, 17.72.030, Recycling Volume Requirement; EIP Associates, a division of PBS&J 2006.

The proposed project would generate between approximately 4,537 and 4,988 lbs per day (828 to 910 tons per year), which exceeds 500 tons per year. This would increase Sacramento's total solid waste disposal by less than 0.002 percent. With implementation of required recycling programs, solid waste disposal from the proposed project could be reduced by 50 to 70 percent. Using a diversion rate of 50 percent for the purposes of this analysis, this would reduce the proposed project's solid waste generation to between 410 and 455 tons per year, less than the 500 tons per year threshold. Therefore, compliance with the City's recycling requirements would ensure that the proposed project's impact on solid waste generation would be ***less than significant***.

Mitigation Measure

None required.

Cumulative Impacts and Mitigation Measures

Because the 500 ton per year standard applies to individual projects, it would not logically apply to cumulative development. The cumulative analysis is based on the project's contribution and potential impact upon landfills. The cumulative context for solid waste services includes all development in the Sacramento Regional County Solid Waste Authority service area. This includes the cities of Sacramento and Citrus Heights and unincorporated areas of the county.

5.5-3 The proposed project, in combination with other development in the City, could require or result in the construction of new landfills or the expansion of existing facilities. This is a *less-than-significant cumulative impact*.

As discussed above, a number of landfills operate in the Sacramento region, and landfills outside the region also serve Sacramento's solid waste needs. The Lockwood Landfill, the primary destination

15 Michael Root, Program Analyst, Solid Waste Division, Department of Utilities, City of Sacramento, Memorandum to Lindsey Alagozian, dated August 12, 2005.

16 Michael Root, Program Analyst, Solid Waste Division, Department of Utilities, City of Sacramento, Memorandum to Lindsey Alagozian, dated August 12, 2005.

for waste collected by the City of Sacramento, is undergoing an expansion that would increase its capacity enough to continue operation for at least the next 100 years. Kiefer Landfill is not expected to reach capacity for another 60 years. As growth continues in the region, in accordance with the County General Plan and city general plans, population would increase and the solid waste stream would continue to grow. Implementation of the Solid Waste Authority and Sacramento recycling requirements, however, would continue to significantly reduce potential impacts on landfill capacity. The existence of significant capacity at the City's primary landfills, the exporting of solid waste and aggressive recycling policy would ensure that the project's contribution is less than considerable, resulting in a ***less-than-significant cumulative impact***.

Mitigation Measure

None required.

WASTEWATER AND STORM DRAINAGE

ENVIRONMENTAL SETTING

The City of Sacramento's Combined Sewer System (CSS) is a stormwater and wastewater collection system designed to convey domestic sewage, commercial and industrial wastewater, and surface stormwater runoff in a single pipeline. Although the project site is within the service area of the CSS, it is in a portion of the downtown area that has separate sanitary sewer and storm drainage pipelines.[17] Therefore, the project site is served by the CSS for wastewater and Basin 52 for stormwater disposal. Basin 52 is a system of drainage pipelines serving a relatively small westerly portion of downtown Sacramento, discharging into the Sacramento River at Sump 52.

Local flooding can occur during moderate and large storms from two causes: when the inflows reaching the CSS exceed its capacity and the system backs up into low-lying areas, and when the inflows reaching the Basin 52 system exceed its capacity and stormwater cannot enter the system.

Combined Sewer System

The project site is located in an area of Sacramento served by the CSS. The CSS is a wastewater collection system designed to convey domestic sewage, commercial and industrial wastewater, and surface stormwater runoff in a single pipeline. The construction of combined sewers, for the specific use of conveying both sanitary and storm flows, was discontinued in 1946. Since that time, separate sanitary sewers and stormwater conveyance have been constructed in newer parts of the service area, and portions of the original CSS have been separated, including the project site.[18]

The City of Sacramento's CSS consists of pipelines and other facilities. Facilities include pumping stations, an off-line storage facility known as Pioneer Reservoir, and the two primary treatment plants: the Combined Wastewater Treatment Plant (CWTP) and Pioneer Reservoir. The collection system is divided into networks consisting of trunks, interceptors, reliefs, force mains, laterals, and other pipelines. Trunk sewers represent 70 percent of the total collection system capacity (5,000,000 cubic feet total capacity).[19]

The City operates two pump stations, known as Pump Station 1/1A and Pump Station 2/2A. Pump Station 2/2A, the primary pump station for the CSS, operates continuously throughout the year as well as during storm events, while Pump Station 1/1A operates only during storms.[20]

The off-line storage facility, Pioneer Reservoir, is a 3.5-acre, pile-supported, covered, reinforced-concrete structure located near Front and U Streets. It was constructed in 1980 to provide 23 million gallons of temporary storage in order to reduce overflows down to approximately five to six events per year. It has a peak hydraulic capacity of 350 million gallons per day (mgd) and a treatment

17 Mark Elliot, City of Sacramento Department of Utilities, personal communication May 4, 2006.
18 City of Sacramento, *Combined Sewer System Rehabilitation and Improvement Plan Draft Environmental Report*, November 1996, Page 3-1.
19 City of Sacramento, *Combined Sewer System Rehabilitation and Improvement Plan Draft Environmental Report*, November 1996, Page 3-2.
20 City of Sacramento, *Combined Sewer System Rehabilitation and Improvement Plan Draft Environmental Report*, November 1996, Page 3-8.

capacity of 250 mgd.[21] Pioneer Reservoir was capable of primary treatment only after improvements resulting from the CSS Improvement and Rehabilitation Plan of 1999. Flows from Pump Station 2/2A are routed to the reservoir via the Pioneer Interceptor, a 120-inch diameter, 8,800-foot long pipe. The Interceptor can also provide an additional five mgd of storage.[22]

The Sacramento Regional Wastewater Treatment Plant (SRWTP), located approximately five miles south of the City in the unincorporated community of Freeport, is a secondary treatment facility that includes raw influent and effluent pumping, primary clarification, secondary treatment with the high-purity oxygen activated sludge process, disinfection, solids thickening, and anaerobic solids digestion. The SRWTP has an existing wastewater treatment capacity of approximately 460 mgd of wet weather flow during peak wet weather conditions. The SRWTP currently receives an average 180 mgd during dry weather conditions and 220 mgd during wet weather conditions.[23]

Currently, the discharge rates to the SRWTP are restricted to 60 mgd peak flow from Sump 2 by an Operating Agreement with the Sacramento Regional Community Services District (SRCSD). Approximately 20 to 30 mgd flows to the SRWTP from Sump 2.[24] The SRWTP also processes wastewater for most of the urbanized areas of the County, including Citrus Heights, Rancho Cordova, and Elk Grove.[25]

Operation of the CSS

Initially, all combined wastewater is sent to the City's pump stations via underground pipes; the primary station is Sump 2, located on the east side of the Sacramento River. Sumps 1 and 2 direct combined wastewater to the SRWTP, the CWTP, and Pioneer Reservoir where it receives secondary and primary treatment, respectively, before it is discharged into the Sacramento River.

Wet weather flows have been known to exceed system capacity during heavy storm events. During storm events when the CSS flows are greater than 60 mgd (approximately ½" of rainfall), CSS flows are diverted to the City's CWTP, located near South Land Park Drive and 35th Avenue. These flows receive primary treatment at the CWTP. The CWTP basins may also be used for storage of flows until capacity is available at the SRWTP.[26] During heavy storm events, flows may be sufficient to exceed the 190 mgd combined capacities of SRWTP (60 mgd) and CWTP (130 mgd). A combined sewer overflow (CSO) results when capacity is exceeded. The overflows are diverted to Pioneer Reservoir for storage. If Pioneer Reservoir reaches its capacity, the excess untreated flows are discharged directly into the Sacramento River. If the capacities of the pipeline system and treatment plant are surpassed, excess untreated flows flood local streets in the downtown area through manholes and catch basins.[27]

The CSO discharges of untreated combined wastewater to the river consist primarily of stormwater runoff (90 percent or more), with the remainder as sanitary sewage. The water quality of these discharges varies significantly depending upon the point of discharge and extent of treatment at

21 City of Sacramento, *The Towers on Capitol Mall DEIR*, prepared by EIP Associates, May 2005, Page 5.5-10.
22 City of Sacramento, *Combined Sewer System Rehabilitation and Improvement Plan Draft Environmental Report*, November 1996, Page 3-10.
23 Mark Lunsford, Operations Supervisor, Sacramento Regional Wastewater Treatment Plant, personal communication, May 17, 2006.
24 Mark Lunsford, Operations Supervisor, Sacramento Regional Wastewater Treatment Plant, personal communication, May 17, 2006.
25 County of Sacramento, Municipal Services Agency, Department of Water Quality, http://srcsd.com/pdf/agency-overview.pdf, Accessed January 9, 2006.
26 City of Sacramento, *The Towers on Capitol Mall DEIR*, prepared by EIP Associates, May 2005, Page 5.5-8.
27 City of Sacramento, *The Towers on Capitol Mall DEIR*, prepared by EIP Associates, May 2005, Page 5.5-8.

Pioneer Reservoir (removal of floatables and grit). The untreated CSOs have low pollutant concentrations because the first flush of more polluted flow is treated at the SRWTP and CWTP.[28]

The City identified a long-term control plan (CSS Improvement Program) which includes system improvements to reduce CSOs to the Sacramento River and outflows to the City streets. The 1995 plan consists of increasing the pumping capacities of Sumps 1/1A and 2, converting Pioneer Reservoir to a primary treatment facility with disinfection, installing a relief sewer system in the downtown area, and constructing several local or regional underground storage facilities and relief sewers in areas that are currently subjected to frequent outflows and flooding.[29] Many of these improvements have been completed, but others are part of an on-going process to improve the CSS system. The Utilities Department continues to upgrade pipes and construct additional storage facilities.

Basin 52

Stormwater runoff in the project area would be handled by the City of Sacramento's Basin 52. Basin 52 is a system of pipelines designed to convey stormwater runoff, eventually discharging into the Sacramento River. Stormwater runoff enters into Sump 52, a pump station that discharges into the Sacramento River. The Basin 52 drainage shed is generally bounded by the railroad to the north, 7th Street to the east, U Street to the south, and the Sacramento River levee to the west.

Basin 52 is undersized and inadequate to handle the volume of stormwater runoff under existing conditions; the system provides less than a two-year level of protection. Currently, inflow to Basin 52 exceeds capacity, and localized flooding occurs when the system is full and stormwater runoff cannot enter the collection system.[30] The Basin 52 Master Plan includes proposed improvements to alleviate the existing deficiencies in capacity, but it is not known when these improvements will be completed.[31]

Wastewater and Storm Drainage Infrastructure Near the Project Site

Existing infrastructure near the project site includes an 18-inch sewer line that conveys wastewater south down 5th Street toward the SRWTP. A 12-inch drainage pipe conveys stormwater from Capitol Mall and 5th Street, joins a 30-inch line in N Street, where it continues south down 4th Street to Sump 52, located at P Street and 2nd Street. Drainage enters the system at two points near the project site, one at Capitol Mall and 5th Street and the other at N Street and 5th Street. From the pump station, stormwater is pumped through 30-inch lines to its outfall at the Sacramento River (near O Street and Front Street).[32]

REGULATORY SETTING

The federal, state, and local regulations and plans that are applicable to the proposed project are discussed below.

28 City of Sacramento, *Combined Sewer System Rehabilitation and Improvement Plan Draft Environmental Report*, November 1996, Page 3-10.

29 City of Sacramento, *2005-2010 Capital Improvement Program, Utilities Program Overview*, Page J-9, http://www.cityofsacramento.org/budget/fy2005-06/cip_2005-2010/approved/documents/12-Utilities.pdf Accessed January 9, 2006.

30 City of Sacramento, *The Towers on Capitol Mall DEIR*, prepared by EIP Associates, May 2005, page 5.5-11.

31 City of Sacramento, *The Towers on Capitol Mall DEIR*, prepared by EIP Associates, May 2005, page 5.5-11.

32 City of Sacramento, *The Towers on Capitol Mall DEIR*, prepared by EIP Associates, May 2005, page 5.5-11.

Federal and State

Federal and State Clean Water Act

The Federal Clean Water Act and regulations set forth by the California Department of Health Services and SWRCB are aimed primarily at discharges of effluent to surface waters. Title 40 of the Code of Federal Regulations (CFR) Part 503, Title 23 California Code of Regulations, and standards established by the Central Valley Regional Water Quality Control Board regulate the disposal of biosolids.

U.S. Environmental Protection Agency's National CSO Control Policy

In April 1994, the U.S. EPA issued its Combined Sewer Overflow Policy for controlling discharges to the nation's waters from combined sewer systems (40 CFR Part 122). One of the cornerstones of the CSO Policy is the requirement for Nine Minimum Controls (NMCs), which apply to every CSS in the nation. The NMCs are defined as the minimum technology-based actions or measures designed to reduce CSOs and their effects on receiving water quality without extensive engineering studies or major construction. This policy stipulates that at least 85 percent of the average annual CSS storm flow be captured and receive primary treatment with disinfection prior to discharge.

The results of a five-year monitoring effort and study (*Effluent and Receiving Water Quality and Toxicity Summary Report for 1991-1995)* found that the City is in compliance with this policy and has generally treated 92 percent of the total CSS storm flow volume prior to discharge.[33] This monitoring effort was completed prior to implementation of the improvements detailed in the CSS Improvement and Rehabilitation Plan.

In addition, the City's NPDES Permit (No. CA0079111) requires that the CWTP be in operation when Pioneer Reservoir is discharging to the river. This plan ensures that the City maximizes flow to the public-owned treatment works, which is one of the nine minimum controls in EPA's National CSO Policy.

NPDES General Permit for Stormwater Discharges Associated with Construction Activity

The State Water Resources Control Board's (SWRCB) NPDES General Permit for Stormwater Discharges Associated with Construction Activity requires an applicant to file a Notice of Intent (NOI) with SWRCB and prepare a Stormwater Prevention Plan (SWPP) prior to construction for projects disturbing an area greater than one acre. The SWPP prepared must include the following: a vicinity map, site map, list of potential pollutant sources, type and location of erosion and sediment best management practices (BMPs), name and phone number of the person responsible for the SWPP, and signed certification page by the property owner or authorized representative. The SWPP would be reviewed by the City of Sacramento Department of Utilities prior to issuance of a grading permit or approval of improvement plans.

33 City of Sacramento, *Combined Sewer System Rehabilitation and Improvement Plan Draft Environmental Report*, November 1996, Page 7.2-10.

Local

Combined System Development Fee

The City of Sacramento has developed a sewer ordinance amendment to replace the Mitigation Agreement previously required for developers.[34] The ordinance was adopted March 15, 2005. The ordinance requires a development fee for projects within the CSS service boundary. Key aspects of the CSS development fee include:[35]

- A fee of $2,633 equivalent single-family dwelling unit (ESD)[36] that will be subject to periodic adjustments.
- The first 25 ESDs of a development will be charged $106 per ESD.
- CSS development fees may be fully or partially offset by constructing cost sharing in the construction or mitigation project.
- The fee approximates the cost to construct local storage to mitigate impacts downstream.
- Fees will be collected into a fund for the City to construct larger projects to mitigate multiple developments.

City of Sacramento General Plan

The City is presently updating its General Plan, which is anticipated to be completed in 2007. The following goals and policies from the City's current General Plan are applicable to wastewater services within the City.

Goal A Provide adequate sewer service for all urbanized or developing neighborhoods.

Policies
1. Provide and upgrade sewer facilities where needed to newly developing areas in the City.
2. Develop plans for extension of sewer lines to existing developed areas where sewer service is lacking.
3. Work with property owners to develop financing arrangements in order to provide sewer services.

The following goal and policies are applicable to storm drainage facilities within the City.

Goal A Provide adequate drainage facilities to accommodate desired growth levels.

Policies
1. Ensure that all drainage facilities are adequately sized to accommodate the projected increase in stormwater runoff from urbanization.
2. Coordinate efforts with the County Public Works Department and other agencies as appropriate to provide adequate and efficient drainage facilities and connector lines to service the Rio Linda, North Natomas and Laguna Creek areas of the City.
3. Target Capital Improvement Programs to fund drainage facilities in infl. areas.
4. Require private sector to form assessment districts and/or utilize other funding mechanisms to cover the cost of providing drainage facilities.
5. Design visible drainage facilities to be visually attractive.
6. Study incentives for developer to provide necessary drainage lines in underdeveloped areas.

34 City of Sacramento, Department of Utilities, Memorandum subject: Combined Sewer System Development Fee. March 1, 2004.

35 City of Sacramento, Department of Utilities, Memorandum subject: Combined Sewer System Development Fee. March 1, 2004.

36 1 ESD equals 400 gallons per day.

Grading, Erosion and Sediment Control Ordinance

The City of Sacramento's Grading, Erosion and Sediment Control Ordinance requires developers to prepare erosion and sediment control plans for during construction and after, preliminary and final grading plans, and plans to control urban runoff pollution during project construction.

Sacramento Stormwater Quality Partnership

The Sacramento Stormwater Quality Partnership, in coordination with the City of Roseville, is preparing new water quality standards for new and redevelopment projects in the Sacramento County and South Placer regions. This is required by the agencies' Stormwater Permit (NPDES Stormwater Permit No CAS082597, Order R5-2002-0206) issued by the Regional Water Quality Control Board. The agencies are working together to create a new Stormwater Quality Design Manual to assist developers, design professionals, and engineers to comply with the new requirements. The Design Manual will provide guidance for selecting, designing, installing and maintaining post-construction stormwater quality control measures. The Design Manual will outline the minimum technical requirements that must be satisfied, while affording the professional designer or developer/property owner flexibility in choosing the approaches that work best for the project site.

The Design Manual will replace and expand upon the Guidance Manual for On-Site Stormwater Quality Control Measures produced by the Sacramento Stormwater Quality Partnership in January 2000. It will consolidate into a single document all stormwater quality design information previously published by several local agencies.

Commercial development greater than one acre is subject to the new stormwater quality standards effective May 18, 2006 for agencies in Sacramento County. The new stormwater quality standards for commercial development require source controls at applicable areas along with treatment controls measures. Run-off reduction measures are also acceptable means for meeting the stormwater quality standards. Source controls include:

- Storm Drain Message and Signage
- Fueling Areas
- Loading/Unloading Areas
- Outdoor Storage Areas
- Outdoor Work Areas
- Vehicle/Equipment Wash Areas
- Waste Management Areas.

Runoff reduction measures include:

- Alternative Driveway Design
- Disconnected Roof Drains
- Divided Sidewalks
- Ecoroof
- Interceptor Trees
- Porous Pavement.

Treatment controls include:

- Porous Pavement Detention
- Stormwater Planter (Flow-through)
- Stormwater Planter (Infiltration)
- Constructed Wetland Basin
- Detention Basin, Combination
- Detention Basin, Dry
- Detention Basin, Wet
- Infiltration Basin
- Infiltration Trench
- Media Filter (Austin Sand Filter)
- Multi-functional Drainage Corridor
- Vegetated Filter Strip
- Vegetated Swale
- Proprietary Devices

IMPACTS AND MITIGATION MEASURES

Methods of Analysis

This analysis used the following generation rates for wastewater[37] provided by the City of Sacramento:

- Office = 0.2 ESD/1,000 square feet (sf)
- General Commercial (retail) = 0.2 ESD/1,000 sf
- Restaurant = 2.0 ESD/1,000 sf

Using the generation rates, an estimate of total wastewater was determined, and compared to capacity of transmission lines and treatment plants serving the project. Storm drainage was analyzed qualitatively.

Standards of Significance

For the purposes of this EIR, impacts to wastewater and drainage services are considered significant if the proposed project would:

- Require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects; or
- Create or contribute stormwater runoff water over pre-development conditions that would exceed the existing or planned capacity of the CSS or Sump 52.

37 City of Sacramento Utilities Department, City of Sacramento Design and Procedures Manual and Improvement Standards, Section 9.1.2, September 1, 1990.

Project-Specific Impacts and Mitigation Measures

5.5-4 The proposed project could require the construction of new wastewater treatment facilities or expansion of existing facilities. This is a *less than significant impact*.

The proposed project would increase the amount of building space in the Central City, which would result in the generation and discharge of additional wastewater requiring treatment at the SRWTP.

Currently, the SRWTP treats an average of 180 mgd during dry weather and 220 mgd during wet weather. The plant can treat up to 460 mgd. During dry weather, the SRWTP receives between 20 and 30 mgd from the CSS. As shown in Table 5.5-3, the proposed project would generate between approximately 0.035 and 0.046 mgd of wastewater, which would increase dry weather CSS flows to the SRWTP by less than one percent. Thus, the overall increase in wastewater flows to the SRWTP generated by the proposed project would be negligible. This increase would not exceed the dry weather capacity of the plant and would not require expansion of the SRWTP.

TABLE 5.5-3

WASTEWATER GENERATION

Use	Square footage/units	Generation Rate (1 ESD = 400 gpd)	ESD	Wastewater (gpd)
Proposed Project Restaurant on Penthouse Floors				
Office	406,384 sf	0.2 ESD/1,000 sf	81.28	32,512
Retail	15,836 sf	0.2 ESD/1,000 sf	3.17	1,268
Restaurant (including kitchen and storage)	11,288 sf	2.0 ESD/1,000 sf	22.6	9,040
Total with Restaurant on Penthouse Floor				**45,820 gpd (0.046 mgd)**
Proposed Project Office on Penthouse Floors				
Office	417,672 sf	0.2 ESD/1,000 sf	83.53	33,412
Retail	15,836 sf	0.2 ESD/1,000 sf	3.17	1,268
Total with Office on Penthouse Floor				**34,680 gpd (0.035 mgd)**

Source: City of Sacramento Utilities Department, *City of Sacramento Design and Procedures Manual and Improvement Standards, Section 9.1.2*, September 1, 1990.

During wet weather, no more than 60 mgd is delivered to the SRWTP. All flows in excess of 60 mgd are routed to other CSS facilities (which are addressed in Impact 5.5-5). Therefore, even during severe storm events, the proposed project would not result in a lack of capacity at the plant. Therefore, this is considered a ***less-than-significant impact***.

Mitigation Measure

None required.

5.5-5 The proposed project could require the construction of new CSS infrastructure or facilities or expansion of existing CSS infrastructure or facilities to prevent sewer overflow or flooding, resulting in significant environmental effects. This is a *less-than-significant impact*.

The proposed project would increase the amount of building space in the Central City, which would result in the generation and discharge of additional wastewater to the CSS.

As shown in Table 5.5-3, the proposed project would generate between approximately 0.035 and 0.046 mgd of wastewater. These flows could be adequately treated by existing infrastructure during dry weather conditions. However, as discussed in the Environmental Setting, the CSS experiences CSOs under existing conditions during severe storm events. Any increase in flows to the CSS during these conditions would be considered a significant impact.

As stated above, localized flooding and CSOs occur during severe storm events, which would be exacerbated by additional flows from the proposed project. However, the City is currently implementing system-wide improvements to the CSS and the proposed project would be required to contribute funds toward City improvements to the CSS or, alternatively, complete on- or off-site improvements to store project-generated wastewater during storm events. Absent system improvements, however, flooding and CSOs would continue. However, as described above, the City has implemented a Combined System Development Fee ordinance that provides (1) additional capacity in the City's system to reduce the potential for flooding and CSOs system-wide, or (2) requirement for storage of project flows to ensure that the proposed project would not contribute to flooding and CSOs. Compliance with the City's Combined System Development Fee ordinance would reduce the potential for CSOs; therefore, this is considered a ***less-than-significant impact.***

Mitigation Measure

None required.

5.5-6 The proposed project could create or contribute stormwater runoff over predevelopment conditions that would exceed the existing or planned capacity of Basin 52. This is a *less-than-significant impact*.

While the proposed project would be larger than the building currently occupying the site, the project site is currently developed and, except for small landscape areas, is covered with impervious surfaces. With development of the proposed project, the site would remain covered with impervious surfaces. Therefore, there would not be a substantial change in the potential for water infiltration and, thus, the rate and amount of stormwater runoff. Nonetheless, as discussed in the Environmental Setting section, the Basin 52 drainage system is undersized and inadequate to handle existing flows during some storm events. Any increase in the rate or amount of runoff entering the Basin 52 system could contribute to localized street flooding during severe storm events.

Although the Basin 52 Master Plan includes improvements to alleviate the existing deficiencies in capacity, the planned improvements may not occur in the immediate future. However, because the proposed project would not result in additional impervious surfaces on the project site, it would not exacerbate existing conditions. This would be a ***less-than-significant impact***.

Mitigation Measure

None required.

Cumulative Impacts and Mitigation Measures

Cumulative impacts to the CSS require examination of all development within the CSS service area, primarily downtown Sacramento. The cumulative context for drainage includes all development in the Basin 52 service area, generally bounded by U Street to the south, 7th Street to the east, the railyards to the north, and the Sacramento River to the west.

5.5-7 The proposed project, in combination with other downtown development, could require the construction of new wastewater treatment facilities or expansion of existing facilities, resulting in significant environmental effects. This is a *less-than-significant cumulative impact*.

The average daily dry weather flow at full build-out of the City General Plan is estimated at 129.1 mgd and peak flow is estimated at 305.9 mgd. As previously discussed, the SRWTP currently receives an average dry weather flow of 180 mgd and wet weather flow of 220 mgd, less than its permitted capacity of 460 mgd, so the SRCSD is not currently undergoing any expansions to the treatment plant. However, based on the Sacramento Area Council of Government's regional population projections, SRCSD's Regional 2020 Master Plan accommodates for expansions of the treatment plant as growth occurs. This plan is intended to ensure that the SRWTP facilities have sufficient capacity to meet planned growth in the service area through the year 2020. In addition, the Master Plan is updated every five years to account for changes in existing and projected population. Any necessary changes to capacity would occur incrementally, as regional population growth demands greater treatment capacity.[38]

The Department of Utilities has completed many of the CSS Improvement and Rehabilitation Program projects, including the rehabilitation and upsizing of Sump 2, construction of new regional storage projects, and numerous rehabilitation and replacement projects throughout the system. The City continues to complete improvements according to the program, including additional storage facilities, and the improvement and expansion of existing facilities. The City has also identified improvements to the older portions of the City's CSS to meet increased demand, including future upgrades to the interceptors that connect into the SRWTP. As previously discussed, the City is implementing a new fee program to ensure that these improvements are sufficiently funded. Therefore, with implementation of the existing programs to ensure that capacity is available as growth occurs, the cumulative impact would be ***less than significant***.

Mitigation Measure

None required.

5.5-8 The proposed project, in combination with other development in the CSS service area, could require the construction of new CSS infrastructure or facilities or expansion of existing CSS infrastructure of facilities to prevent sewer overflow or flooding, resulting in significant environmental effects. This is a *less-than-significant cumulative impact*.

As previously stated, the CSS already experiences CSOs and localized flooding during severe storm events. The proposed project, along with all other development within the Central City, would result in an increase in wastewater contributions to the CSS, which could worsen impacts on the CSS during such events. However, the continuance of the system-wide improvements discussed in Impact 5.5-5, would ensure that the CSS would be able to accommodate future flows into the system. The proposed project, along with all other future developments within the CSS service area, would be required to comply with the City's Combined Sewer Development Fee ordinance. This would substantially reduce the potential for flooding and CSOs in the Central City area. Therefore, the cumulative impact on the CSS would be ***less than significant***.

38 City of Sacramento, *The Towers on Capitol Mall DEIR*, prepared by EIP Associates, May 2005, Page 5.5-16.

Mitigation Measure

None required.

5.5-9 The proposed project, in combination with other development in the Basin 52 drainage shed, could contribute stormwater runoff over pre-development conditions that would exceed the planned capacity of Basin 52. This is a *less-than-significant cumulative impact*.

Currently, the Basin 52 drainage shed is largely developed with urban uses, so much of the area is covered with impervious surfaces. However, cumulative development of additional intense urban uses could occur within this area, and result in an increase in impervious surfaces. This cumulative increase in impervious surfaces would increase the rate of surface runoff and exceed conveyance capacities within the Basin 52 drainage shed, which could result in localized flooding in the service area. As previously stated, the City is continuing to update the Basin 52 Stormwater Master Plan, which identifies recommended pipeline storage and pump improvements. As these improvements are made, the potential for flooding in the Basin 52 shed would be substantially reduced. Therefore, the cumulative impact on the Basin 52 drainage shed would be ***less than significant*.**

Mitigation Measure

None required.

WATER SUPPLY

ENVIRONMENTAL SETTING

Existing Water Sources and Supplies

The City claims pre-1914 rights to divert 75 cubic feet per second (cfs) from the Sacramento River and secured five additional appropriative water rights with various priorities from October 1947 to September 1954. Sacramento River permit 00992 and American River permits 011358 and 011361 authorize the taking of water from the respective sources by direct diversion. The other two permits, 011359 and 011360, authorize re-diversion and consumptive uses of stored water and releases from the Upper American River Project. Currently, the City has Application S014834 pending with the State Water Resources Control Board (SWRCB) for an additional 50,581 acre-feet per year (AFY) from the Sacramento River. The City's surface water permits require use of the diverted water within the authorized Place of Use (POU). Additionally, the City maintains 32 groundwater wells for potable and non-potable use; 23 wells are actively used to supply drinking water. The current system can supply 24 mgd and produce up to 26,800 acre-feet per year (AFY).

In 1957, the U.S. Bureau of Reclamation (USBR) and the City executed a contract that ensures maximum entitlements through the Central Valley Project (CVP). At buildout in 2030, the USBR contract provides the City a maximum annual diversion of 326,800 AFY. This contract has no delivery limitations. The City's surface water entitlements through the permits discussed above and the USBR contractual diversions are listed in Table 5.5-4. As of 2005, the City is authorized to receive 205,000 AFY. The contract amount increases annually to a maximum of 326,800 AFY in 2030 as shown in Table 5.5-5.

TABLE 5.5-4

SURFACE WATER ENTITLEMENTS

Permit	Authorized Diversion	Maximum Permitted Diversion	
		AFY	cfs
1957 USBR 2030 Contractual Maximum[c]	American River	245,000	675
	Sacramento River	81,800	225
	Total Combined Diversion	326,800	900
2000 WFA Maximum	American River	245,000	310[a]
	Sacramento River	81,800	290[b]
	Total Combined Diversion	326,800	900

Notes:
a. 310 cfs is a maximum withdrawal rate, additional restrictions apply.
b. The Sacramento WTP, below the confluence of the American and Sacramento River, is an allowable withdrawal point for the permitted American River flows, allowing an increase in the diversion from the Sacramento River.
c. Based on permits 00922, 011358, 011359, 011360, and 11361.
Source: EIP Associates, 2006, a division of PBS&J.

TABLE 5.5-5

USBR MAXIMUM CONTRACTED ANNUAL SURFACE WATER DIVERSION (AFY)

Source	2005	2010	2015	2020	2025	2030
American River	123,200	145,700	170,200	196,200	222,200	245,000
Sacramento River	81,800	81,800	81,800	81,800	81,800	81,800
TOTAL	**205,000**	**227,500**	**252,000**	**248,000**	**304,000**	**326,800**

Source: EIP Associates, 2006, a division of PBS&J.

An important component of water supplies within Sacramento region is the Water Forum Agreement (WFA). The Sacramento WFA is an agreement between multiple stakeholders in the Sacramento metropolitan area and lower foothill regions. After seven years of meetings, sub-committee negotiations, and small group operations, the Water Forum members established a working agreement that provides water quality and reliability for all participants. The WFA's coequal goals were to (1) provide a reliable and safe water supply for the region's economic health and planned development through to the year 2030, and (2) preserve the fishery, wildlife, recreational and aesthetic values of the Lower American River.[39] From these coequal goals, the Water Forum signatories determined seven major elements that must be implemented during the next 30 years if the agreement is to be successful. The elements specific to reliability of water supplies include: Increased Surface Water Diversions, Actions to Meet Customers' Needs While Reducing Diversion Impacts in Drier Years, Water Conservation, Groundwater Management, and the Water Forum Successor Effort. As a signatory of the WFA, the City of Sacramento Utilities Department is actively participating in all seven elements. Most recently, the City has increased water treatment capacity at the Sacramento River Water Treatment Plant (WTP) and the E.A. Fairbain WTP.

In an effort to continue to develop a reliable water supply consistent with the WFA, the City is participating in the Sacramento River Water Reliability Study, which includes a feasibility study for a Sacramento River diversion. The Sacramento River Water Reliability Study includes development of alternatives, an environmental evaluation, and consultation with federal and State agencies regarding potential impacts. The USBR is the lead agency for federal review and Placer County Water Agency is the lead agency for local review.

The WFA places flow restrictions on diversions from the American River when the flow is below "Hodge flows"; parties in the litigation cannot divert water from the American River unless Hodge flow conditions are met. Hodge flows measure at least 2,000 cfs from October 15 through February; 3,000 cfs from March through June; and 1,750 cfs from July to October 14. Based on CALSIM II analysis of the 1922 to 1994 climate data, 59 percent of years will experience Hodge flow conditions during the peak months of June through August. As a signatory of WFA, the City will reduce direct diversion from the American River during Hodge flow conditions. Table 5.5-6 shows the City's diversion limits.

During years when the projected unimpaired inflow to Folsom Reservoir is less than 400,000 acre-feet (AF), the WFA limits diversion from the American River to 50,000 AFY. The WFA has labeled the extremely low flow conditions as a "conference year" where signatories will meet to discuss water management strategies. Most notably, the WFA does not restrict diversion of the American River entitlements from a Sacramento River diversion point; therefore, supplies in normal year and dry years are identical for the City in any given year. However, annual surface water diversion amounts are limited by the diversion and treatment capacity from the Sacramento River. Assuming a treatment capacity of 50,000 AFY at the Fairbain WTP and 180,000 AFY at the Sacramento WTP, the current drought limiting scenario still allows the production of 230,000 AFY.

39 Water Forum Agreement, 2000, page 29.

TABLE 5.5-6

RESTRICTED AMERICAN RIVER DIVERSION RATES

Month	Diversion Limit[1]	
	cfs	AF
January	120	7,400
February	120	6,700
March	120	7,400
April	120	7,100
May	120	7,400
June	155	9,200
July	155	9,500
August	155	9,500
September	120	7,100
October	100	6,100
November	100	6,000
December	100	6,100

Notes:
1. Restriction occurs when the bypassing flow is below the Hodge flow condition.
Source: EIP Associates, 2006, a division of PBS&J.

One of the alternatives being evaluated in the Sacramento River Water Reliability Study is for an additional WTP with a treatment capacity of 145 mgd (225 cfs) on the Sacramento River near Elverta Road, north of the Sacramento International Airport. With the addition of the new Sacramento River WTP, the combined production of potable water at all three WTP's will be 505 mgd, or a total annual production capacity of 311,800 AFY. This is 95 percent of the maximum USBR contract deliveries. The potential completion date of a new Sacramento WTP is within eight years, before buildout of the City's current General Plan in 2030.

Current Water Use

The City's average water demand is 52.7 mgd for the American River and 63.9 mgd for the Sacramento River; the peak demand is 96 mgd and 113 mgd, respectively.[40] The City wholesales water to California American Water and the County of Sacramento, which, in water year 2004 -2005, was roughly 7,700 AF. The total water demand for the year 2004 was 143,784 AF (approximately 128 mgd); therefore, based on 2005 entitlements of 205,000 AFY, the City has an excess supply of 61,216 AFY of water.[41]

Water Treatment, Storage, and Distribution

Annually, the City of Sacramento provides more than 45 billion gallons of water for drinking, household use, fire suppression, landscaping, and commercial, and industrial use. The Department of Utilities operates and maintains the City's two water treatment plants, eight pump stations, 10 storage reservoirs, 32 municipal wells, thousands of hydrants, and more than 1,400 miles of pipeline necessary to distribute water to homes and businesses throughout the City.[42]

Water Treatment

The City owns and operates two water diversion and treatment facilities: the Sacramento River WTP and the E.A. Fairbain WTP on the American River. The Sacramento WTP is west of Interstate 5 and

40 City of Sacramento Utilities Department, Annual Report, Operational Statistics Fiscal Year 2004/2005.
41 City of Sacramento Utilities Department, Annual Report, Operational Statistics Fiscal Year 2004/2005.
42 City of Sacramento Utilities Department, Annual Report, Operational Statistics Fiscal Year 2004/2005.

south of Richards Boulevard, and was upgraded in 2003, this increased the plant's capacity from 110 mgd (123,260 AFY) to 160 mgd (179,288 AFY). The Fairbain WTP, located on the south bank of the lower American River, was recently rehabilitated and expanded, which doubled the plant's capacity from 100 mgd (112,055 AFY) to 200 mgd (224,110 AFY). The Fairbain WTP now has a treatment capacity equal to the maximum diversion rate of 310 cfs allowed in the WFA. If both plants operated at their maximum production, the combined output would be approximately 403,000 AFY. At ultimate build out and future expansions, the two treatment plants would produce 545 mgd or 610,670 AFY.[43]

Water Storage

Water storage is required to meet water demand for periods when peak hour demand exceeds maximum daily supply rates. These high demand periods usually occur for four to six hours during hot summer days and for potentially longer periods during large fire events. The City of Sacramento has nine above-ground storage reservoirs (each with a capacity of three mg) for a total capacity of 27 mg. The City also has one underground reservoir with a capacity of 15 mg.[44] The reservoirs are at different locations throughout the City's water distribution system. In addition, 34.5 mg of on-site storage exists at the water treatment plants (14.5 mg at the Sacramento WTP and 20 mg at the Fairbain WTP). Therefore, the total water storage capacity in the City is 76.5 mg. This capacity represents approximately 64 percent of the City's 2004/2005 average daily water demand of 120 mg, or approximately one-third of the 2004/2005 average maximum day demand of 215 mg.[45]

Water Supply Infrastructure Near the Project Site

An existing six-inch water line services the project site from the northeast corner of the property. The project would either use this existing service and reduce down to a three-inch line for domestic water or establish a new three-inch connection to provide water service. Fire protection water service would either use the existing service or establish a new connection as required by the City of Sacramento.

REGULATORY SETTING

Federal

U.S. Environmental Protection Agency (EPA)

The EPA established primary drinking water standards in the Clean Water Act (CWA) Section 304 and states are required to ensure that potable water for the public meets these standards. Standards for 81 individual constituents have been established under the Safe Drinking Water Act, as amended in 1986. The U.S. EPA may add additional constituents in the future.

State

The California Department of Health Services (DHS), SWRCB, and the Department of Water Resources (DWR) would have input into the provision of water for the project site. In compliance with State Water Code Sections 10910(a) and 10910(c)(1), the water supplier for the proposed project is required to prepare a WSA for the water service request as part of the CEQA EIR process. The SWRCB regulates the water quality functions of the State and manages the State's Water Code. State primary and secondary drinking water standards are promulgated in California Code of

43 City of Sacramento, *General Plan Update*, 1987, page 7-2.
44 City of Sacramento, *Parkebridge Draft EIR*, August 2005, Page 5.7-4.
45 City of Sacramento Utilities Department, Annual Report, Operational Statistics Fiscal Year 2004/2005.

Regulations (CCR) Title 22 Sections 64431-64501. Secondary drinking water standards incorporate non-health risk factors including taste, odor, and appearance.

Water Rights and Entitlements

Since 1914, the SWRCB administers and controls all water rights permits in California. Under this process, an application is filed and the SWRCB issues a permit for surface water diversion, including the approved POU for that water. California water law typically applies only to surface water resources, although according to the SWRCB, "California law also recognizes and protects rights to extract and use waters percolating beneath the surface of the land."[46]

Urban Water Management Planning Act

California Water Code Section 10610 (et seq.) requires that all public water systems providing water for municipal purposes to more than 3,000 customers, or supplying more than 3,000 AFY, must prepare an Urban Water Management Plan (UWMP). The DWR provides guidance to urban water suppliers in the preparation and implementation of UWMPs. UWMPs must be updated at least every five years on or before December 31, in years ending in five and zero. The City prepared an UWMP in 2000 and the 2005 Draft UWMP will be available in 2006.

Senate Bill 610 - Water Supply Assessments

Senate Bill (SB) 610 was adopted in 2001 and reflects the growing awareness of the need to incorporate water supply and demand analysis at the earliest possible stage in the land use planning process. SB 610 amends the statutes of the Urban Water Management Planning Act, as well as the California Water Code Section 10910 et seq. The foundation document for compliance with SB 610 is the UWMP, which provides an important source of information for cities and counties as they update their general plans. Likewise, planning documents such as general plans and specific plans form the basis for the demand information contained in an UWMP, as well as WSAs required under SB 610.

Water Code Section 10910 (c)(4) states "If the city or county is required to comply with this part pursuant to subdivision (b), the water assessment for the project shall include a discussion with regard to whether the total projected water supplies, determined to be available by the city or county for the project during normal, single dry and multiple dry water years during a 20-year projection, will meet the projected water demand associated with the proposed project, in addition to existing and planned future uses, including agricultural and manufacturing uses."

Water supply planning under SB 610 and SB 221 (see below) requires reviewing and identifying adequate available water supplies necessary to meet the demand generated by a project, as well as the cumulative demand for the general region over the next 20 years, under a broad range of water conditions. This information is typically found in the current UWMP for the project area. The SB 610 requires the identification of the public water supplier; the City has been identified in the WSA as the public water supplier to the 500 Capitol Mall project.

In addition, SB 610 requires the preparation of a WSA if a project meets the definition of a "Project" under Water Code Section 10912 (a). The code defines a "Project" if it meets any of the following criteria:

- A proposed residential development of more than 500 dwelling units;

46 State Water Resources Control Board, Statutory Water Rights Law, 1999.

- A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet (sf) of floor space;
- A commercial building employing more than 1,000 persons or having more than 250,000 sf of floor space;
- A hotel or motel with more than 500 rooms;
- A proposed industrial, manufacturing, or processing plant, or industrial park, planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 sf of floor area;
- A mixed-use project that includes one or more of these elements; or
- A project creating the equivalent demand of 500 residential units.

Alternately, if a public water system has less than 5,000 service connections, the definition of a "Project" includes any proposed residential, business, commercial, hotel or motel, or industrial development that would account for an increase of 10 percent or more in the number of service connections for the public water system. The proposed project includes more than 500 dwelling units, and, therefore, qualifies as a "Project" under Section 10912 (a) of the Water Code. Thus, a WSA was prepared, as required by these criteria under SB 610 (included as Appendix G).

Water Code Section 10910 (d)(1) states: "The assessment required by this section shall include an identification of any existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the proposed project, and a description of the quantities of water received in prior years by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), under the existing water supply entitlements, water rights or water service contracts."

Section 10910 (d)(2) of the Water Code further defines requirements of WSAs, including: (A) documentation showing proof of water supply entitlements, water rights, or existing water service; (B) copies of a capital outlay program for financing the delivery of a water supply that has been adopted by the public water system; (C) copies of federal, state, or local permits for construction of necessary infrastructure associated with delivery of the water supply; and (D) copies of any necessary regulatory approvals that are required to convey or deliver the water supply.

The City prepared the Draft WSA in April 2006 for the proposed project using technical information included in the City's UWMP which satisfies the documentation requirements of SB 610, CEQA 10583.5, and Water Code sections 10631, 10910, and 10912. The WSA concludes that the project site is within the service area of the City, and the City would provide domestic water to all development in the City's General Plan.

Senate Bill 221- Written Verification of Water Supply

Government Code Section 66473.7(a)(1) requires an affirmative written verification of sufficient water supply. Senate Bill 221 is designed as a "fail-safe" mechanism to ensure that collaboration on finding the needed water supplies to serve a new large subdivision occurs early in the planning process. This verification must also include documentation of historical water deliveries for the previous 20 years, as well as a description of reasonably foreseeable impacts of the proposed subdivision on the availability of water resources of the region. Government Code section 66473.7 (b)(1) states "The legislative body of a city or county or the advisory agency, to the extent that it is authorized by local ordinance to approve, conditionally approve, or disapprove the tentative map, shall include as a condition in any tentative map that includes a subdivision a requirement that a sufficient water supply shall be available. Proof of the availability of a sufficient water supply shall be

requested by the subdivision applicant or local agency, at the discretion of the local agency, and shall be based on written verification from the applicable public water system within 90 days of a request." In other words, as a result of the information contained in the written verification, the city or county may attach conditions to assure there is an adequate water supply available to serve the proposed project as part of the tentative map approval process. SB221 verification will be required for the proposed project.

Drinking Water Quality

The California Department of Health Services (DHS) is responsible for implementing the federal Safe Drinking Water Act of 1974 and its updates, as well as California statutes and regulations related to drinking water. As part of their efforts, the DHS inspects and provides regulatory oversight for public water systems within California. In addition, in the Sacramento area the Central Valley RWQCB has the responsibility for protecting the beneficial uses of the State's waters, including groundwater, and these include municipal drinking water supply, as well as various other uses.

Public water system operators are required to regularly monitor their drinking water sources for microbiological, chemical, and radiological contaminants to show that drinking water supplies meet the regulatory requirements listed in Title 22 of the California Code of Regulations as primary maximum contaminant levels (MCLs). Primary standards are developed to protect public health and are legally enforceable. Among these contaminants are approximately 80 specific inorganic and organic contaminants and six radiological contaminants that reflect the natural environment, as well as human activities. Examples of potential primary inorganic contaminants are aluminum and arsenic, while radiological contaminants can include uranium and radium.

Public water system operators are also required to monitor for a number of other contaminants and characteristics that deal with the aesthetic properties of drinking water. These are known as secondary MCLs. Secondary standards are generally associated with qualities such as taste, odor, and appearance, but these are generally non-enforceable guidelines. However, in California secondary standards are legally enforceable for all new drinking water systems and new sources developed by existing public water suppliers.[47] The public water system operators are also required to analyze samples for unregulated contaminants, and to report other contaminants that may be detected during sampling.

The California Department of Toxic Substances (DTSC) is the primary agency charged with protecting groundwater resources through their Hazardous Waste Management Program and Site Mitigation Programs. A critical element of both programs is maintaining environmental quality and economic vitality through the protection of groundwater resources. This is accomplished through: hazardous waste facility permitting and design; oversight of hazardous waste handling; removal and disposal; oversight of remediation of hazardous cleanup of illegal drug labs; cleanup of abandoned hazardous waste sites; oversight of the closure of military bases; and pollution prevention.

<u>Local</u>

Water Forum Agreement

The WFA established the guiding principles for water management in the Sacramento area and adjacent foothill region. The collaborative effort represents business, agricultural, environmental, citizen, water management, and local government interests in Sacramento County, and water interests in Placer County and western El Dorado County. The agreement proposes the American River, the Sacramento River, and groundwater as sources of future water supply. The agreement

47 California Department of Water Resources, California's Groundwater, Bulletin 118, 2003.

provides a comprehensive package of linked actions that will achieve the two co-equal objectives: (1) to provide a reliable and safe water supply for the region's economic health and planned development through to the year 2030, and (2) to preserve the fishery, wildlife, recreational, and aesthetic values of the Lower American River.[48] From these coequal goals, the Water Forum signatories determined seven major elements that must be implemented during the next thirty years if the agreement is to be successful. These seven major elements include:

1. *Increased surface water diversions* (as noted above, these would occur primarily on the American River);
2. *Actions to meet customers' needs while reducing diversion impacts on the lower American in drier years*. This element is to ensure that sufficient water supplies will be available to customers in dry years as well as wet years;
3. *Support for an improved pattern of fishery flow releases from Folsom Reservoir*. This element supports needed assurances for continued implementation of a pattern of water releases from Folsom Reservoir that more closely matches the needs of anadromous fish;
4. *Lower American River Habitat Management Element*. This element combined with elements #2 and #3 is included to mitigate the impacts of diversions on the Lower American River in a reasonable and feasible manner;
5. *Water Conservation Element*. This element incorporates various conservation measures to help meet both of the co-equal goals listed above;
6. *Groundwater Management Element*. Establishes a framework to protect groundwater resources in Sacramento County and to ensure these resources are used in a sustainable manner. Introduces the concept of "conjunctive use", which entails monitoring the amount of water withdrawn from the groundwater basin and the planned use of surface water in conjunction with groundwater; and
7. *Water Forum Successor Effort*. This element outlines the way WFA members oversee, monitor, and report on implementation of the WFA.

City of Sacramento

City of Sacramento General Plan

The City's current General Plan policies related to water are provided below. The City is presently updating its General Plan, which is anticipated to be completed in Spring 2007.

Goal A Provide and improve water supply facilities to meet future growth of the City and assure continued supply of safe potable water.

Policies

1. Develop and adopt a comprehensive water policy for the City of Sacramento that is consistent with a long range adopted plan.
2. Develop and implement a financing strategy that the City can use to construct needed water facilities.
3. Work with property owners to develop financing arrangements in order to provide needed water facilities.
4. Give high priority in the Capital Improvements Program to funding infrastructure in highly depressed and designated infill areas.
5. Provide water service meeting or exceeding State and federal regulatory agency requirements.

IMPACTS AND MITIGATION MEASURES

Methods of Analysis

The analysis in this section focuses on the nature and magnitude of the change in levels of water use compared with existing and projected water demand within the project site and the City's water service area. To determine potential impacts, water demands were estimated from demand projection calculations and quantitative evaluation of data relative to the proposed project, along with existing land uses, approved projects, and proposed development. The primary resources used for

48 Water Forum Agreement, 2000, page 29.

this analysis include the following technical documents: *Draft Water Supply Assessment for the Proposed 500 Capitol Mall Project*, EIP Associates (April 2006); *Urban Water Management Plan Prepared for the City of Sacramento*, Maddaus Consulting (2000); *Sacramento River Water Reliability Study* (March 2005).

Water Demand Analysis

Water Code Section 10910 (c)(3) states "If the projected water demand associated with the proposed project was not accounted for in the most recently adopted urban water management plan, or the public water system has no urban water management plan, the water supply assessment for the project shall include a discussion with regard to whether the public water system's total projected water supplies available during normal, dry and multiple dry water years during a 20-year projection will meet the projected water demand associated with the proposed project, in addition to the public water system's existing and planned future uses, including agricultural and manufacturing uses." Table 5.5-7 shows a historical comparison of water demands based on population and treated water delivered by the City's Utilities Department.

TABLE 5.5-7

CITY OF SACRAMENTO HISTORICAL WATER DELIVERIES

	Surface Water				Groundwater	Total Water Delivered	
Year	Population[1]	Annual Surface Water Delivered (AFY)	Maximum Day Water Delivered (mgd)	Maximum Day to Average Day Ratio	Annual Groundwater Delivered (AFY)	Total Annual Water Delivery (AFY)	Average (mgd)
1997/98	392,800	92,031	140.40	1.71	7,186	99,216	88.58
1998/99	396,200	102,180	143.60	1.58	24,630	126,810	113.22
1999/00	405,963	112,547	161.60	1.61	24,146	136,693	122.04
2000/01	418,711	114,172	214.00	2.10	23,578	137,750	122.98
2001/02	426,013	113,979	159.80	1.57	24,271	138,250	123.43
2002/03	433,400	111,539	278.90	2.35	23,997	135,537	121.01
2003/04	441,000	128,412	318.40	2.33	15,372	143,784	128.37
2004/05	452,959	116,305	176.4	1.70	19,271	135,576	120.7

Notes:
1 .Operational Statistics 2004/2005.
2, Other data from corresponding annual report.
Source: City of Sacramento, Department of Utilities, Operational Statistics Report 2004/2005.

The most accurate projection of demand can be developed using water demand factors based on land use sectors; for residential, this is measured in gallons per day per dwelling unit (gpd/du). The expected water use of the proposed project was determined by analyzing similar land uses and assigning a demand factor for each proposed use. The demand factors were formulated based on data from the *1994 Proposed Water Demand/Wastewater Generation Factors Report* by Nolte Engineering and West Yost and Associates, City of Sacramento, General Plan Implementation Chapter, as well as current and historical uses at similar facilities, and personal communications with the City of Sacramento Department of Utilities. A demand factor of 15 gpd per employee and 400 square feet per employee were assumed. Dividing 15 gpd per employee by 400 square feet determined the demand factor per square foot of building area, which is 0.0375 gpd/sf. See Table 5.5-8 for further explanation. As shown in Table 5.5-8, office uses for the proposed project are

estimated to create a demand 15,239 gpd or 17.06 AFY. When combined with restaurant and retail uses, the project would create an average daily demand of 18,561 gpd or 20.78 AFY.[49]

TABLE 5.5-8

PROPOSED PROJECT WATER DEMAND

Building/Facility	Space Used (sf)	Demand factor	Total Annual Demand (gpd)	Total Annual Demand (AFY)
Office	406,384	0.0375 gpd/sf[1]	15,239	17.06
Bar/Restaurant/Retail	27,124	0.35 gpd/sf[2]	3,322	3.72
Parking Garage	534,900	0	0	0.00
TOTALS	**1,818,335**		**18,561**	**20.78**

Notes:
1. Office assumes 400 square feet per employee and 15 gallons per day per employee (15gpd/emp divided by 400 sf = demand factor 0.0375 gpd/sf) Source: American Water Works Association 1996.
2. Restaurant/Retail based on water service demand from Water Supply Assessment for Palo Alto Medical Foundation Draft EIR, 2005.

Source: American Water Works Association 1996; Water Supply Assessment for Palo Alto Medical Foundation Draft EIR, 2005; EIP Associates, a division of PBS&J.

Standards of Significance

For the purposes of this EIR, impacts on water resources are considered significant if the proposed project would:

- Create an increase in water demand in excess of 10 million gallons per day; or
- Result in inadequate treatment capacity or inadequate distribution infrastructure to supply the project.

Project-Specific Impacts and Mitigation Measures

5.5-10 The proposed project's demand for water could exceed available sources of water supply sources. This would be a *less-than-significant impact.*

The proposed project land uses would generate an increased demand for water of 18,561 gpd or approximately 20.78 AFY, as shown in Table 5.5-8. The WSA assumed that the proposed project would use water supplied through surface water rights and entitlements from the Sacramento and American Rivers. These supplies would be delivered through existing City supply facilities and water infrastructure constructed for delivery onto the project site. Overall water consumption for 2004 totaled 143,764 AF, leaving the City with an excess of 56,736 AFY from the 2004 contracted supply. With a potential project demand of 20.78 AFY, the proposed project demand would represent approximately 0.01 percent of the City's 2005 authorized supply of 205,000 AFY. Alternately, if the net gain in demand at the proposed project is added to the 2004 demand of 143,764, the total demand in the City would be 143,784 AFY, leaving a surplus of 61,216 AFY; this is well below the contracted amounts with the USBR. In addition, the USBR contract continues to increase annually and culminates at 326,800 AFY in 2030. Therefore, the surplus will continue to increase simultaneously with customer demands. This analysis finds that the City of Sacramento has sufficient water allocation secured from their 1957 contracts with the USBR and other related permits to serve the proposed project. Therefore, the proposed project would not exceed water supplies in the City, and this is considered a ***less-than-significant impact***.

49 City of Sacramento, Draft Water Supply Assessment for the Proposed 500 Capitol Mall, June 2006, p. 3-1.

Mitigation Measure

None required.

5.5-11 The proposed project could increase water demand in excess of 10 million gallons per day (gpd). This is a *less-than-significant impact*.

The proposed project would increase water demand at the project site by 18,561 gpd; this is far below the City's 10 million gallon per day threshold. Therefore, this would be considered a ***less-than-significant impact***.

Mitigation Measure

None required.

5.5-12 The proposed project's demand for water could exceed the availability of treated water and the distribution systems, resulting in the need for new or expanded facilities. This is a *less-than-significant impact.*

The project's water demand (18,561 gpd or 0.018561 mgd) would require treatment prior to delivery at the project site. The Sacramento WTP and Fairbain WTP have a combined capacity of 360 mgd (403,398 AFY). Based on Sacramento's 2004/2005 water demand of 117 mgd (52.7 mgd from the American River, 63.9 mgd from the Sacramento River), the treatment plants have a combined excess capacity of 244 mgd. The proposed project's demand for water treatment would be 0.008 percent of the excess capacity available at the treatment plants. Therefore, this impact would be considered ***less than significant***.

Mitigation Measure

None required.

Cumulative Impacts and Mitigation Measures

The cumulative analysis for water supply, distribution, and storage considers the potential environmental effects of supplying water to the project in addition to regional water demands generated in Sacramento County under the provisions of WFA.

5.5-13 The proposed project, in combination with buildout of the City of Sacramento General Plan, would increase water demand throughout the City that could exceed water supplies. This is a *less-than-significant cumulative impact.*

The proposed project would increase the demand for water in the City's service area beyond the existing demand of approximately 143,000 AFY in 2004; this demand is well below the current USBR contracted limit of 200,500 AFY for that year. In addition, the City's authorized supply under both the WFA and USBR contract increases until 2030 when the City's contracted amount will reach 326,800 AFY. The City-wide projected annual demand remains approximately 70 percent of the USBR contracted annual diversion when using a constant 2.0 percent per year growth rate to achieve the 2030 projected demand of 240,080 AFY, as shown in Table 5.5-9. The City-wide water demand would have to nearly triple the 2004 demand in order to exceed the available supply. The City is in the process of updating its General Plan, and it is highly unlikely that the updated General

Plan would include a doubling of the population over current buildout. The population projections for Sacramento County estimate that the county would grow less than ten percent every five years.[50]

TABLE 5.5-9

SUPPLY AND DEMAND COMPARISON DURING NORMAL YEARS (AFY)

	2005	2010	2015	2020	2025	2030
Surface Water Supply						
American River	123,200	145,700	170,200	196,200	222,200	245,000
Sacramento River	81,800	81,800	81,800	81,800	81,800	81,800
TOTAL SURFACE WATER SUPPLY[1]	**205,000**	**227,500**	**252,000**	**278,000**	**304,000**	**326,800**
Demand	146,647	161,567	178,336	196,842	217,265	239,805
Net Project Demand[2]	--	15.58	15.58	15.58	15.58	15.58
TOTAL DEMAND	**146,647**	**161,583**	**178,352**	**196,858**	**217,281**	**239,821**
SURPLUS	**58,353**	**65,917**	**73,648**	**81,142**	**86,719**	**86,979**

Notes:
1. Total surface water supply is based on USBR contracted delivery.
2. Net project demand is proposed demand minus historic building demand. Project demand is 20.78, Historic demand on-site is 5.2 AFY. See Water Supply Assessment, Appendix G, for further explanation of net project demand.
Source: EIP Associates, 2006, a division of PBS&J.

The City has limited diversions to 50,000 AFY during Hodge flow conditions in the American River, but is not limited to divert American River entitlements from the Sacramento River, resulting in no reduction in contracted delivery for single or multiple dry years. This analysis reinforces the previous statements that cumulative development within the service area of the City of Sacramento would not exceed water supplies or entitlements provided to the City through the USBR contract or WFA. Therefore, this impact is considered ***less-than-significant.***

Mitigation Measure

None required.

5.5-14 The proposed project, in combination with buildout of the City of Sacramento General Plan, would contribute to increased water demands throughout the City that could exceed treatment or pumping capabilities within the City's service area. This is a *less-than-significant cumulative impact*.

Although much of the Central City Business District is already developed, it is likely that the land uses within the City's service area would intensify in the future as development pressure throughout the metropolitan area increases. The intensification of uses and buildout of the General Plan could result in the need for upgrades in the City's water distribution and/or treatment systems.

The most appropriate approach to address the diversion and treatment limitations is to analyze maximum day demand. The dry year treatment production estimate of 230,000 AFY is based upon a diversion 50,000 AFY from the American River at the Fairbain WTP and 180,000 AFY at the Sacramento WTP. In order for the Sacramento WTP to achieve 180,000 AFY, the plant would have to consistently treat 160 mgd. However, because the plant only treats water as demand requires, during low demand times, such as during winter months, the plant would produce less than the 160 mgd capacity. Currently, the City does not store surplus water beyond that necessary for

50 State of California, *Interim County Population Projections*, Estimated July 1, 2000 and Projections for 2005, 2010, 2015, and 2020, June 2001.

operational and emergency needs; consequently, the Sacramento WTP does not produce its annual capacity of 180,000 AFY. Average day demand is not expected to exceed 160 mgd until after 2015; therefore, the Sacramento WTP would operate below annual maximum production capacity until after 2015. Subsequently, reliable supplies to City customers would be ensured through the City's current treatment and infrastructure. However, based on the WSA findings, there is a potential maximum day surface water deficit occurring after 2015, if a new diversion facility and WTP are not constructed on the Sacramento River. The City is aware of this shortfall, and is a partner on the Sacramento River Water Reliability Study, which is investigating alternatives for an additional diversion on the Sacramento River. The environmental documentation for the alternatives analysis is scheduled to be completed in 2007,[51] essentially providing eight years for the design and construction of a selected project before any potential maximum demand shortfall. Specifically, the City claims that the new WTP would be operational within six to ten years.[52] This alternative of a 145 mgd diversion and WTP included in the Sacramento River Water Reliability Study would ensure the delivery of the entitled water for the City, as well as all wholesale and wheeling agreements in 2015 beyond 2030. Therefore, this is considered a ***less-than-significant cumulative impact*** on water treatment and deliveries.

Mitigation Measure

None required.

51 Stevens, David, MWH, Initial Alternatives Report. Final diversion, March 2005. Sacramento River Reliability Study. Updated by personal communication April 18, 2006.

52 Sherry, Dan, City of Sacramento Utilities Department, Comment on *Draft WSA for Towers on Capitol Mall*, June 25, 2005.

5.6 Transportation and Circulation

5.6 TRANSPORTATION AND CIRCULATION

INTRODUCTION

This Transportation and Circulation section discusses existing, baseline, and cumulative transportation and circulation conditions associated with the 500 Capitol Mall Project. The analysis includes consideration of automobile traffic impacts on roadway capacity, transit impacts, bicycle impacts, pedestrian impacts, and parking impacts. Quantitative analyses of a.m. and p.m. peak hour conditions have been conducted for the following scenarios:

- Existing Conditions
- Baseline
- Baseline plus Project
- Near-Term (2013)
- Near-Term (2013) plus Projects
- Long-Term (2030)
- Long-Term (2030) plus Projects

Table 5.6-1 describes the traffic analysis scenarios. The four cumulative scenarios involving Near-Term and Long-Term conditions have been analyzed in the Sacramento Downtown Traffic Study. The project will be sharing in the cost of mitigation of cumulative impacts identified in the study.

TABLE 5.6-1

DESCRIPTION OF TRAFFIC ANALYSIS SCENARIOS

Scenario	Description of Scenario
Existing Conditions	
Existing	Existing conditions in the study area without any additional development.
Baseline Conditions	
Baseline	Existing conditions plus traffic associated with Crocker Art Museum Expansion, 301 Capitol Mall, 601 Capitol Mall, Metro Place Office / Residential, 15th and L Streets Hotel, CalPERS Headquarters Expansion, Sutter Medical Center, Trinity Cathedral, CADA East End Gateway Residential, and Capitol West End projects.
Baseline Plus Project	Baseline conditions plus 500 Capitol Mall traffic.
Cumulative Conditions	
Cumulative Near-Term (Year 2013)	Year 2013 conditions in the study area without any changes to the project site.
Cumulative Near-Term (Year 2013) Plus Projects	Year 2013 conditions in the study area plus traffic associated with 800 K Street, 831 L Street, Westfield Shoppingtown Downtown Plaza Expansion, 500 Capitol Mall, The Metropolitan, Cathedral Square, Epic Tower, 701 L Street, and The Library Lofts projects.
Cumulative Long-Term (Year 2030)	Year 2030 conditions in the study area without any changes to the project site.
Cumulative Long-Term (Year 2030) Plus Projects	Year 2030 conditions in the study area plus traffic associated with 800 K Street, 831 L Street, Westfield Shoppingtown Downtown Plaza Expansion, 500 Capitol Mall, The Metropolitan, Cathedral Square, Epic Tower, 701 L Street, and The Library Lofts projects.

Source: DKS Associates, 2006.

Sources Reviewed

The preparation of the Transportation and Circulation section included review of various sources of information. These sources include, but are not limited to, the following:

- City of Sacramento General Plan
- Central City Community Plan
- 2010 Bikeway Master Plan
- Metropolitan Transportation Plan
- Sacramento Regional Transit Master Plan
- 2000 Highway Capacity Manual
- Trip Generation, Seventh Edition
- Parking Generation, Third Edition
- Sacramento Central City Two-Way Conversion Studies
- Sacramento Downtown Traffic Study

Technical data used for the preparation of this section is included as Appendix H; intersection analyses are available for review at the City of Sacramento Development Services Department. The Downtown Traffic Study prepared by Dowling Associates is included as Appendix I.

Comments on the Notice of Preparation (NOP) addressed several transportation subject areas, including study scope, traffic operations, parking, transit services, pedestrian access, and alternative modes.

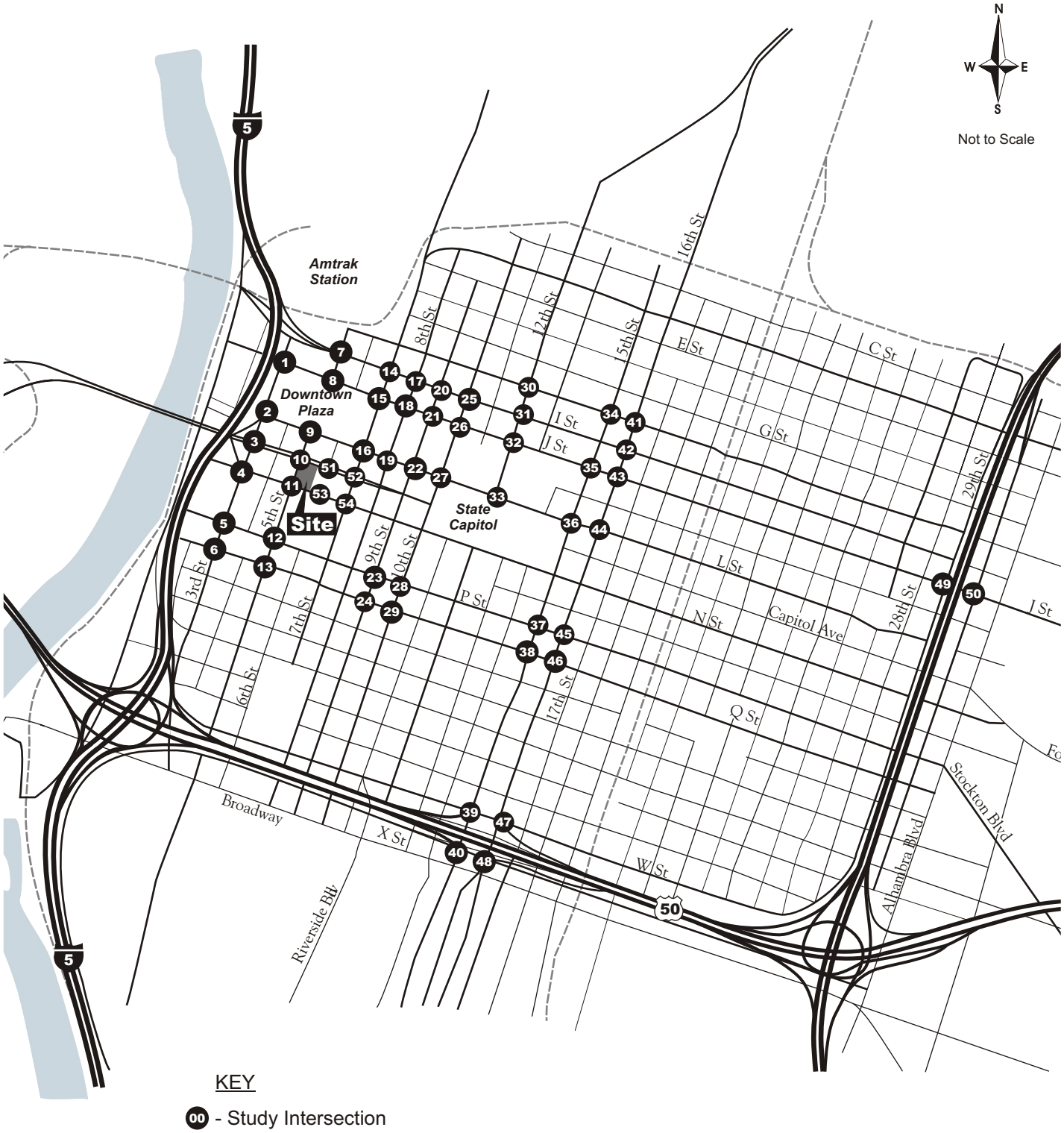
Commentors requested that the study address impacts on traffic circulation, parking, and alternative modes of access. It was recommended that parking provided on site not exceed the project's demand. Localized traffic operations changes were requested, including on-street parking, pedestrian crossings, transit shelters, and traffic regulations. Participation in a TMA and transit pass subsidies were encouraged. Project funding contributions for transit projects and the state highway system were requested.

PROPOSED PROJECT

As illustrated in Figure 5.6-1, the project is located on the southeast corner of Capitol Mall and 5th Street. The site has frontage on Capitol Mall, 5th Street, and N Street. Figure 5.6-2 illustrates the proposed site plan.

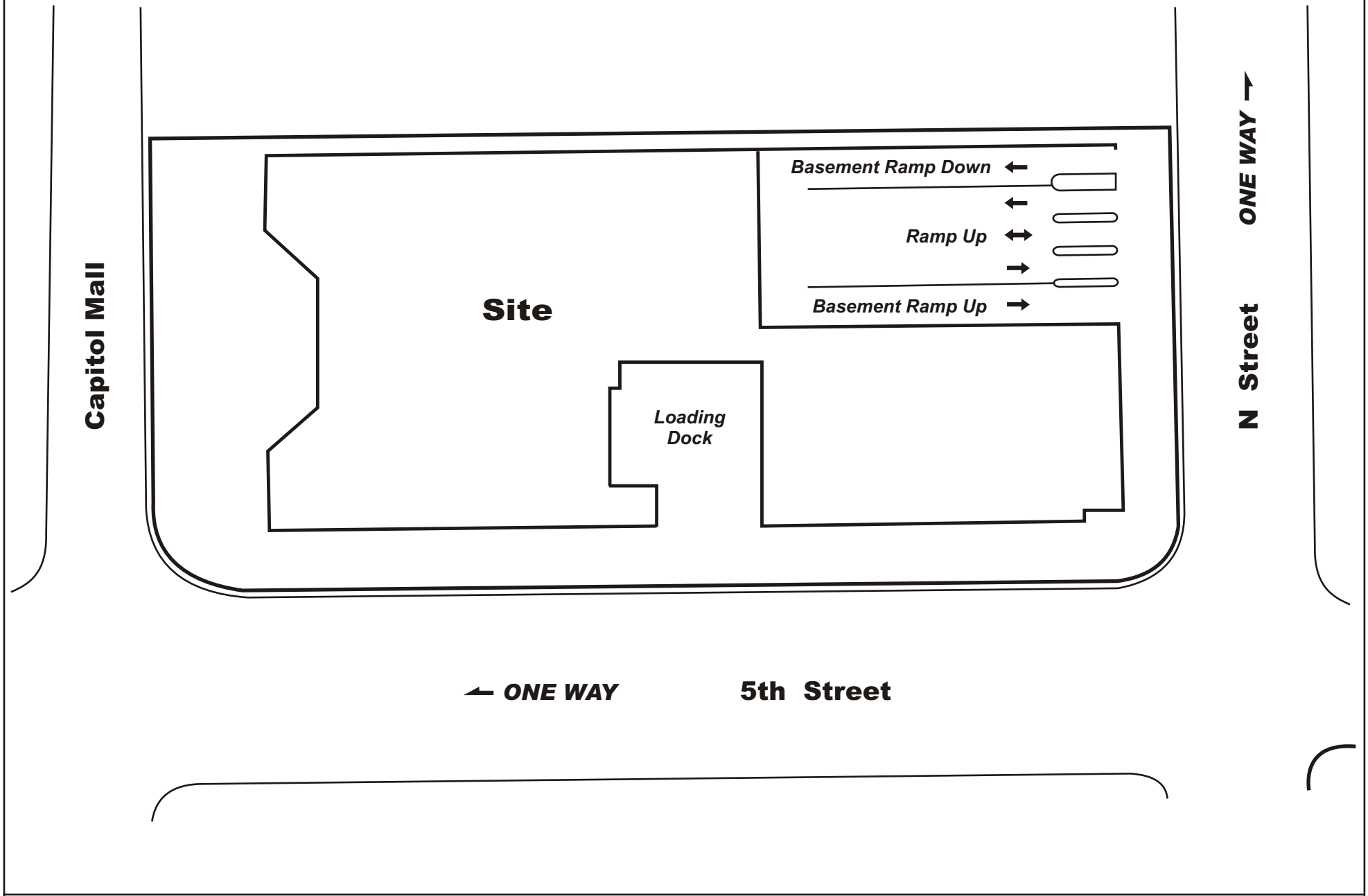
Major transportation elements of the proposed project include:

- 794 parking spaces in a parking garage integrated with the building. Seventy six spaces would be located in a separate basement garage, with the remaining spaces in ten aboveground levels.
- Access to the parking garage from N Street.
- Loading dock access from 5th Street.



500 Capitol Mall

Figure 5.6-1
PROJECT LOCATION



500 Capitol Mall

NO SCALE

Figure 5.6-2
SITE PLAN

ENVIRONMENTAL SETTING

The roadway, transit, bicycle, and pedestrian components of the transportation system are described below. Figure 5.6-1 illustrates the roadway system within the study area.

Regional Roadways

Regional vehicular access to Downtown Sacramento is provided primarily by the freeway system that serves the central areas of Sacramento. **Interstate 5 (I-5)** is a north-south facility located just west of Downtown. Access from Downtown to I-5 is provided via I, L and P Streets, and access from I-5 to Downtown is provided via J and Q Streets. To the south, I-5 provides access to southern portions of the City and County, as well as other Central Valley communities. To the north, I-5 provides access to I-80, northern portions of the City and County, Sacramento International Airport, and other Central Valley communities.

The east-west **U.S. Route 50 (U.S. 50)** lies approximately 1.5 miles south of Downtown. Access to U.S. 50 from Downtown is provided via 9th and 15th Streets to the 11th and 16th Street on-ramps. Access from U.S. 50 to Downtown is provided from the 16th and 10th Street off-ramps. To the east, U.S. 50 serves eastern portions of the City and County and extends into El Dorado County. To the west, U.S. 50 extends via the Pioneer Bridge to West Sacramento and Yolo County.

Business Loop Interstate 80 (Business 80), also known as State Route 51 between U.S. 50 and Auburn Avenue, lies approximately 2 miles east of Downtown. Although access between Downtown and Business 80 is available at several locations along the east edge of Central City, more direct access to Business 80 is provided via **State Route 160 (SR 160)** via 12th and 16th Streets. SR 160 provides access to North Sacramento, northeastern portions of the City and County, South Natomas via Northgate Boulevard, and I-80 extending into Placer County.

Local Roadways

Downtown Sacramento is served by a grid street system. North-south streets have numbered street names and east-west streets have lettered street names. Near Downtown, many streets operate as one-way facilities. In general, the one-way streets carry three travel lanes, with parking permitted along both curbs. Two-way streets generally have one lane in each direction with parking on both sides of the street. To accommodate critical traffic volumes and turning movements in selected locations, parking has been prohibited to provide additional lanes. Most major intersections in Downtown are signal-controlled.

Important east-west streets for Downtown access include H, J, N, Q, and X Streets, which are one-way eastbound, and I, L, P, and W Streets, which are one-way westbound. Capitol Mall is a two-way east-west facility that extends from the Tower Bridge to the State Capitol at 10th Street. Capitol Mall has two to three lanes in each direction between the Tower Bridge and 9th Street, separated by a grass median. Between 9th and 10th Streets, the roadway includes a mid-block traffic circle.

Important north-south streets for Downtown access include 3rd, 7th, 9th, 12th, and 15th Streets, which are one-way southbound (except for a portion of 3rd street between L and J Street) and 5th, 8th, 10th, and 16th Streets, which are one-way northbound (except for a portion of 5th Street between J and L Streets).

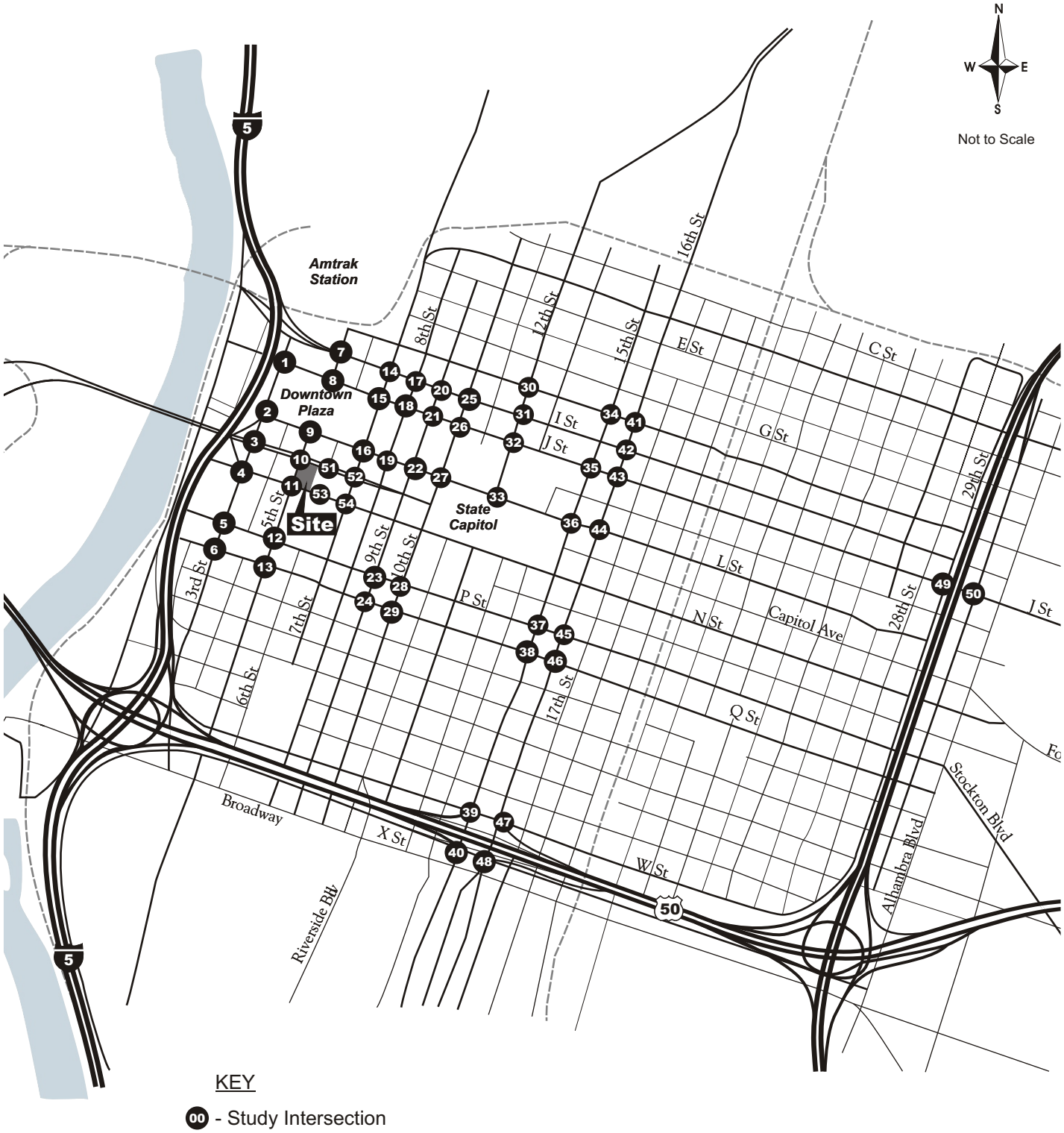
Adjacent to the project site, Capitol Mall is a median-divided roadway with two eastbound and three westbound lanes. Fifth Street is one-way northbound with five lanes – two left turn lanes to Capitol Mall westbound, two through lanes, and one shared through –right turn lane. N Street is one way eastbound with three through travel lanes.

Existing Roadway Operating Conditions

Study Area

For traffic analysis purposes, a set of intersections and freeway system elements was selected based upon the anticipated volume of project traffic, the distributional patterns of project traffic, and known locations of operational difficulty. As illustrated in Figure 5.6-3, the study area includes the following fifty-four intersections:

1. 3rd Street / J Street
2. 3rd Street / L Street
3. 3rd Street / Capitol Mall
4. 3rd Street / N Street
5. 3rd Street / P Street
6. 3rd Street / Q Street
7. 5th Street / I Street
8. 5th Street / J Street
9. 5th Street / L Street
10. 5th Street / Capitol Mall
11. 5th Street / N Street
12. 5th Street / P Street
13. 5th Street / Q Street
14. 7th Street / I Street
15. 7th Street / J Street
16. 7th Street / L Street
17. 8th Street / I Street
18. 8th Street / J Street
19. 8th Street / L Street
20. 9th Street / I Street
21. 9th Street / J Street
22. 9th Street / L Street
23. 9th Street / P Street
24. 9th Street / Q Street
25. 10th Street / I Street
26. 10th Street / J Street
27. 10th Street / L Street
28. 10th Street / P Street
29. 10th Street / Q Street
30. 12th Street / H Street



500 Capitol Mall

Figure 5.6-3
STUDY INTERSECTIONS AND FREEWAY LOCATIONS

31. 12th Street / I Street
32. 12th Street / J Street
33. 12th Street / L Street
34. 15th Street / H Street
35. 15th Street / J Street
36. 15th Street / L Street
37. 15th Street / P Street
38. 15th Street / Q Street
39. 15th Street / W Street
40. 15th Street / X Street
41. 16th Street / H Street
42. 16th Street / I Street
43. 16th Street / J Street
44. 16th Street / L Street
45. 16th Street / P Street
46. 16th Street / Q Street
47. 16th Street / W Street
48. 16th Street / X Street
49. 29th Street / J Street
50. 30th Street / J Street
51. 6th Street / Capitol Mall
52. 7th Street / Capitol Mall
53. 6th Street / N Street (driveway)
54. 7th Street / N Street

The following mainline sections on the freeway system are included in the study area:

- I-5 Northbound
    - South of U.S. 50 on-ramp
    - North of U.S. 50 on-ramp
    - South of L Street on-ramp
    - South of I Street on-ramp
    - South of Richards Boulevard off-ramp
- I-5 Southbound
    - North of Richards Boulevard on-ramp
    - North of J Street off-ramp

  - North of I Street on-ramp
  - North of U.S. 50 off-ramp

- U.S. 50 Eastbound
  - West of I-5 on-ramp
  - West of 15th Street off-ramp
  - West of 10th Street on-ramp
  - West of 16th Street on-ramp

- U.S. 50 Westbound
  - East of SR 99 on-ramp
  - East of 10th Street off-ramp
  - East of 15th Street on-ramp
  - East of I-5 off-ramp

The following merge / diverge / weaving areas on the freeway system are included in the study area:

- I-5 Northbound
  - U.S. 50 on-ramp
  - P Street to J Street weave
  - L Street on-ramp
  - I Street on-ramp
  - Richards Boulevard off-ramp

- I-5 Southbound
  - Richards Boulevard on-ramp
  - J Street off-ramp
  - I Street to Q Street weave
  - U.S. 50 off-ramp

- U.S. 50 Eastbound
  - I-5 on-ramp
  - 15th Street off-ramp
  - 10th Street on-ramp
  - 16th Street to Business 80 / SR 99 weave

- U.S. 50 Westbound
  - Business 80 to 16th Street weave
  - 10th Street off-ramp
  - 15th Street on-ramp

- o I-5 off-ramp

The following freeway ramp queuing areas are included in the study area:

- I-5 Northbound
  - o Q Street off-ramp
  - o J Street off-ramp
- I-5 Southbound J Street off-ramp
- U.S. 50 Eastbound 15th Street off-ramp
- U.S. 50 Westbound
  - o 16th Street off-ramp
  - o 10th Street off-ramp

Traffic counts were collected at each of the study area intersections and freeway ramps during the a.m. and p.m. peak commuter periods between September 2004 and March 2006. Recent freeway mainline and ramp count data was obtained from Caltrans.

Figure 5.6-4 illustrates existing intersection geometry (approach lanes and traffic control), as well as existing a.m. and p.m. peak hour traffic counts.

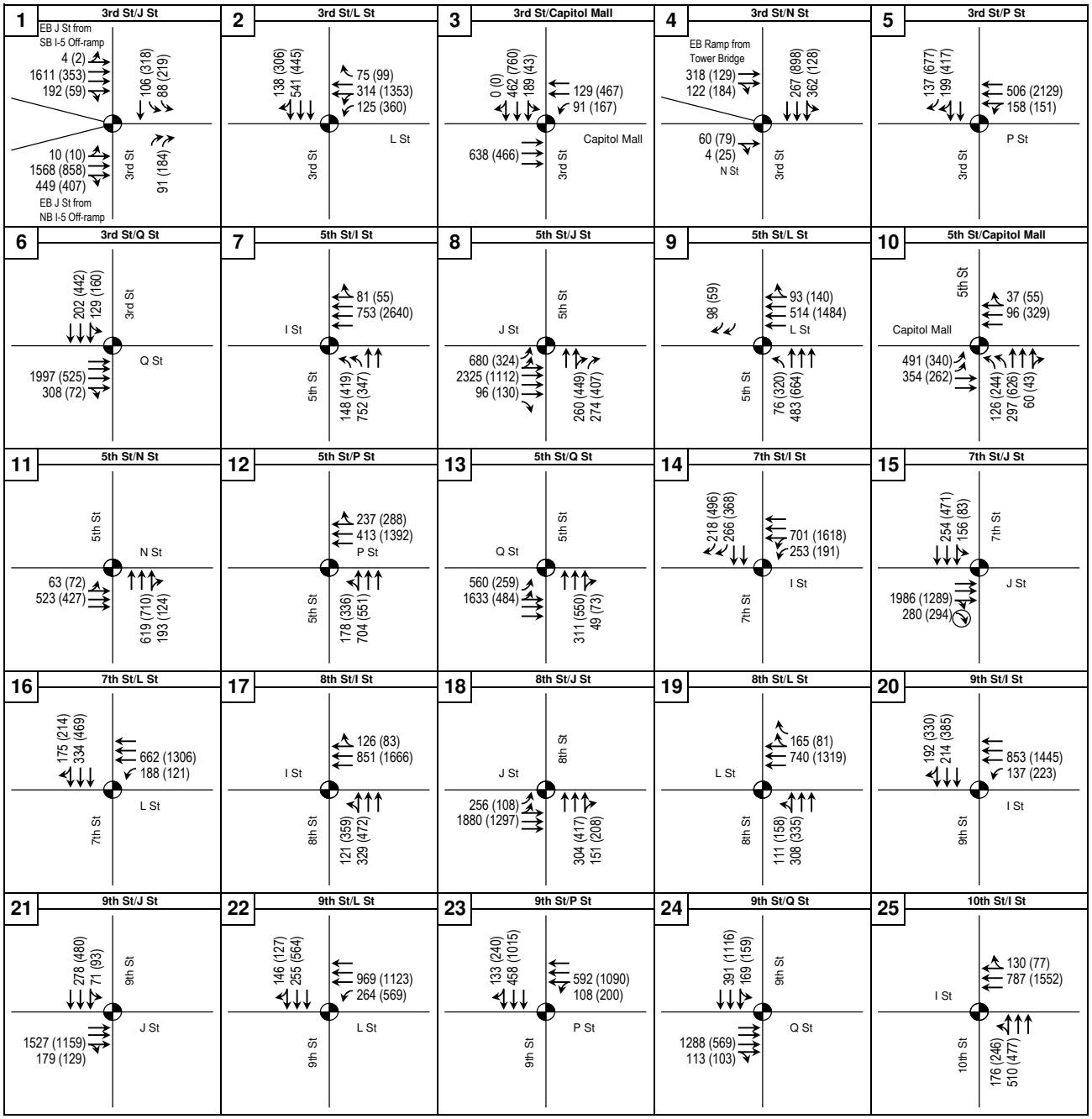
Methodology

Field reconnaissance was undertaken to ascertain the traffic control characteristics of each of the study area intersections and freeway system elements. Determination of roadway operating conditions is based upon comparison of known or projected traffic volumes during peak hours to roadway capacity. In an urban setting, roadway capacity is generally governed by intersection characteristics, and intersection delay is used to determine “levels of service.” Levels of service describe roadway operating conditions. Level of service is a qualitative measure of the effect of a number of factors, including speed and travel time, traffic interruptions, freedom to maneuver, safety, driving comfort and convenience, delay, and operating costs. Levels of service are designated "A" through "F" from best to worst, which cover the entire range of traffic operations that might occur. Levels of Service (LOS) "A" through "E" generally represent traffic volumes at less than roadway capacity, while LOS "F" represents over capacity and / or forced flow conditions.

The City of Sacramento General Plan includes a goal of maintaining LOS “C” throughout the roadway network. Because of the constraints of existing development in the City, and because of other environmental concerns, this goal cannot always be met. Caltrans utilizes a LOS “E” standard for the Sacramento urban freeway system.

Intersection Analysis

Intersection analyses were conducted using a methodology outlined in the Transportation Research Board’s Special Report 209, *Highway Capacity Manual,* 2000. The methodology used is known as “operational analysis.” This procedure calculates an average control delay per vehicle at an intersection, and assigns a level of service designation based upon the delay. The method also provides a calculation of the volume-to-capacity (v/c) ratio of the critical movements at signalized intersections. Tables 5.6-2 and 5.6-3 present the level of service criteria for signalized and unsignalized intersections, respectively.



KEY

31 (27) = AM (PM) peak hour traffic volume

= Signalized intersection

= Intersection approach lane

= Lane provided during AM peak, only

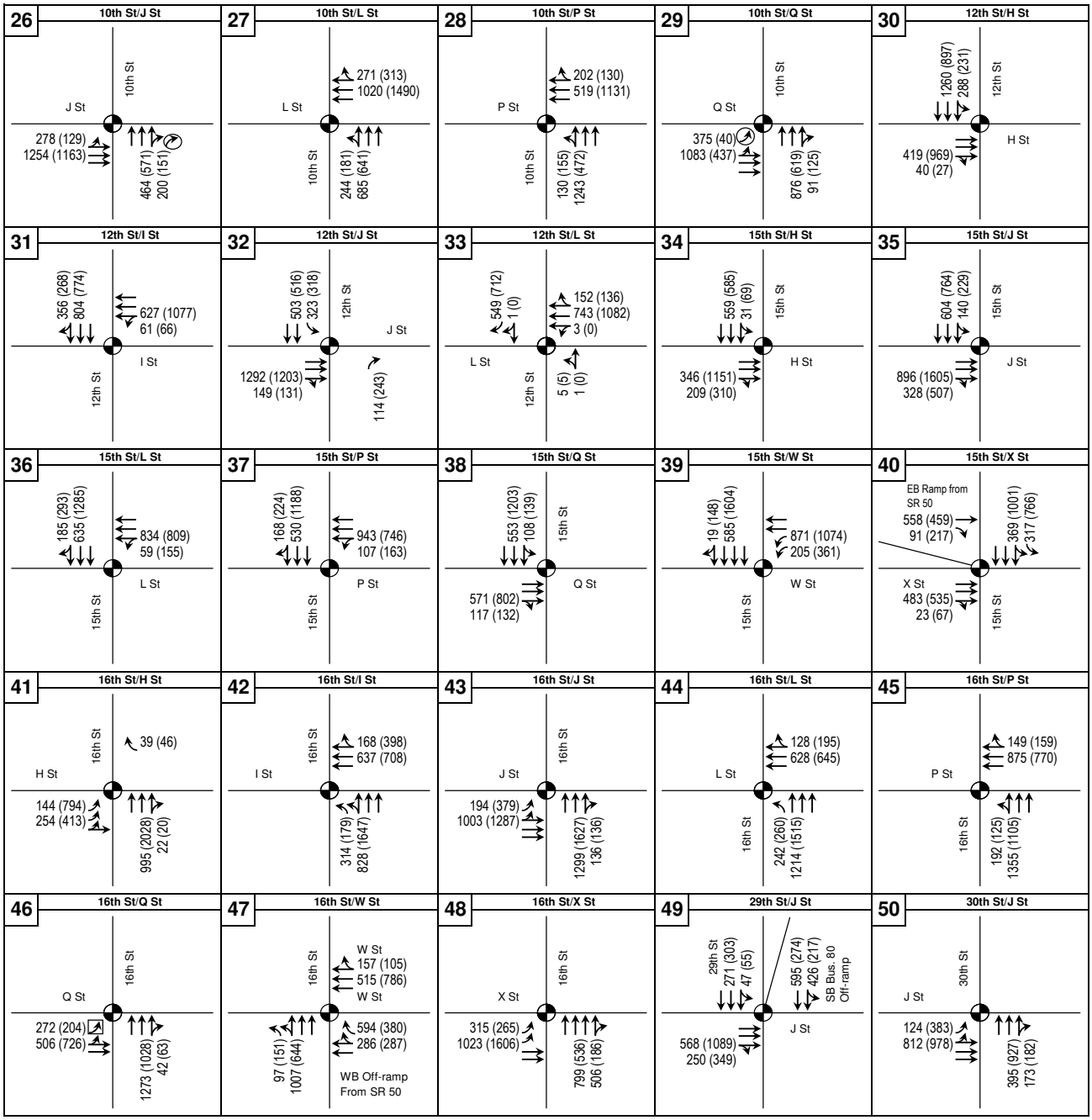
= Lane provided during PM peak, only

Sources: Sacramento Downtown Traffic Study, Dowling Associates, 2006; DKS Associates, 2006

500 Capitol Mall

N W E S

Figure 5.6-4 - Sheet 1 of 3
EXISTING TRAFFIC VOLUMES, LANES, AND TRAFFIC CONTROLS



KEY

31 (27) = AM (PM) peak hour traffic volume

= Signalized intersection

= Intersection approach lane

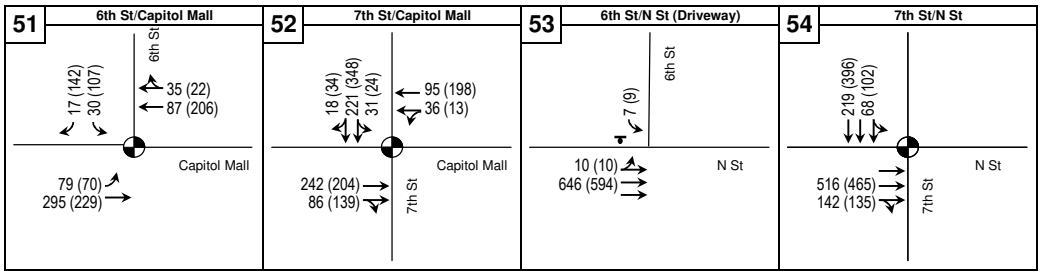
= Lane provided during AM peak, only

= Lane provided during PM peak, only

Sources: Sacramento Downtown Traffic Study, Dowling Associates, 2006; DKS Associates, 2006

500 Capitol Mall

Figure 5.6-4 - Sheet 2 of 3
EXISTING TRAFFIC VOLUMES, LANES, AND TRAFFIC CONTROLS



KEY

31 (27) = AM (PM) peak hour traffic volume

◕ = Signalized intersection

= Intersection approach lane

= Lane provided during AM peak, only

= Lane provided during PM peak, only

= Unsignalized intersection

Sources: Sacramento Downtown Traffic Study, Dowling Associates, 2006; DKS Associates, 2006

500 Capitol Mall

Figure 5.6-4 - Sheet 3 of 3
EXISTING TRAFFIC VOLUMES, LANES, AND TRAFFIC CONTROLS

TABLE 5.6-2

LEVEL OF SERVICE CRITERIA – SIGNALIZED INTERSECTIONS

Level of Service (LOS)	Control Delay Per Vehicle (seconds)	Description
A	≤ 10.0	Very low control delay. Occurs when progression is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.
B	> 10.0 and ≤ 20.0	Generally occurs with good progression, short cycle lengths, or both. More vehicles stop than with LOS "A," causing higher levels of average delay.
C	> 20.0 and ≤ 35.0	These higher delays may result from fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant at this level, though many still pass through the intersection without stopping.
D	> 35.0 and ≤ 55.0	The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high v/c ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.
E	> 55.0 and ≤ 80.0	These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent occurrences.
F	> 80.0	This level, considered to be unacceptable to most drivers, often occurs with oversaturation, that is, when arrival flow rates exceed the capacity of the intersection. It may also occur at high v/c ratios below 1.0 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.

Source: Highway Capacity Manual, Transportation Research Board, Special Report No. 209, Washington, D.C., 2000.

TABLE 5.6-3

LEVEL OF SERVICE CRITERIA – UNSIGNALIZED INTERSECTIONS

Level of Service (LOS)	Total Delay Per Vehicle (seconds)
A	≤ 10
B	> 10 and ≤ 15
C	> 15 and ≤ 25
D	> 25 and ≤ 35
E	> 35 and ≤ 50
F	> 50

Source: Highway Capacity Manual, Transportation Research Board, Special Report No. 209, Washington, D.C., 2000.

Freeway Analysis

Freeway mainline segments were analyzed utilizing a methodology outlined in the Transportation Research Board's Special Report 209, Highway Capacity Manual (2000). Maximum service flow rates of 2,200 vehicles per lane per hour for typical freeway lanes and 1,600 vehicles per lane per hour for auxiliary lanes were utilized, based upon data collected by Caltrans in the Sacramento urban area. Tables 5.6-4 through 5.6-6 present the level of service criteria for freeway mainline, ramp junction, and weaving segments, respectively.

Analysis Results

Intersections

Table 5.6-7 summarizes the existing a.m. and p.m. peak hour operating conditions at the study area intersections. At unsignalized intersections, the average intersection level of service is utilized to determine conformity with the City's goal. Individual movements may operate at worse levels of service. All study intersections currently operate at or above the City's level of service "C" goal except for the 3rd Street / J Street intersection, which operates at LOS D during the a.m. peak hour.

TABLE 5.6-4

LEVEL OF SERVICE CRITERIA – FREEWAY MAINLINE

Level of Service (LOS)	Maximum Volume-to-Capacity Ratio	Maximum Density (passenger vehicles per mile per lane)
A	0.32	11
B	0.53	18
C	0.74	26
D	0.90	35
E	1.00	45
F	Varies	Varies

Source: Highway Capacity Manual, Transportation Research Board, Special Report No. 209, Washington, D.C., 2000.

TABLE 5.6-5

LEVEL OF SERVICE CRITERIA – FREEWAY RAMP JUNCTIONS

Level of Service (LOS)	Maximum Density (Passenger Cars Per Mile Per Lane)
A	10
B	20
C	28
D	35
E	Greater than 35
F	Demand flows exceed capacity.

Source: Highway Capacity Manual, Transportation Research Board, Special Report No. 209, Washington, D.C., 2000.

TABLE 5.6-6

LEVEL OF SERVICE CRITERIA – FREEWAY WEAVING SEGMENTS

Level of Service (LOS)	Maximum Density (Passenger Cars Per Mile Per Lane)
A	10
B	20
C	28
D	35
E	43
F	Greater than 43

Source: Highway Capacity Manual, Transportation Research Board, Special Report No. 209, Washington, D.C., 2000.

TABLE 5.6-7

EXISTING INTERSECTION OPERATING CONDITIONS

	A.M. Peak Hour		P.M. Peak Hour	
Intersection	**LOS**	**Delay (seconds)**	**LOS**	**Delay (seconds)**
1. 3rd St / J St	**D**	**44.4**	B	15.7
2. 3rd St / L St	B	13.2	B	15.4
3. 3rd St / Capitol Mall	B	19.0	B	18.1
4. 3rd St / N St	C	21.1	B	19.0
5. 3rd St / P St	A	8.9	B	14.1
6. 3rd St / Q St	A	9.7	B	10.3
7. 5th St / I St	B	11.0	B	14.6
8. 5th St / J St	C	20.5	B	11.4
9. 5th St / L St	B	13.8	C	21.7
10. 5th St / Capitol Mall	C	20.2	B	18.0
11. 5th St / N St	B	13.2	B	13.2
12. 5th St / P St	B	10.3	B	12.0
13. 5th St / Q St	A	9.5	A	9.9
14. 7th St / I St	A	9.8	B	18.2
15. 7th St / J St	B	16.5	B	12.4
16. 7th St / L St	B	11.2	B	14.5
17. 8th St / I St	B	10.3	B	17.5
18. 8th St / J St	B	16.1	B	12.1
19. 8th St / L St	B	11.5	B	15.2
20. 9th St / I St	B	12.7	C	20.7
21. 9th St / J St	B	18.1	B	12.4
22. 9th St / L St	A	9.6	B	11.5
23. 9th St / P St	A	9.0	B	10.8
24. 9th St / Q St	B	10.6	B	10.9
25. 10th St / I St	B	14.4	C	21.2
26. 10th St / J St	C	21.3	B	16.6
27. 10th St / L St	B	12.0	B	13.5
28. 10th St / P St	B	11.4	A	8.6
29. 10th St / Q St	B	10.9	A	8.5
30. 12th St / H St	B	16.5	B	13.3
31. 12th St / I St	A	6.3	A	7.3
32. 12th St / J St	B	16.1	B	14.3
33. 12th St / L St	B	12.6	B	14.0
34. 15th St / H St	A	9.7	B	11.9
35. 15th St / J St	B	11.1	B	19.9
36. 15th St / L St	B	10.9	B	11.2
37. 15th St / P St	B	11.2	B	11.0
38. 15th St / Q St	B	10.0	B	11.1
39. 15th St / W St	B	12.3	B	14.4
40. 15th St / X St	C	22.5	C	29.5
41. 16th St / H St	B	11.3	B	17.3
42. 16th St / I St	B	10.3	B	11.5
43. 16th St / J St	B	11.6	B	13.2
44. 16th St / L St	B	10.8	B	11.8
45. 16th St / P St	B	11.3	B	10.8
46. 16th St / Q St	B	11.6	A	9.9
47. 16th St / W St	C	23.5	C	23.7
48. 16th St / X St	B	13.7	B	15.8
49. 29th St / J St	C	28.6	C	22.0
50. 30th St / J St	B	12.2	B	14.0
51. 6th St / Capitol Mall	B	12.6	B	19.3
52. 7th St / Capitol Mall	C	21.0	C	20.9
53. 6th St / N St	A	9.9	A	9.7
54. 7th St / N St	B	11.5	B	10.6

Source: DKS Associates, 2006.

Freeway System

Tables 5.6-8 through 5.6-10 summarize the existing a.m. and p.m. peak hour operating conditions on the freeway system. Some segments of the freeway system do not operate within Caltrans' LOS "E" goal. Due to downstream congestion, I-5 northbound and southbound exhibits LOS "F" conditions in the study area in the p.m. peak hour. The interchange of I-5 and U.S. 50 experiences congestion during both a.m. and p.m. peak hours. Queuing from the intersection of 3rd and J Streets extends onto the northbound freeway mainline during the a.m. peak hour.

TABLE 5.6-8

EXISTING PEAK HOUR FREEWAY MAINLINE OPERATING CONDITIONS

Facility / Direction	Location	Volume		Volume / Capacity Ratio		LOS	
		AM	PM	AM	PM	AM	PM
Northbound I-5	South of US 50 on-ramp	3,417	2,872	0.54	0.46	C	**F**[1]
	North of US 50 on-ramp	7,119	5,235	0.85	0.62	D	**F**[1]
	South of L Street on-ramp	5,279	3,841	0.84	0.61	D	**F**[1]
	South of I Street on-ramp	5,471	4,598	0.65	0.55	C	**F**[1]
	South of Richards Blvd off-ramp	5,806	6,011	0.58	0.60	C	**F**[1]
Southbound I-5	North of Richards Blvd on-ramp	7,628	5,797	0.91	0.69	E	C
	North of J Street on-ramp	8,104	6,568	0.96	0.78	E	D
	North of I Street on-ramp	6,437	6,295	0.77	0.75	D	**F**[1]
	North of US 50 off-ramp	5,978	6,149	0.63	0.65	C	**F**[1]
Eastbound US 50	West of I-5 on-ramp	3,176	1,434	0.38	0.17	B	A
	West of 15th Street off-ramp	8,183	6,334	0.68	0.52	C	B
	West of 10th Street on-ramp	7,534	5,658	0.72	0.54	C	C
	West of 16th Street on-ramp	8,319	6,403	0.69	0.53	C	B
Westbound US 50	East of Hwy 51/US 99 on-ramp	3,637	3,250	0.36	0.33	B	B
	East of 10th Street off-ramp	6,483	6,058	0.62	0.58	C	C
	East of 15th Street on-ramp	5,555	5,709	0.53	0.54	B	C
	East of I-5 off ramp	6,029	6,375	0.48	0.51	B	B

1. LOS "F" conditions due to queuing from downstream bottleneck.
Source: Sacramento Downtown Traffic Study, Dowling Associates, 2006.

TABLE 5.6-9

EXISTING PEAK HOUR FREEWAY INTERCHANGE OPERATING CONDITIONS

Facility / Direction	Location	AM Peak Hour			PM Peak Hour		
		LOS	Density[1] (Flow)	Volume	LOS	Density[1] (Flow)	Volume
Northbound I-5	US 50 on-ramp	**F**	41.52	3,269	D	28.76	1,997
	P Street to J Street weave	C	23.09	7,306	C	18.62	5,920
	L Street on-ramp	C	(209)	192	C	(826)	757
	I Street on-ramp	B	11.61	335	B	18.69	1,413
	Richards Boulevard off-ramp	B	19.05	659	C	21.82	349
Southbound I-5	Richards Boulevard on-ramp	C	(519)	476	C	(841)	771
	J Street off-ramp	B	19.37	1,667	B	15.70	273
	I Street to Q Street weave	B	18.56	6,725	C	23.27	7,342
	US 50 off-ramp	**F**	14.29	3,809	**F**	14.70	4,301
Eastbound US 50	I-5 on-ramp	**F**	44.94	5,007	**F**	40.99	4,900
	15th Street off-ramp	D	32.34	649	C	24.88	676
	10th Street on-ramp	B	18.89	785	B	15.23	745
	16th Street to Business 80 / SR99 weave	D	31.68	8,975	C	25.64	6,743
Westbound US 50	Business 80 to 16th Street weave	B	15.88	4,880	B	16.33	4,883
	10th Street off-ramp	C	26.83	928	C	22.01	349
	15th Street on-ramp	C	27.81	474	D	30.04	666
	I-5 off-ramp	**F**	(4,203)	3,853	B	(3,574)	3,276

1. Density in units of passenger vehicles per lane per mile. Units in parentheses indicate ramp flow rate in passenger car equivalents.
Source: Sacramento Downtown Traffic Study, Dowling Associates, 2006.

TABLE 5.6-10

EXISTING PEAK HOUR FREEWAY RAMP QUEUING

Location	Storage Capacity (feet)	AM Peak Hour		PM Peak Hour	
		Queue (feet)	Adequate Capacity	Queue (feet)	Adequate Capacity
I-5 NB Q Street off-ramp	3,500	700	Yes	150	Yes
I-5 NB J Street off-ramp	1,750	3,450	**No**	825	Yes
I-5 SB J Street off-ramp	3,600	3,000	Yes	600	Yes
US 50 EB 15th Street off-ramp	1,600	600	Yes	650	Yes
US 50 WB 16th Street off-ramp	1,625	975	Yes	900	Yes

Source: Sacramento Downtown Traffic Study, Dowling Associates, 2006.

Bicycle System

A Sacramento City / County Bicycle Task Force developed a 2010 Bikeway Master Plan for the region. The Master Plan is a policy document that was prepared to coordinate and develop a bikeway system that will benefit and serve the recreational and transportation needs of the public. Officially designated bicycle facilities are classified as follows:

Class I: Off-street bike trails or paths which are physically separated from streets or roads used by motorized vehicles.

Class II: On street bike lanes with signs, striped lane markings, and pavement legends.

Class III: On-street bike routes marked by signs and shared with motor vehicles and pedestrians. Optional four-inch edge lines painted on the pavement.

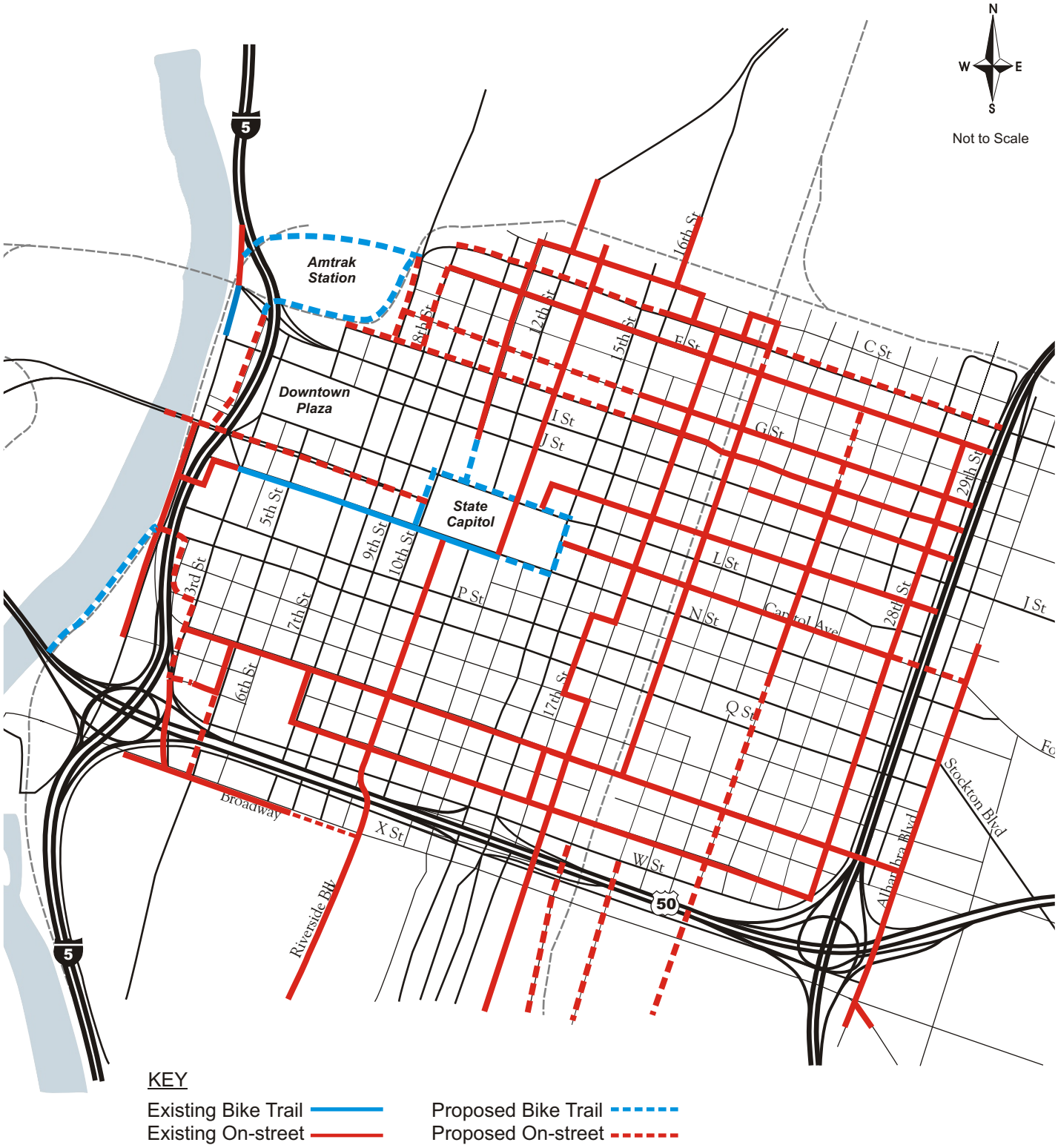
Class IV: Figure 5.6-5 illustrates existing and planned bikeways in the study area. In the immediate site vicinity, an off-street bikeway exists along the south side on N Street. On-street bikeways are proposed along Capitol Mall.

Transit System

Regional Transit (RT) operates 80 bus routes and 26.9 miles of light rail covering a 418 square-mile service area. Buses and light rail run 365 days a year using 76 light rail vehicles, 258 buses powered by compressed natural gas (CNG) and 17 shuttle vans. Buses operate daily from 5:00 a.m. to 11:30 p.m. every 15 to 60 minutes, depending on the route. Light rail trains operate from 4:30 a.m. to 1:00 a.m. daily with service every 15 minutes during the day and every 30 minutes in the evening. Figure 5.6-6 illustrates transit services in the study area.

The nearest light rail stations are located at 7th Street north of Capitol Mall (southbound) and on 8th Street south of Capitol Mall (northbound). Capital Shuttle Bus Routes 140 and 141 operate along N Street adjacent to the site, and Route 38 operates along 5th Street adjacent to the site. Many other RT bus routes operate within a few blocks of the site, particularly along L Street, 7th Street, and 8th Street.

The Amador Regional Transit System (ARTS) operates commuter service from Amador County to Downtown Sacramento. The Amador Sacramento Express route operates along L Street near the project site. One trip operates to Downtown Sacramento in the a.m., and one trip operates from Downtown Sacramento in the p.m.

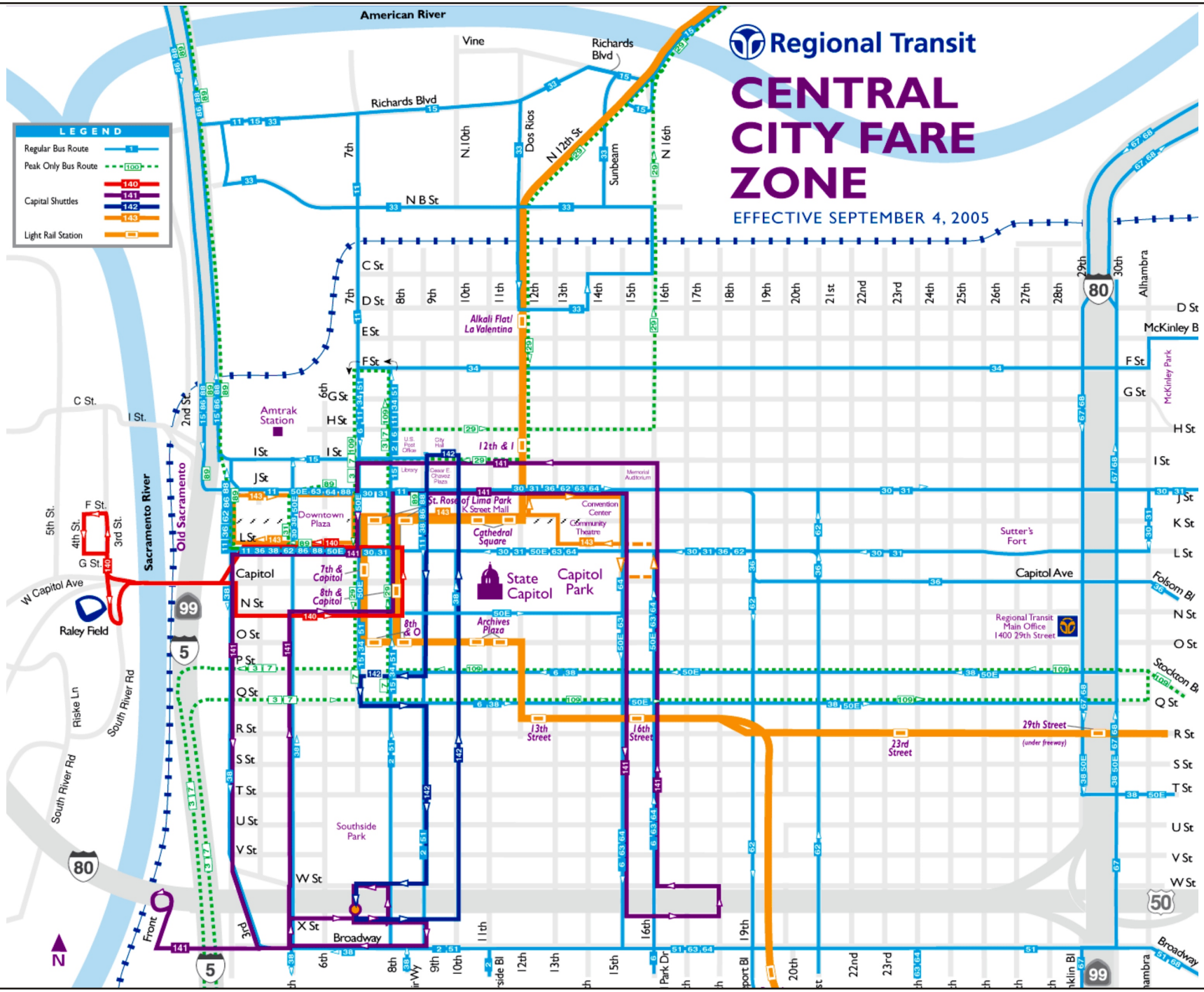


KEY

Existing Bike Trail
Existing On-street
Proposed Bike Trail
Proposed On-street

500 Capitol Mall

Figure 5.6-5
BICYCLE FACILITIES



500 Capitol Mall

Source: Sacramento Regional Transit District

Figure 5.6-6
REGIONAL TRANSIT CENTRAL CITY SERVICES

Capitol Corridor rail service operates between Colfax and the San Francisco Bay Area / San Jose, with a Sacramento stop at the Amtrak Station at 5th and I Streets. Several trains and connecting buses operate in both eastbound and westbound directions during peak commuter periods.

El Dorado Transit operates commuter service between El Dorado County and Downtown Sacramento, with ten trips to Downtown Sacramento in the a.m. and eleven trips from Downtown Sacramento in the p.m. Nearby stops are located at 5th and P Streets, and at 8th and N Streets.

Elk Grove Transit (e-tran) operates commuter service between the City of Elk Grove and Downtown Sacramento. Buses operate along 7th and 8th Streets near the project site. Seven routes serve Downtown Sacramento.

Placer County Transit operates the Placer County Commuter Express between Placer County and Downtown Sacramento. Two inbound trips to Downtown Sacramento operate in the a.m. and two outbound trips from Sacramento operate in the p.m. A nearby stop is located at 5th and P Streets.

The City of Roseville (Roseville Transit) operates seven commuter routes to Downtown Sacramento. A nearby stop is located at 5th and P Streets.

The San Joaquin Regional Transit District operates commuter service between Stockton and Downtown Sacramento. Two inbound buses to Downtown Sacramento operate during the a.m., and two outbound buses from Downtown Sacramento operate during the p.m. Yolobus operates many bus routes between Yolo County (including West Sacramento, Davis, and Woodland) and Downtown Sacramento. Yolobus also provides service between Downtown Sacramento and Sacramento International Airport. Many of the Yolobus routes operate along Capitol Mall and L Street.

Yuba-Sutter Transit operates commuter service between Yuba and Sutter Counties (including Marysville and Yuba City) and Downtown Sacramento. Four routes operate in the a.m. to Downtown Sacramento, and four routes operate in the p.m. from Downtown Sacramento. In addition, three midday round trips are provided. A nearby stop is located at 5th and P Streets.

Pedestrian System

Throughout the study area, sidewalks are provided on both sides of the majority of City streets. Pedestrian signals are included at most signalized intersections. Many pedestrians are observed in the study area, accessing residences, offices, businesses, and transit services.

Parking

Off-Street

The proposed office building will include a parking structure designed to accommodate 794 vehicles.

On-Street

Within approximately one-block of the project, there are approximately 179 on-street parking spaces. Based on data collected during 2005 for the Central City Parking Master Plan, 139 of these spaces (78 percent) were occupied on a typical midday period. The project is not expected to substantially increase or decrease the number of on-street parking spaces.

Baseline Roadway Operating Conditions

Several major development projects have been approved or proposed in the site vicinity. These projects will add traffic to the roadway network in the study area. In addition, changes to the study

area roadway system are also anticipated to be implemented shortly. The Baseline projects, illustrated in Figure 5.6-7, include:

- Crocker Art Museum Expansion
- 301 Capitol Mall
- 601 Capitol Mall
- Metro Place Office / Residential
- 15th and L Streets Hotel
- CalPERS Headquarters Expansion
- Sutter Medical Center Expansion
- Trinity Cathedral Expansion
- CADA East End Gateway Residential
- Capitol West End Project Central Plant Renovation
- Conversion of 3rd Street to two-way operations between I and J Streets
- Amtrak / Folsom Corridor Light Rail Extension – Amtrak Extension (Regional Transit)

Figure 5.6-8 illustrates baseline intersection geometry (approach lanes and traffic control), as well as baseline a.m. and p.m. peak hour traffic volumes.

Analysis Results

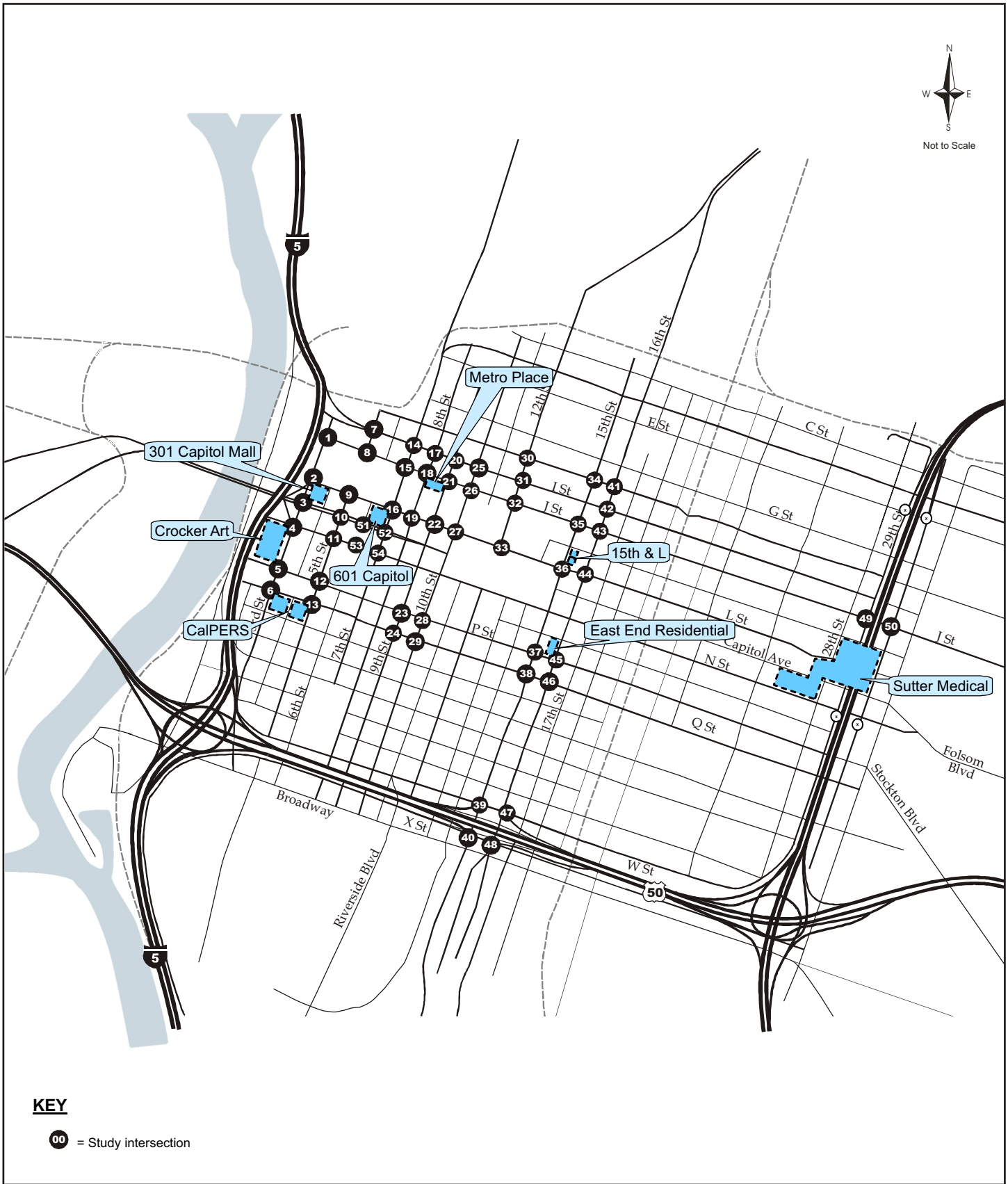
Intersections

Table 5.6-11 summarizes the baseline a.m. and p.m. peak hour operating conditions at the study area intersections. At unsignalized intersections, the average intersection level of service is utilized to determine conformity with the City's goal. Individual movements may operate at worse levels of service. After completion of the baseline projects, levels of service are expected to comply with the City's LOS "C" traffic operations standard at all but the following three locations:

- 3rd Street / J Street, where the intersection would operate at LOS E during the a.m. peak hour;
- 3rd Street / L Street, where the intersection would operate at LOS D during the p.m. peak hour; and
- 15th Street / J Street, where the intersection would operate at LOS D during the p.m. peak hour.

Freeway System

Tables 5.6-12 through 5.6-14 summarize the baseline a.m. and p.m. peak hour operating conditions on the freeway system. Some segments of the freeway system will not operate within Caltrans' LOS "E" goal. Southbound I-5 north of J Street is expected to operate at LOS "F" during the a.m. peak hour. Due to downstream congestion, I-5 northbound and southbound exhibits LOS "F" conditions in the study area in the p.m. peak hour. The interchange of I-5 and U.S. 50 experiences congestion during both a.m. and p.m. peak hours. Queuing from the intersection of 3rd and J Streets extends onto the northbound and southbound freeway mainline during the a.m. peak hour.

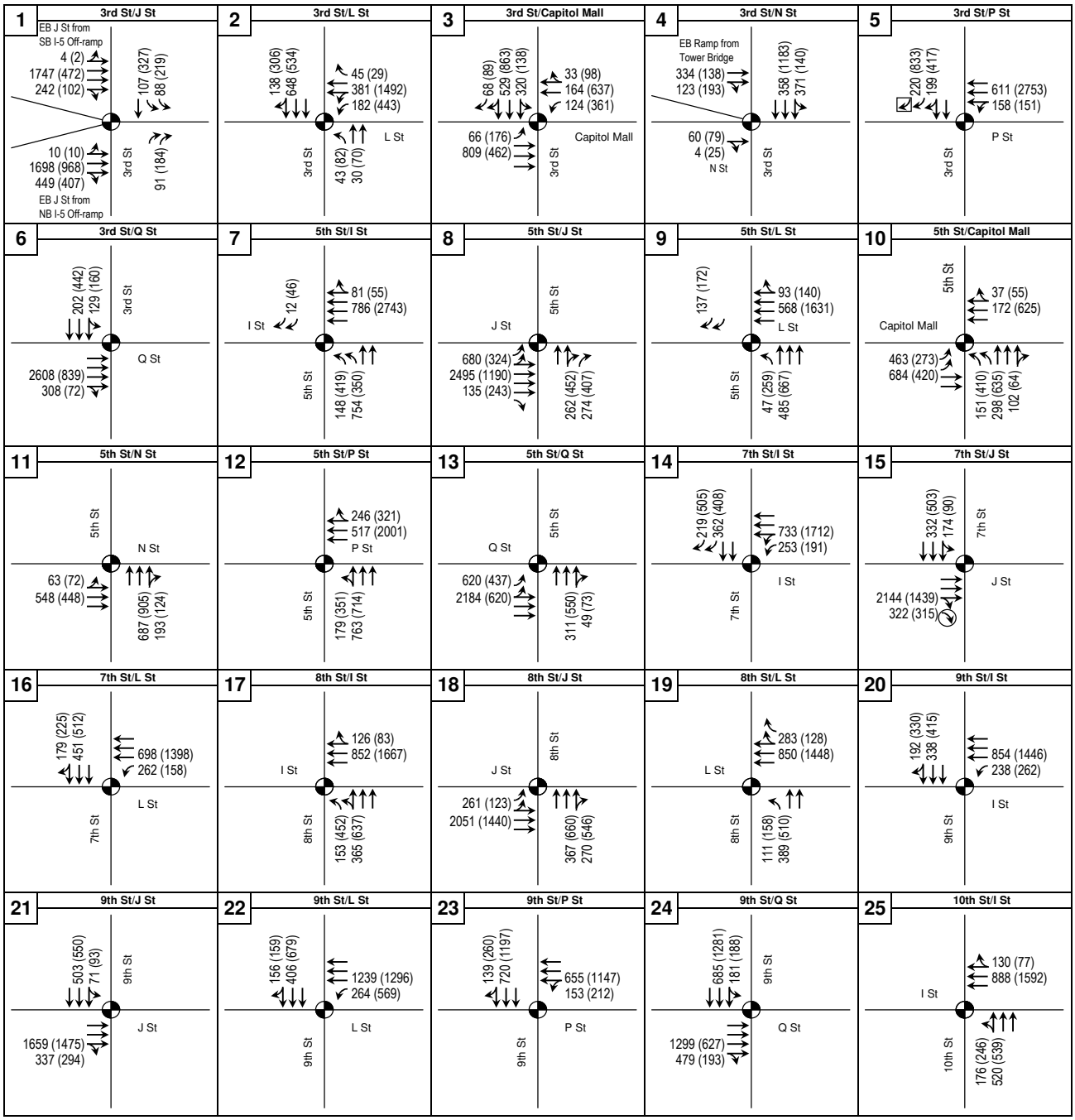


KEY

00 = Study intersection

500 Capitol Mall

Figure 5.6-7
BASELINE PROJECTS



KEY

31 (27) = AM (PM) peak hour traffic volume

◐ = Signalized intersection

↙ = Intersection approach lane

(↙) = Lane provided during AM peak, only

☑ = Lane provided during PM peak, only

500 Capitol Mall

N
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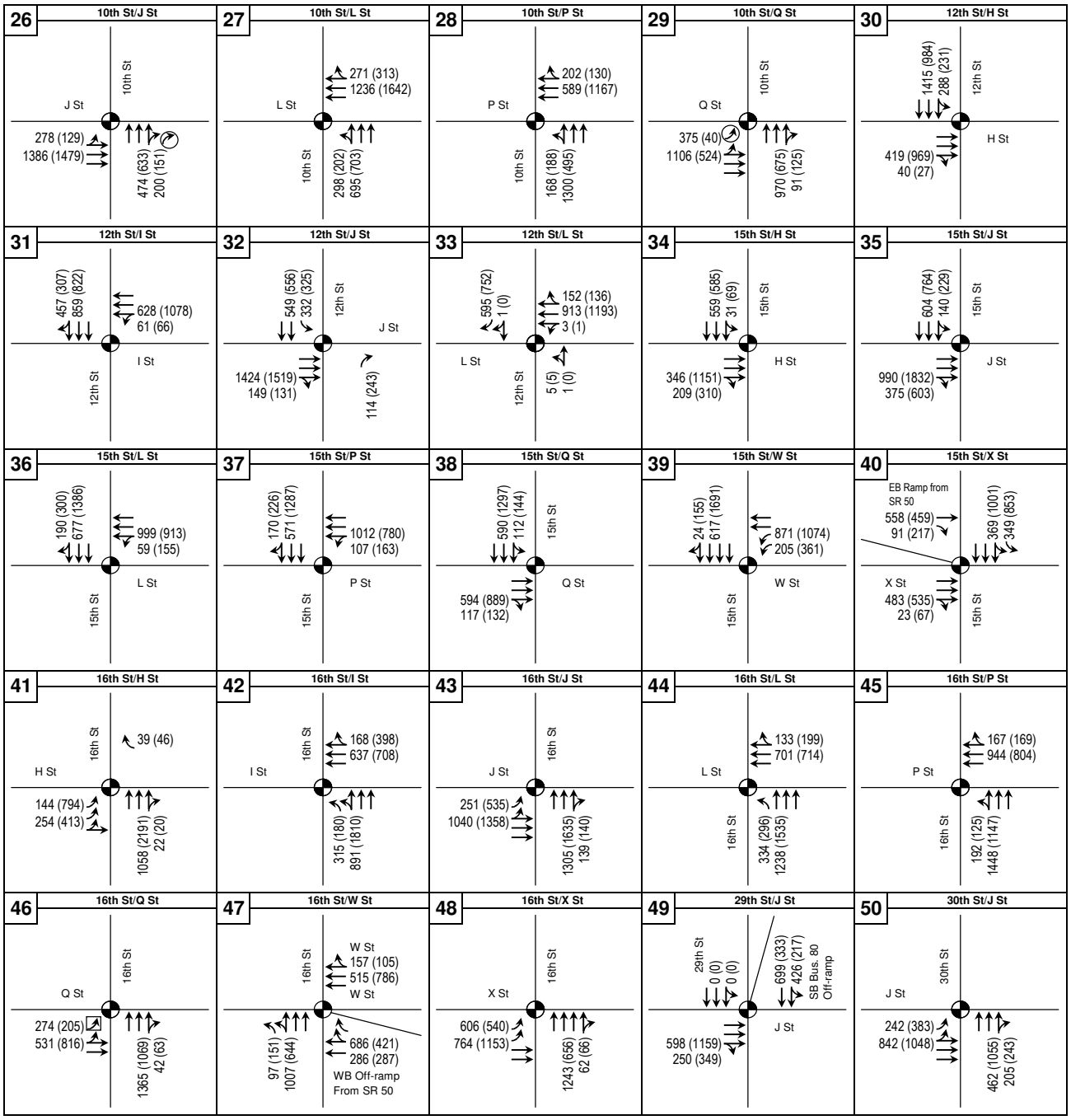
Figure 5.6-8 - Sheet 1 of 3
BASELINE WITHOUT PROJECT TRAFFIC VOLUMES, LANES, AND TRAFFIC CONTROLS



KEY

31 (27) = AM (PM) peak hour traffic volume

= Signalized intersection

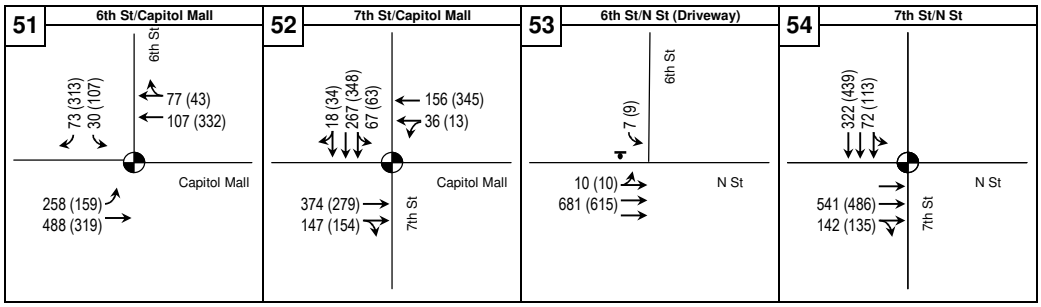
= Intersection approach lane

= Lane provided during AM peak, only

= Lane provided during PM peak, only

500 Capitol Mall

Figure 5.6-8 - Sheet 2 of 3
BASELINE WITHOUT PROJECT TRAFFIC VOLUMES, LANES, AND TRAFFIC CONTROLS



KEY

31 (27) = AM (PM) peak hour traffic volume

◕ = Signalized intersection

↙ = Intersection approach lane

(↙) = Lane provided during AM peak, only

☑ = Lane provided during PM peak, only

⊤ = Unsignalized intersection

Sources: Sacramento Downtown Traffic Study, Dowling Associates, 2006; DKS Associates, 2006

500 Capitol Mall

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Figure 5.6-8 - Sheet 3 of 3
BASELINE WITHOUT PROJECT TRAFFIC VOLUMES, LANES, AND TRAFFIC CONTROLS

TABLE 5.6-11

BASELINE INTERSECTION OPERATING CONDITIONS

	A.M. Peak Hour		P.M. Peak Hour	
Intersection	**LOS**	**Delay (seconds)**	**LOS**	**Delay (seconds)**
1. 3rd St / J St	**E**	**59.9**	B	18.2
2. 3rd St / L St	B	18.6	**D**	**43.8**
3. 3rd St / Capitol Mall	C	21.2	C	23.2
4. 3rd St / N St	C	20.9	B	19.6
5. 3rd St / P St	A	9.2	C	27.6
6. 3rd St / Q St	B	11.6	A	9.7
7. 5th St / I St	A	11.1	C	20.6
8. 5th St / J St	C	21.7	B	11.6
9. 5th St / L St	B	14.0	C	24.3
10. 5th St / Capitol Mall	B	19.2	B	19.0
11. 5th St / N St	B	13.4	B	13.8
12. 5th St / P St	B	10.7	B	16.1
13. 5th St / Q St	B	11.1	A	9.8
14. 7th St / I St	A	10.0	B	18.6
15. 7th St / J St	B	17.8	B	13.6
16. 7th St / L St	B	11.5	B	15.4
17. 8th St / I St	B	10.3	B	18.4
18. 8th St / J St	B	18.0	B	14.6
19. 8th St / L St	B	12.3	B	16.4
20. 9th St / I St	B	13.0	C	20.8
21. 9th St / J St	C	21.0	B	17.0
22. 9th St / L St	B	10.4	B	12.0
23. 9th St / P St	A	9.5	B	11.4
24. 9th St / Q St	B	11.5	B	11.6
25. 10th St / I St	B	14.9	C	21.9
26. 10th St / J St	C	22.0	C	21.0
27. 10th St / L St	B	12.7	B	14.8
28. 10th St / P St	B	11.8	A	8.9
29. 10th St / Q St	B	11.0	A	8.8
30. 12th St / H St	B	18.1	B	13.7
31. 12th St / I St	A	6.6	A	7.6
32. 12th St / J St	B	18.8	C	21.2
33. 12th St / L St	B	13.2	B	14.6
34. 15th St / H St	A	9.7	B	11.9
35. 15th St / J St	B	11.6	**D**	**49.2**
36. 15th St / L St	B	11.5	B	11.7
37. 15th St / P St	B	11.4	B	11.3
38. 15th St / Q St	B	10.1	B	11.4
39. 15th St / W St	B	12.4	B	14.5
40. 15th St / X St	C	22.5	C	32.1
41. 16th St / H St	B	11.5	C	21.6
42. 16th St / I St	B	10.4	B	11.7
43. 16th St / J St	B	11.7	B	13.5
44. 16th St / L St	B	11.0	B	11.9
45. 16th St / P St	B	11.8	B	10.9
46. 16th St / Q St	B	11.9	B	10.2
47. 16th St / W St	C	24.0	C	24.1
48. 16th St / X St	B	13.8	B	16.3
49. 29th St / J St	C	34.1	C	22.8
50. 30th St / J St	B	12.6	B	14.8
51. 6th St / Capitol Mall	B	14.5	C	22.4
52. 7th St / Capitol Mall	C	24.3	C	22.6
53. 6th St / N St	A	9.9	B	11.0
54. 7th St / N St	B	11.3	B	13.7

Source: DKS Associates, 2006.

TABLE 5.6-12

BASELINE PEAK HOUR FREEWAY MAINLINE OPERATING CONDITIONS

Facility / Direction	Location	Volume		Volume / Capacity Ratio		LOS	
		AM	PM	AM	PM	AM	PM
Northbound I-5	South of US 50 on-ramp	3,539	2,959	0.56	0.47	C	**F**[1]
	North of US 50 on-ramp	7,249	5,346	0.86	0.64	D	**F**[1]
	South of L Street on-ramp	5,330	4,960	0.85	0.79	D	**F**[1]
	South of I Street on-ramp	5,522	5,717	0.66	0.68	C	**F**[1]
	South of Richards Blvd off-ramp	5,881	7,196	0.59	0.72	C	**F**[1]
Southbound I-5	North of Richards Blvd on-ramp	8,124	6,086	0.97	0.72	E	C
	North of J Street on-ramp	8,600	6,857	1.02	0.82	**F**	D
	North of I Street on-ramp	6,607	6,281	0.79	0.75	D	**F**[1]
	North of US 50 off-ramp	5,846	6,036	0.62	0.64	C	**F**[1]
Eastbound US 50	West of I-5 on-ramp	3,197	1,446	0.38	0.17	B	A
	West of 15th Street off-ramp	8,278	6,441	0.68	0.53	C	C
	West of 10th Street on-ramp	7,629	5,765	0.73	0.55	C	C
	West of 16th Street on-ramp	8,465	6,795	0.70	0.56	C	C
Westbound US 50	East of Hwy 51/US 99 on-ramp	4,065	3,447	0.41	0.34	B	B
	East of 10th Street off-ramp	6,854	6,281	0.65	0.60	C	C
	East of 15th Street on-ramp	5,645	5,857	0.54	0.56	C	C
	East of I-5 off ramp	6,124	6,530	0.49	0.52	B	B

1. LOS "F" conditions due to queuing from downstream bottleneck.
Source: Sacramento Downtown Traffic Study, Dowling Associates, 2006.

TABLE 5.6-13

BASELINE PEAK HOUR FREEWAY INTERCHANGE OPERATING CONDITIONS

Facility / Direction	Location	AM Peak Hour			PM Peak Hour		
		LOS	Density[1] (Flow)	Volume	LOS	Density[1] (Flow)	Volume
Northbound I-5	US 50 on-ramp	**F**	42.16	3,277	D	29.37	2,021
	P Street to J Street weave	C	24.15	7,487	C	21.11	6,345
	L Street on-ramp	C	(209)	192	C	(826)	757
	I Street on-ramp	B	11.90	359	C	21.22	1,479
	Richards Boulevard off-ramp	B	19.31	659	C	26.69	349
Southbound I-5	Richards Boulevard on-ramp	C	(519)	476	C	(841)	771
	J Street off-ramp	C	20.56	1,993	B	16.39	576
	I Street to Q Street weave	B	19.74	6,904	C	23.76	7,356
	US 50 off-ramp	**F**	13.97	3,809	**F**	14.43	4,301
Eastbound US 50	I-5 on-ramp	**F**	45.58	5,081	**F**	41.77	4,995
	15th Street off-ramp	D	32.74	649	C	25.32	676
	10th Street on-ramp	B	19.47	836	B	17.70	1,030
	16th Street to Business 80 / SR99 weave	D	32.77	9,153	D	28.24	7,206
Westbound US 50	Business 80 to 16th Street weave	B	17.52	5,343	B	17.37	5,147
	10th Street off-ramp	D	29.86	1,209	C	23.33	424
	15th Street on-ramp	D	28.25	479	D	30.75	673
	I-5 off-ramp	**F**	(4,292)	3,934	B	(3,713)	3,404

1. Density in units of passenger vehicles per lane per mile. Units in parentheses indicate ramp flow rate in passenger car equivalents.
Source: Sacramento Downtown Traffic Study, Dowling Associates, 2006.

TABLE 5.6-14

BASELINE PEAK HOUR FREEWAY RAMP QUEUING

Location	Storage Capacity (feet)	AM Peak Hour		PM Peak Hour	
		Queue (feet)	Adequate Capacity	Queue (feet)	Adequate Capacity
I-5 NB Q Street off-ramp	3,500	1,000	Yes	250	Yes
I-5 NB J Street off-ramp	1,750	3,975	No	1,050	Yes
I-5 SB J Street off-ramp	3,600	3,800	**No**	800	Yes
US 50 EB 15th Street off-ramp	1,600	600	Yes	650	Yes
US 50 WB 16th Street off-ramp	1,625	1,125	Yes	975	Yes

Source: Sacramento Downtown Traffic Study, Dowling Associates, 2006.

REGULATORY SETTING

Roadway operations are regulated by agencies with jurisdiction of the particular roadway. Study area roadways are under the jurisdiction of the City of Sacramento (City surface streets) and Caltrans (freeway system).

The City of Sacramento's General Plan includes three overall goals related to transportation:

- Create a safe, efficient surface transportation network for the movement of people and goods.
- Provide all citizens in all communities of the City with access to a transportation network that serves both the City and region, either by personal vehicle or transit. Make a special effort to maximize alternatives to single-occupant vehicle use, such as public transit.
- Maintain a desirable quality of life, including good air quality, while supporting planned land use and population growth.

The General Plan also includes the following goals related to transportation planning:

- Establish and implement a comprehensive regional transportation plan that identifies needs, integrates the existing transportation network with planned growth, and proposes new facilities.
- Consider air quality along with traffic flow efficiency when making decisions about transportation.

The General Plan includes the following goals related to streets and roads:

- Create a street system that would ensure the safe and efficient movement of people and goods within and through communities and to other areas in the City and region.
- Maintain the quality of the City's street system.
- Create and maintain a street system that protects residential neighborhoods from unnecessary levels of traffic.
- Work towards achieving an overall Level of Service C on the City's local and major street systems.

The General Plan includes the following additional goals for non-vehicular transportation:

- Pedestrians: Increase the use of the pedestrian mode as a mode of choice for all areas of the City.
- Bikeways: Develop bicycling as a major transportation and recreational mode.

The City of Sacramento's Center City Community Plan contains the following transportation goal:

- Encourage the development of an overall balance system of transportation which emphasizes public transit, protects residential neighborhoods, promotes alternatives to the single occupant automobile commuter, and which provides for safe, convenient and efficient movement of people and goods in and through the Central City.

The Community Plan also includes the following sub-goals:

- Establish a major street system which will route vehicular traffic to the activity areas of the Central City without directing such traffic through residential neighborhoods.
- Improve vehicular circulation and reduce traffic congestion in the Central Business District area, without causing negative impacts on streets within residential areas.
- Support programs aimed at significantly increasing transit riders.
- Provide adequate off-street parking to meet the needs of shoppers, visitors and residents.
- Restrain the projected increase in parking spaces needed for long-term employee parking by promoting pubic transit improvements, carpool programs, employer sponsored bus passes and other alternatives to the single occupant car usage.
- Assist in providing Park 'n Ride facilities in suburban areas linked to the Central City by express public transit.
- Reduce the adverse impact of commuter parking on residential streets.
- Develop a safe commuter bikeway system within the Central City with connections to major facilities in and outside the Central City area.
- Provide for safe pedestrian movement in the Central City circulation system through increased enforcement of pedestrian right-of-way laws and reducing traffic speed and volumes through appropriate means on residential streets.
- Retain necessary railroad trackage needed to serve industrial uses. Convert unneeded railroad rights-of-way to transit and / or other appropriate land uses which will facilitate transit use.
- Develop a truck route system that will accommodate the needs of the business community and minimize the impact of truck movements on traffic and residential neighborhoods.
- Utilize public policies to encourage public transit usage and carpooling, including publicly and privately paid transit passes.
- Use appropriate measures to require new developments to assist in transit improvements in lieu of major investments in parking facilities.

IMPACTS AND MITIGATION MEASURES

Methods of Analysis

Analysis of the "Baseline Plus Project" scenario consists of estimating the traffic "generated" by the proposed project, and assigning that traffic to the roadway network. The resultant a.m. and p.m. peak hour traffic volumes on the City street system and freeway network are utilized to determine roadway operating conditions. The resultant conditions are compared to baseline conditions in accordance with standards of significance to determine the significance of project traffic impacts.

Trip Generation

Trip generation of the proposed project is based upon information compiled by the Institute of Transportation Engineers (Trip Generation, Seventh Edition, 2003 and Trip Generation Handbook, 2004). The methodology is taken from the Sacramento Downtown Traffic Study (Dowling Associates, 2006). Table 5.6-15 shows the number of trips that would be generated by the proposed project. In summary, the proposed project would generate 5,156 new external vehicle trips on an average day. Of the external trips, 578 external trips would occur during the weekday morning peak hour and 649 external trips during the weekday evening peak hour.

TABLE 5.6-15

VEHICULAR TRIP GENERATION

	Trips Generated						
		A.M. Peak Hour			P.M. Peak Hour		
Land Use	**Weekday**	**Entering**	**Exiting**	**Total**	**Entering**	**Exiting**	**Total**
Office (General Office Building) 467,942 square feet	4,377	568	77	645	103	500	603
Retail (Shopping Center) 27,124 square feet	2,908	44	28	72	127	138	265
Total Project Trips	7,285	612	105	717	230	638	868
Transit Adjustments	-550	-64	-10	-74	-14	-59	-73
Walk, Bike, and Other Non-Auto Travel Adjustments	-460	-21	-5	-26	-18	-30	-48
Internal Trips Within This Project	-176	-1	-1	-3	-6	-6	-12
Trips to / from Other Proposed Projects	-943	-18	-18	-36	-43	-43	-87
New External Trips	5,156	507	70	578	149	500	649

Source: DKS Associates, 2006.

The external trips were derived by adjusting the Institute of Transportation Engineers (ITE) trip generation estimates. ITE trip generation estimates are based on empirical data collected at suburban locations throughout the United States. Adjustments to the ITE trip generation estimates were made to account for higher transit ridership, higher levels of walking and bicycle use, and the interaction of land uses in the Downtown area. Adjustments for the higher use of transit and walk, bike, and other non-auto travel were based on information contained in the Pre-Census Travel Behavior Report: Analysis of the 2000 SACOG Household Travel Survey (DKS Associates, 2001).

After the adjustments were made for transit, walk, bike, and other non-auto travel, an adjustment was made to account for internal trips between different types of land uses within each project site. The internal trip adjustments were performed using procedures recommended by the Institute of Transportation Engineers for multi-use developments (Trip Generation Handbook). Internal trips are

trips that would occur between different land uses on the same site without accessing the external street system.

Finally, adjustments were made to account for trips likely to be made by non-motorized travel modes among the new projects proposed for Downtown. The ITE method for determining internal trips was used and considered all the proposed downtown projects as one project (because of the ease of walking between the new projects). Only the trips generated over and above the internal trips for each individual project were considered appropriate for this adjustment.

No pass-by trips were assumed for Downtown retail uses because it is not convenient to drive by, park, and stop to shop, as would be the case in suburban locations. Most of these types of trips would be served by non-motorized travel modes – walking or biking.

Trip Distribution and Assignment

The distribution of trips associated with the project site was derived from the SACMET travel demand model, observations of travel patterns near the site, and knowledge of the proposed access locations associated with the project. Figure 5.6-9 illustrates the trip distribution percentages for the project.

Standards of Significance

The standards of significance in this analysis are based upon the current practice of the appropriate regulatory agencies, as described below.

Intersections

In the City of Sacramento, impacts to traffic (intersections) are considered significant if:

- the traffic generated by a project degrades peak period level of service from A, B, or C (without project) to D, E, or F (with project); or
- the LOS (without project) is D, E, or F, and project generated traffic increases the peak period average vehicle delay by five seconds or more.

Freeway System

Caltrans considers the following to be significant impacts:

- Off-ramps with vehicle queues that extend into the ramp's deceleration area or onto the freeway.
- Project-generated traffic results in increases that cause any ramp's merge / diverge level of service to be worse than the freeway's level of service.
- Project-generated traffic results in increases that cause the freeway level of service to deteriorate beyond level of service "E."
- The project adds traffic to a freeway facility already operating at LOS "F."

Bikeways

A significant bikeway impact would occur if:

- the project would hinder or eliminate an existing designated bikeway, or if the project interferes with implementation of a proposed bikeway; or

KEY

00 - Study Intersection

10% - Percent of Project Trips To and From Downtown

7% - Percent of Project Trips Remaining Downtown

500 Capitol Mall

Figure 5.6-9
TRIP DISTRIBUTION FOR PROPOSED PROJECT

- the project were to result in unsafe conditions for bicyclists, including unsafe bicycle/pedestrian or bicycle/motor vehicle conflicts.

Pedestrian Facilities

A significant pedestrian circulation impact would occur if:

- the project were to result in unsafe conditions for pedestrians, including unsafe increase pedestrian / bicycle or pedestrian / motor vehicle conflicts.

Transit System

A significant impact to the transit system would occur if:

- project generated ridership, when added to existing or future ridership, would exceed available or planned system capacity. Capacity is defined as the total number of passengers the system of busses and light rail vehicles can carry during the peak hours of operation.

Parking

A significant impact to parking would occur if:

- the proposed project parking supply would be less than the estimated parking demand.

Project-Specific Impacts and Mitigation Measures

5.6-1 Intersections – The project would increase traffic volumes at study area intersections. This is considered a *significant impact.*

The project would increase traffic volumes in the study area. Figure 5.6-10 illustrates the a.m. and p.m. peak hour intersection volumes and geometry for the Baseline Plus Project scenario. Table 5.6-16 summarizes the resultant conditions. The changes in intersection operating conditions with the addition of project-generated traffic exceed the standards of significance for impacts to intersections at the following locations:

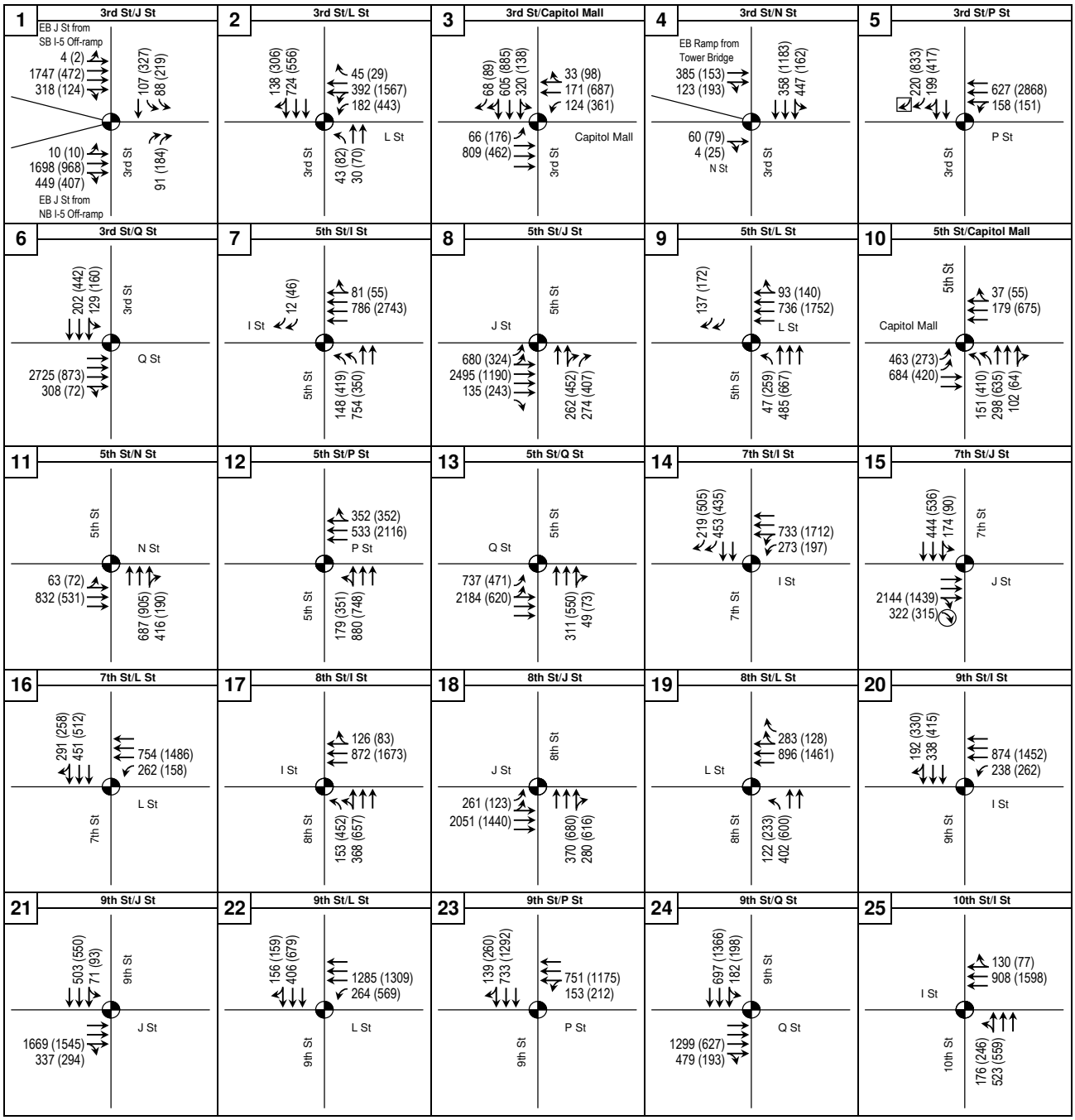
1. 3rd Street / J Street – In the a.m. peak hour, the intersection operates at LOS “E” with an increase in average delay of 6.4 seconds.

2. 3rd Street / L Street – In the p.m. peak hour, the intersection operates at LOS “D” with an increase in average delay of 11.1 seconds.

5. 3rd Street / P Street – In the p.m. peak hour, traffic generated by the project degrades the intersection operating condition from LOS “C” to LOS “D.”

35. 15th Street / J Street – In the p.m. peak hour, the intersection operates at LOS “E” with an increase in average delay of 10.4 seconds.

Therefore, the impacts are considered *significant*.



KEY

31 (27) = AM (PM) peak hour traffic volume

◐ = Signalized intersection

↙ = Intersection approach lane

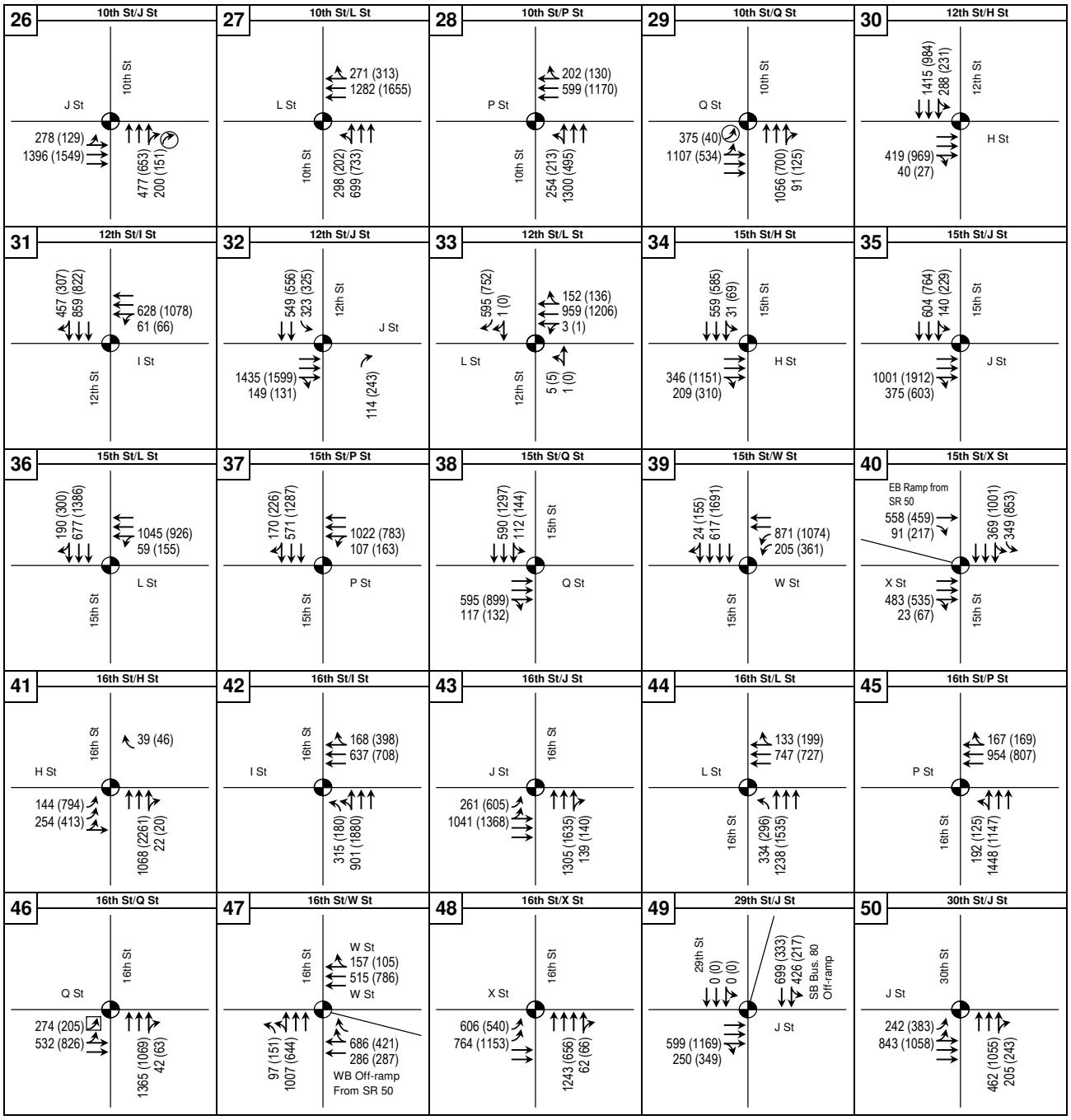
(↙) = Lane provided during AM peak, only

☑ = Lane provided during PM peak, only

500 Capitol Mall

N
W E
S

Figure 5.6-10 - Sheet 1 of 3
BASELINE PLUS PROJECT TRAFFIC VOLUMES, LANES, AND TRAFFIC CONTROLS



KEY

31 (27) = AM (PM) peak hour traffic volume

= Signalized intersection

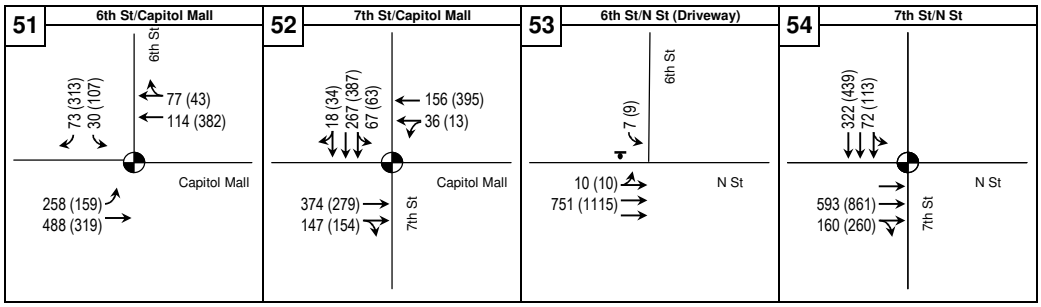
= Intersection approach lane

= Lane provided during AM peak, only

= Lane provided during PM peak, only

500 Capitol Mall

Figure 5.6-10 - Sheet 2 of 3
BASELINE PLUS PROJECT TRAFFIC VOLUMES, LANES, AND TRAFFIC CONTROLS



KEY

31 (27) = AM (PM) peak hour traffic volume

= Signalized intersection

= Intersection approach lane

= Lane provided during AM peak, only

= Lane provided during PM peak, only

= Unsignalized intersection

Sources: Sacramento Downtown Traffic Study, Dowling Associates, 2006; DKS Associates, 2006

500 Capitol Mall

Figure 5.6-10 - Sheet 3 of 3
BASELINE PLUS PROJECT TRAFFIC VOLUMES, LANES, AND TRAFFIC CONTROLS

TABLE 5.6-16

BASELINE PLUS PROJECT INTERSECTION OPERATING CONDITIONS

Intersection	A.M. Peak Hour		P.M. Peak Hour	
	LOS	Delay (seconds)	LOS	Delay (seconds)
1. 3rd St / J St	**E**	**66.3**	B	18.6
2. 3rd St / L St	B	18.8	**D**	**54.9**
3. 3rd St / Capitol Mall	C	21.4	C	23.7
4. 3rd St / N St	C	22.0	B	19.8
5. 3rd St / P St	A	9.2	**D**	**36.6**
6. 3rd St / Q St	B	12.1	A	9.6
7. 5th St / I St	A	11.1	C	20.6
8. 5th St / J St	C	21.7	B	11.6
9. 5th St / L St	B	14.8	C	29.4
10. 5th St / Capitol Mall	B	19.2	B	19.4
11. 5th St / N St	B	14.5	B	14.1
12. 5th St / P St	B	11.4	B	19.0
13. 5th St / Q St	B	11.4	A	9.8
14. 7th St / I St	A	10.2	B	18.7
15. 7th St / J St	B	18.3	B	13.6
16. 7th St / L St	B	11.6	B	16.7
17. 8th St / I St	B	10.3	B	18.5
18. 8th St / J St	B	18.1	B	17.0
19. 8th St / L St	B	12.4	B	16.1
20. 9th St / I St	B	13.1	C	20.8
21. 9th St / J St	C	21.1	B	18.6
22. 9th St / L St	B	10.5	B	12.0
23. 9th St / P St	A	9.6	B	11.6
24. 9th St / Q St	B	11.5	B	12.0
25. 10th St / I St	B	15.0	C	22.0
26. 10th St / J St	C	22.1	C	23.3
27. 10th St / L St	B	12.9	B	15.0
28. 10th St / P St	B	12.1	A	9.0
29. 10th St / Q St	B	11.1	A	8.9
30. 12th St / H St	B	18.1	B	13.7
31. 12th St / I St	A	6.6	A	7.6
32. 12th St / J St	B	19.2	C	26.4
33. 12th St / L St	B	13.4	B	14.6
34. 15th St / H St	A	9.7	B	11.9
35. 15th St / J St	B	11.6	**E**	**59.6**
36. 15th St / L St	B	11.8	B	11.7
37. 15th St / P St	B	11.4	B	11.3
38. 15th St / Q St	B	10.1	B	11.4
39. 15th St / W St	B	12.4	B	14.5
40. 15th St / X St	C	22.5	C	32.1
41. 16th St / H St	B	11.5	C	25.2
42. 16th St / I St	B	10.4	B	11.9
43. 16th St / J St	B	11.7	B	13.6
44. 16th St / L St	B	11.0	B	11.9
45. 16th St / P St	B	11.8	B	10.9
46. 16th St / Q St	B	11.9	B	10.2
47. 16th St / W St	C	24.0	C	24.1
48. 16th St / X St	B	13.8	B	16.3
49. 29th St / J St	C	34.1	C	22.8
50. 30th St / J St	B	12.6	B	14.8
51. 6th St / Capitol Mall	B	14.6	C	22.9
52. 7th St / Capitol Mall	C	24.4	C	23.2
53. 6th St / N St	B	10.1	B	11.0
54. 7th St / N St	B	11.7	B	13.7

Source: DKS Associates, 2006.

Mitigation Measures

5.6-1 (a) *Intersection of 3rd Street / J Street – Modify the traffic signal phase splits during the a.m. peak period by increasing the phase time for the southbound I-5 off-ramp approach (eastbound) to 40 seconds, maintaining the 50 second phase time for the northbound I-5 off-ramp, and decreasing the north and southbound 3rd Street phase time to 10 seconds. The applicant for the proposed project shall pay a fair share to recover the costs for the City's Traffic Operation Center monitoring and retiming of this intersection.*

This mitigation measure would reduce average vehicle delay by 14.7 seconds during the a.m. peak hour and would reduce the baseline plus project impact to ***less than significant***.

(b) *Intersection of 3rd Street/ L Street - Modify the westbound approach to provide one left-turn lane, two through lanes, (to the northbound I-5 on-ramp), and one right-turn lane. The applicant shall pay fair share toward the City project to improve and re-stripe the intersection.*

This mitigation measure would reduce average vehicle delay by 25.2 seconds during the p.m. peak hour and would reduce the baseline plus project impact to ***less than significant***.

(c) *Intersection of 3rd Street / P Street – Modify the traffic signal phase splits during the p.m. peak period by increasing the signal phase time to 32 seconds for the westbound P Street approach and decreasing the southbound 3rd Street approach to 18 seconds. The applicant for the proposed project shall pay a fair share to recover the costs for the City's Traffic Operation Center monitoring and retiming of this intersection.*

This mitigation measure would reduce average vehicle delay by 7.7 seconds during the p.m. peak hour and would reduce the baseline plus project impact to ***less than significant***.

(d) *Intersection of 15th Street / J Street – Modify the traffic signal phase splits during the p.m. peak period by increasing the phase time for the eastbound J Street approach to 30 seconds, and decreasing the southbound 15th Street signal phase time to 20 seconds. The applicant for the proposed project shall pay a fair share to recover the costs for the City's Traffic Operation Center monitoring and retiming of this intersection.*

This mitigation measure would reduce average vehicle delay by 18.5 seconds during the p.m. peak hour and would reduce the baseline plus project impact to ***less than significant***.

5.6-2 Freeway Mainline – The project would increase traffic volumes on the freeway mainline. This is considered a *significant impact.*

The project would increase traffic volumes on the freeway mainline. Table 5.6-17 summarizes the resultant conditions. The changes in freeway system operating conditions with the addition of project-generated traffic exceed the standards of significance for impacts to the freeway system, since traffic is added to freeway segments already operating at LOS "F." These sections include portions of Southbound I-5 during the a.m. peak hour and portions of Northbound I-5 during the p.m. peak hour. This would be a *significant impact*.

The City does require as part of Title 17, Division VI, Chapter 17.184 of the Sacramento Municipal Code that the project comply with the elements of the Transportation System Management (TSM) program. The purpose of the TSM program is to establish TSM requirements for employers and developers with the City in order to meet the thirty-five (35) percent trip reduction goal. These

TABLE 5.6-17

BASELINE PLUS PROJECT PEAK HOUR FREEWAY MAINLINE OPERATING CONDITIONS

Facility / Direction	Location	Volume		Volume / Capacity Ratio		LOS	
		AM	PM	AM	PM	AM	PM
Northbound I-5	South of US 50 on-ramp	3,539	2,959	0.56	0.47	C	F[1]
	North of US 50 on-ramp	7,249	5,346	0.86	0.64	D	F[1]
	South of L Street on-ramp	5,330	4,960	0.85	0.79	D	F[1]
	South of I Street on-ramp	5,533	5,717	0.66	0.69	C	**F[1]**
	South of Richards Blvd off-ramp	5,892	7,271	0.59	0.73	C	**F[1]**
Southbound I-5	North of Richards Blvd on-ramp	8,200	6,108	0.98	0.73	E	C
	North of J Street on-ramp	8,676	6,879	1.03	0.82	**F**	D
	North of I Street on-ramp	6,607	6,281	0.79	0.75	D	F[1]
	North of US 50 off-ramp	5,846	6,036	0.62	0.64	C	F[1]
Eastbound US 50	West of I-5 on-ramp	3,197	1,446	0.38	0.17	B	A
	West of 15th Street off-ramp	8,286	6,496	0.68	0.54	C	C
	West of 10th Street on-ramp	7,637	5,820	0.73	0.55	C	C
	West of 16th Street on-ramp	8,479	6,895	0.70	0.57	C	C
Westbound US 50	East of Hwy 51/US 99 on-ramp	4,121	3,463	0.41	0.35	B	B
	East of 10th Street off-ramp	6,955	6,311	0.66	0.60	C	C
	East of 15th Street on-ramp	5,701	5,873	0.54	0.56	C	C
	East of I-5 off ramp	6,180	6,546	0.49	0.52	B	B

1. LOS "F" conditions due to queuing from downstream bottleneck.
Source: DKS Associates, 2006.

requirements will promote alternative commute modes and encourage transit use in order to reduce traffic congestion, optimize use of the transportation system, and improve air quality.

The Traffic Study found that the impacted freeway mainline segments currently operate at LOS "F" in the Baseline Condition during the PM Peak Hour without the Project, and would continue to operate at LOS "F" in both the "Near Term Cumulative Condition (2013)" and "Long Term Cumulative Condition (2030)" both without and with the Project. Freeway mainline improvements are within the exclusive jurisdiction of Caltrans, which can and should propose and adopt appropriate improvement plans that would reduce freeway mainline impacts, pursuant to Public Resources Code Section 21081 and CEQA Guideline Section 15091.

The City consulted with Caltrans prior to the preparation of this Draft EIR concerning possible mitigation measures to address the proposed project's impacts to the identified freeway mainline segments. The discussion focused on (1) identifying any Caltrans approved or adopted capital improvement projects that would improve access to and from Sacramento's downtown and improve the existing LOS F on the freeway mainline segments to LOS "E" or better in the Near Term (2013) and Long Term (2030), and (2) proportional share mitigation impact funding contributions to those projects as a means of addressing impacts to the highways from the proposed project and various other pending developments in the area.

Caltrans indicated that they have developed general cost estimates for the following projects. Though these projects are designed to address regional transportation needs that extend far beyond the downtown area, Caltrans believes they would serve to mitigate impacts from pending downtown developments and are viable:

- I-5 American River Bridge widening - two structures. Add one standard lane and re-establish standard shoulders to each structure: $134 million.
- I-5 HOV lanes - Garden Highway to I-80 HOV lanes with direct connectors: $300 million.
- I-5 HOV lanes - U.S. 50 Interchange to Elk Grove Blvd: $200 million.

No preliminary improvement plans have been prepared for these proposed freeway improvements, and it is unclear what the cost estimates are based on or include.

These proposed freeway improvement projects are included in Sacramento Area Council of Governments (SACOG) existing Metropolitan Transportation Plan (MTP) for preliminary engineering and environmental only. The MTP is a long-range plan which is based on growth and travel demand projections coupled with financial projections. The MTP lists hundreds of locally and regionally important projects. It is updated every three years, at which time projects can be added or deleted. SACOG uses the plan to help prioritize projects and guide regional transportation project funding decisions. The projects included in the MTP have not gone through the environmental review process and are not guaranteed for funding or construction.

Given the status of the improvement projects identified by Caltrans and the information available at this time, the City has concluded that there is currently insufficient information and certainty on which to base a feasible and viable mitigation measure to address the proposed project's impacts on the identified freeway mainline segments. The proposed freeway improvement projects are not currently approved and funded. There is no fee or other funding mechanism currently in place for future funding. Furthermore, the City cannot determine either the cost of the proposed freeway improvement projects or the proposed project's fair share proportional contribution to the improvement projects with sufficient certainty to enable the City to develop a fee-based mitigation measure that would satisfy the legal requirements for fee-based mitigation under both CEQA (see CEQA Guidelines 15126.4) and constitutional principles that call for a nexus and rough proportionality between a project's impacts and the fee-based mitigation measure. Finally, the prospects of the proposed freeway improvements ever being constructed remains uncertain due to funding priorities and on-going policy developments that may favor other approaches to addressing freeway congestion. Collection of a mitigation fee under these circumstances at this time may well be an idle act.

Widening the freeway mainline right of way would create adverse impacts by requiring the removal of historic buildings in the Old Sacramento District, and potentially the Crocker Art Museum, which are already situated adjacent to the existing freeway right of way; would potentially require modifications to the flood wall/levee that protects Downtown Sacramento; and would create further physical barriers between people living and working in Downtown Sacramento and the Sacramento River and the Old Sacramento District. Such new impacts from widening the freeway would not be capable of mitigation to a less than significant level and would violate City policies concerning: the preservation of the Old Sacramento District; promoting ease of pedestrian access between Downtown Sacramento and the Sacramento River; promoting ease of pedestrian access between Downtown Sacramento and the Old Sacramento District; and protecting the integrity of Sacramento's flood control system.

Consequently, the City has been unable to identify any feasible mitigation measures that could reduce or avoid the impact of the proposed project on the three I-5 freeway mainline segments to a less than significant level. The California Environmental Quality Act (Pub. Resources Code, §21000 et seq.) defines "feasible" for these purposes as capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors (Pub. Resources Code, §21061.1). Therefore, the impacts of the proposed project on the three I-5 freeway segments would remain ***significant and unavoidable***.

Mitigation Measures

None available.

5.6-3 Freeway Interchanges – The project would increase traffic volumes at the freeway interchanges. This is considered a *significant impact.*

The project would increase traffic volumes at freeway interchanges. Table 5.6-18 summarizes the resultant conditions. The changes in freeway system operating conditions with the addition of project-generated traffic exceed the standards of significance for impacts to the freeway system, since traffic is added to freeway interchanges already operating at LOS "F." Impacts occur at the interchange of I-5 and U.S. 50 during the a.m. and p.m. peak hours. This would be a *significant impact*.

TABLE 5.6-18

BASELINE PLUS PROJECT PEAK HOUR FREEWAY INTERCHANGE OPERATING CONDITIONS

Facility / Direction	Location	AM Peak Hour			PM Peak Hour		
		LOS	Density[1] (Flow)	Volume	LOS	Density[1] (Flow)	Volume
Northbound I-5	US 50 on-ramp	F	42.16	3,277	D	29.37	2,021
	P Street to J Street weave	C	24.15	7,487	C	21.11	6,345
	L Street on-ramp	C	(221)	203	C	(908)	832
	I Street on-ramp	B	11.92	359	C	21.35	1,479
	Richards Boulevard off-ramp	B	19.34	659	C	27.00	349
Southbound I-5	Richards Boulevard on-ramp	C	(519)	476	C	(841)	771
	J Street off-ramp	C	20.74	2,069	B	16.44	598
	I Street to Q Street weave	B	19.74	6,904	C	23.76	7,356
	US 50 off-ramp	F	13.97	3,809	F	14.43	4,301
Eastbound US 50	I-5 on-ramp	**F**	45.64	5,089	**F**	42.22	5,050
	15th Street off-ramp	D	32.77	649	C	25.55	676
	10th Street on-ramp	B	19.53	842	B	18.17	1,075
	16th Street to Business 80 / SR99 weave	D	32.84	9,167	D	28.69	7,301
Westbound US 50	Business 80 to 16th Street weave	B	17.68	5,399	B	17.42	5,163
	10th Street off-ramp	D	30.52	1,255	C	23.52	437
	15th Street on-ramp	D	28.50	479	D	30.82	673
	I-5 off-ramp	**F**	(4,352)	3,990	B	(3,731)	3,420

1. Density in units of passenger vehicles per lane per mile. Units in parentheses indicate ramp flow rate in passenger car equivalents.
Source: DKS Associates, 2006.

No feasible mitigation measures were identified that would reduce the impact of the project on the one freeway interchange. Widening the freeway would reduce the impact but was not considered feasible. Therefore, the impacts of the proposed project on the one freeway interchange would remain ***significant and unavoidable*.**

Mitigation Measures

None available.

5.6-4 Freeway Ramp Queuing – The project would increase the length of freeway ramp queues. This is considered a *significant impact.*

The project would increase freeway ramp queues. Table 5.6-19 summarizes the resultant conditions. The changes in freeway system operating conditions with the addition of project-generated traffic exceed the standards of significance for impacts to the freeway system, since the project traffic increases the length of queuing at a location where queues are anticipated to exceed available storage without the project. An impact occurs on the Southbound I-5 exit ramp to J Street during the a.m. peak hour. The impact is considered *significant*.

TABLE 5.6-19

BASELINE PLUS PROJECT PEAK HOUR FREEWAY RAMP QUEUING

Location	Storage Capacity (feet)	AM Peak Hour		PM Peak Hour	
		Queue (feet)	Adequate Capacity	Queue (feet)	Adequate Capacity
I-5 NB Q Street off-ramp	3,500	1,000	Yes	250	Yes
I-5 NB J Street off-ramp	1,750	3,975	No	1050	Yes
I-5 SB J Street off-ramp	3,600	4,100	**No**	800	Yes
US 50 EB 15th Street off-ramp	1,600	600	Yes	650	Yes
US 50 WB 16th Street off-ramp	1,625	1,125	Yes	975	Yes

Source: DKS Associates, 2006.

Mitigation Measure

This change in traffic signal timing required in Mitigation Measure 5.6-1(a) would reduce the queue length to 3,400 feet, which is less than the available storage of 3,600 feet, and would reduce the baseline plus project impact to ***less than significant***.

5.6-4 *Implement Mitigation Measure 5.6-1(a).*

5.6-5 Bikeways – The project would result in the addition of employees, patrons, and visitors to the site, some of whom would travel by bicycle. This is considered a *less-than-significant impact.*

The proposed project would result in the addition of employees, patrons, and visitors to the site, some of whom would travel by bicycle. The proposed project would not result in any substantial changes to the existing or future bikeway system. The proposed project is not anticipated to hinder or eliminate an existing designated bikeway, or interfere with implementation of a proposed bikeway. The project is not anticipated to result in unsafe conditions for bicyclists, including unsafe bicycle / pedestrian or bicycle / motor vehicle conflicts. Bicycle impacts are considered ***less than significant***.

Mitigation Measures

None required.

5.6-6 Pedestrian Facilities – The project would result in the addition of employees, patrons, and visitors to the site. This is considered a *less-than-significant impact.*

The proposed project would result in the addition of employees, patrons, and visitors to the site. The project is not anticipated to result in unsafe conditions for pedestrians, including unsafe bicycle / pedestrian or pedestrian / motor vehicle conflicts. Pedestrian impacts are considered ***less than significant***.

Mitigation Measures

None required.

5.6-7 Transit Services – The project would increase demand for transit services. This is considered a *less-than-significant impact.*

The project would increase demand for transit services. The proposed project would result in the addition of employees, patrons, and visitors to the site, some of whom would travel by transit. Although particular transit vehicles operate at or near capacity during the peak commuter periods, a review of existing transit operations and plans for future transit services indicate that there is ample capacity on the Regional Transit system to support the anticipated increase in trips. The project is estimated to generate 623 daily transit trips, 83 transit trips during the a.m. peak hour, and 82 transit trips during the p.m. peak hour. The impact of the proposed project on the transit system is ***less than significant***.

Mitigation Measures

None required.

5.6-8 Parking – The project would increase demand for parking. This is considered a *less-than-significant impact.*

The project is located within the Central Business District. The parking regulations (Chapter 17.64.060) for the Central Business District require off-street parking of at least one space per 600 square feet for office development. The regulations also specify a maximum of one space per 500 square feet for office development. No parking is required in the Central Business for retail uses. The ongoing Central City Parking Master Plan has verified the adequacy of the zoning ordinance requirements for office development in the Central City. Based on 467,942 square feet of office development, the project is required to provide 780 to 936 parking spaces. The project is proposing 794 spaces. The impact of the proposed project on parking is ***less than significant***.

Mitigation Measures

None required.

Construction Impacts

5.6-9 Construction – The construction of the project may include the temporary closure of numerous transportation facilities, including portions of City streets, sidewalks, bikeways, on-street parking, off-street parking, and transit facilities. This is considered a *significant impact.*

Construction will include disruptions to the transportation network near the site, including the possibility of temporary lane closures, street closures, sidewalk closures, and bikeway closures. Existing on-street parking will be disrupted during construction, and replacement spaces may not be available. Pedestrian and transit access may be disrupted. Heavy vehicles will access the site and will need to be staged for construction. These activities will result in degraded roadway operations. The addition of construction personnel will result in the temporary need for additional parking. Therefore, the impacts are considered ***significant***.

Mitigation Measure

Implementation of Mitigation Measure 5.6-9 would reduce this impact to ***less than significant***.

5.6-9 *Prior to beginning of construction, a construction traffic management plan shall be prepared by the applicant to the satisfaction of the City traffic engineer, Regional Transit, and any other affected agency.*

Project Local Circulation Impacts

In addition to the analysis of project impacts in conjunction with the City's standards of significance for CEQA review, an analysis of site access and vehicular circulation was conducted. This analysis focuses on the project's parking entrances. Queuing analyses were conducted to determine whether typical peak hour operations of these areas would cause queuing onto adjacent sidewalks or onto the City street system.

The parking access design, shown in Figure 5.6-2, provides five lanes. Beginning on the east, the lanes are designated as follows:

- Entry lane to basement parking level
- Entry lane to above ground parking levels
- Reversible lane to / from above ground parking levels
- Exit lane from above ground parking levels
- Exit lane from basement parking level

The critical time period for entry to the parking garage is during the a.m. peak hour, as it is during this period that the largest volume of entering traffic is anticipated. It is estimated that 507 vehicles will enter the garage during this time period. The current access design provides storage for only one vehicle (at each of three entry gates) without queuing onto the sidewalk. It is recommended that queuing space for at least two vehicles be provided for the two gates providing access to above ground parking. With space for two vehicles at each gate, the design can accommodate the anticipated volume at a 95 percent probability without queuing onto the sidewalk.

The critical time period for exiting from the parking garage is during the p.m. peak hour, as it is during this period that the largest volume of exiting traffic is anticipated. It is estimated that 500 vehicles will exit the garage during this period. The current egress design provides three exit lanes. The longest queues are anticipated in the two lanes exiting the above ground parking. During the p.m. peak hour, the average queue expected is about two vehicles; that is, one vehicle is expected at each exit gate. The 95th percentile queue is eight vehicles; that is, one vehicle is expected at each exit gate with six vehicles (in total) queued in the exit lanes approaching the gates. No changes in design are required for the exiting lanes.

The project loading dock is located along 5th Street approximately midway between Capitol Mall and N Street. As is typical for a loading dock in a dense urban environment, large trucks would be required to back into the loading dock from 5th Street. Due to the potential effects on traffic, it is recommended that use of the loading dock be restricted during the p.m. peak commuter period.

CUMULATIVE CONDITIONS

The Sacramento Downtown Traffic Study (Study) was prepared to assist the City staff in the assessment of transportation impacts for projects planned in Downtown Sacramento. The Study is intended to provide a common basis for project-specific studies that will be conducted for each of nine projects, including the proposed project, in compliance with the California Environmental Quality Act (CEQA). The following projects were included in the Study:

- 800 K Street
- 831 L Street
- Westfield Shoppingtown Downtown Plaza Expansion

- 500 Capitol Mall
- Cathedral Square (11th & J)
- The Metropolitan (10th Street and J Street)
- Epic Tower (12th Street and I Street)
- 701 L Street
- The Library Lofts (8th Street and I Street)

The Study evaluated existing conditions, baseline conditions expected to occur after development of Downtown projects already approved, and the cumulative impacts of the above nine proposed projects, in combination with other growth expected to occur in the region. The Study evaluated two cumulative horizon years: a near-term 2013 horizon and a long-term 2030 horizon. The Downtown study included the cumulative impacts of the proposed 500 Capitol Mall project, as well as several other approved and pending projects as listed above.

This section summarizes the cumulative impacts and mitigation measures identified in the Downtown Study. The cost of implementing these mitigation measures will be shared among all the projects.

Near-Term (2013) Impacts and Mitigation Measures

5.6-10 Impacts to study intersection under Near Term Plus Project Condition. This is a *significant cumulative impact*.

The proposed project, in combination with other proposed downtown projects, would add traffic to study intersections and cause significant impacts for near-term cumulative conditions at the following intersections:

(a) **3rd Street / J Street**, where the level of service without the proposed projects would be LOS F during the a.m. peak hour and project generated traffic would increase the average vehicle delay by 34.7 seconds. This is considered a *significant impact.*

(b) **3rd Street / L Street**, where the level of service without the proposed projects would be LOS E during the p.m. peak hour and project generated traffic would increase the average vehicle delay by 43.9 seconds. This is considered a *significant impact.*

(c) **3rd Street / N Street**, where the traffic generated by the project would degrade the level of service from LOS C to LOS D during the a.m. peak hour. This is considered a *significant impact*.

(d) **3rd Street / P Street**, where the traffic generated by the project would degrade the level of service from LOS C to LOS D during the p.m. peak hour. This is considered a *significant impact.*

(e) **5th Street / L Street**, where the traffic generated by the project would degrade the level of service from LOS C to LOS E during the p.m. peak hour. This is considered a *significant impact.*

(f) **7th Street / L Street**, where the traffic generated by the project would degrade the level of service from LOS B to LOS D during the p.m. peak hour. This is considered a *significant impact.*

(g) **8th Street / L Street**, where the traffic generated by the project would degrade the level of service from LOS B to LOS D during the p.m. peak hour. This is considered a *significant impact.*

(h) **9th Street / J Stree**t, where the traffic generated by the project would degrade the level of service from LOS B to LOS E during the p.m. peak hour. This is considered a *significant impact.*

(i) **10th Street / J Street**, where the traffic generated by the project would degrade the level of service from LOS C to LOS E during the p.m. peak hour. This is considered a *significant impact.*

(j) **12th Street / J Street**, where the traffic generated by the project would degrade the level of service from LOS C to LOS E during the p.m. peak hour. This is considered a *significant impact.*

(k) **15th Street / J Street**, where the level of service without the proposed projects would be LOS D during the p.m. peak hour and project generated traffic would increase the average vehicle delay by 54.4 seconds. This is considered a *significant impact.*

(l) **15th Street / X Street**, where the level of service without the proposed projects would be LOS E during the p.m. peak hour and project generated traffic would increase the average vehicle delay by 21.5 seconds. This is considered a *significant impact.*

(m) **16th Street / H Street**, where the traffic generated by the project would degrade the level of service from LOS C to LOS D during the p.m. peak hour. This is considered a *significant impact.*

Mitigation Measures

5.6-10 (a) *At the 3rd Street / J Street intersection, modify the traffic signal phase splits during the a.m. peak period by increasing the phase time for the southbound I-5 off-ramp approach (eastbound) to 40 seconds, maintaining the 50 second phase time for the northbound I-5 off-ramp, and decreasing the north and southbound 3rd Street phase time to 10 seconds. The project applicant shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.*

This mitigation measure would reduce average vehicle delay by 33 seconds during the a.m. peak hour and would reduce the near-term cumulative impact to a ***less-than-significant level***.

(b) *At the 3rd Street / L Street intersection, modify the westbound approach to provide one left-turn lane, two through lanes (to the northbound I-5 on-ramp), and one right-turn lane. The project applicant shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.*

This mitigation measure would reduce average vehicle delay by 40 seconds during the p.m. peak hour and maintain LOS C operations during the a.m. peak hour. The mitigation measure would reduce the near-term cumulative impact to a ***less-than-significant level***.

(c) *At the 3rd Street / N Street intersection, modify the traffic signal phase splits during the a.m. peak period by increasing the southbound 3rd Street signal phase time to 34 seconds, decreasing the eastbound N Street approach to 15 seconds, and*

maintaining the phase time for the eastbound Tower Bridge approach at 21 seconds. The project applicant shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.

This mitigation measure would improve traffic operations to LOS C during the a.m. peak hour and would reduce the near-term cumulative impact to a ***less-than-significant level***.

(d) *At the 3rd Street / P Street intersection, modify the traffic signal phase splits during the p.m. peak period by increasing the signal phase time to 32 seconds for the westbound P Street approach and decreasing the southbound 3rd Street approach to 18 seconds. The project applicant shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.*

This mitigation measure would improve traffic operations to LOS C during the p.m. peak hour and would reduce the near-term cumulative impact to a **less-than-significant *level***.

(e) *At the 5th Street / L Street intersection, modify the traffic signal phase splits during the p.m. peak period by increasing the signal phase time to 28 seconds for the westbound L Street approach and decreasing the northbound and southbound 5th Street approaches to 42 seconds. The project applicant shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.*

This mitigation measure would improve traffic operations to LOS C during the p.m. peak hour and would reduce the near-term cumulative impact to a ***less-than-significant level***.

(f) *At the 7th Street / L Street intersection, modify the traffic signal phase splits during the p.m. peak period by increasing the signal phase time to 22 seconds for the westbound L Street approach and decreasing the northbound and southbound 5th Street approaches to 28 seconds. The project applicant shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.*

This mitigation measure would improve traffic operations to LOS C during the p.m. peak hour and would reduce the near-term cumulative impact to a ***less-than-significant level***.

(g) *At the 8th Street / L Street intersection, modify the traffic signal phase splits during the p.m. peak period by increasing the signal phase time to 25 seconds for the westbound L Street approach and decreasing the northbound 8th Street signal phase time to 25 seconds. The project applicant shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.*

This mitigation measure would improve traffic operations to LOS B during the p.m. peak hour and would reduce the near-term cumulative impact to a ***less-than-significant level***.

(h) *At the 9th Street / J Street intersection, modify the traffic signal phase splits during the p.m. peak period by increasing the signal phase time to 28 seconds for the eastbound J Street approach and decreasing the southbound 9th Street signal phase time to 22 seconds. The project applicant shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.*

This mitigation measure would improve traffic operations to LOS C during the p.m. peak hour and would reduce the near-term cumulative impact to a ***less-than-significant level***.

(i) *At the 10th Street / J Street intersection, modify the traffic signal phase splits during the p.m. peak period by increasing the signal phase time to 28 seconds for the eastbound J Street approach and decreasing the northbound 10th Street signal phase time to 22 seconds. The project applicant shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.*

This mitigation measure would improve traffic operations to LOS C during the p.m. peak hour and would reduce the near-term cumulative impact to a ***less-than-significant level***.

(j) *At the 12th Street / J Street intersection, , modify the traffic signal phase splits during the p.m. peak period by increasing the signal phase time to 22 seconds for the eastbound J Street approach and decreasing the 12th Street signal phase time to 28 seconds. The project applicant shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.*

This mitigation measure would improve traffic operations to LOS C during the p.m. peak hour and would reduce the near-term cumulative impact to a ***less-than-significant level***.

(k) *At the 15th Street / J Street intersection, modify the traffic signal phase splits during the p.m. peak period by increasing the phase time for the eastbound J Street approach to 30 seconds, and decreasing the southbound 15th Street signal phase time to 20 seconds. The project applicant shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.*

This mitigation measure would reduce average vehicle delay by 61.4 seconds during the p.m. peak hour and would reduce the near-term cumulative impact to a ***less-than-significant level***.

(l) *At the 15th Street / X Street intersection, modify the traffic signal phase splits during the p.m. peak period by increasing the phase time for the southbound 15th Street approach to 28 seconds, decreasing the eastbound U.S. 50 off-ramp phase time to 28 seconds, and maintaining 17 seconds for the X Street approach. The project applicant shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.*

This mitigation measure would reduce average vehicle delay by 34.4 seconds during the p.m. peak hour and would reduce the near-term cumulative impact to a ***less-than-significant level***.

(m) *At the 16th Street / H Street intersection, modify the traffic signal phase splits during the p.m. peak period by increasing the phase time for the northbound 15th Street approach to 26 seconds, decreasing the phase times for the eastbound H Street left and through movements to 18 and 24 seconds, respectively, and maintaining 6 seconds for the westbound H Street right-turning movement. The project applicant shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.*

This mitigation measure would improve traffic operations to LOS C during the p.m. peak hour and would reduce the near-term cumulative impact to a ***less-than-significant level***.

5.6-11 Impacts to freeway mainline under Near Term Plus Project Condition. This is considered a *significant cumulative impact.*

The proposed project, in combination with other proposed downtown projects, would add traffic to freeway mainline segments but would not cause freeway levels of service to deteriorate beyond

LOS E. The proposed project, in combination with other downtown projects, would add traffic to I-5 freeway segments that would operate at LOS F even without the project. This is considered a *significant impact.*

Mitigation Measures

No feasible mitigation measures were identified that would reduce the impact of the project on I-5 freeway mainline segments. Widening the freeway would reduce the impact but was not considered feasible. The impacts of proposed projects on I-5 freeway segments would remain ***significant and unavoidable*.**

5.6-12 Impacts to freeway merge / diverge / weave areas under Near Term Plus Project Condition. This is considered a *significant cumulative impact.*

The proposed project, in combination with other proposed downtown projects, would add traffic to freeway ramps and weaving areas but would not cause levels of service to deteriorate beyond LOS E on these facilities. The projects would add traffic to I-5 and U.S. 50 freeway ramps that would operate at LOS F without the projects. This is considered a *significant impact*.

Mitigation Measures

No feasible mitigation measures were identified that would reduce the impact of the project on I-5 and U.S. 50 freeway ramps. Widening the freeway would reduce the impact but was not considered feasible. The impacts of proposed projects on freeway ramps would remain ***significant and unavoidable***.

5.6-13 Impacts to freeway ramp queues under Near Term Plus Project Conditions. This is considered a *significant cumulative impact.*

The proposed project, in combination with other downtown projects, would add traffic to the northbound I-5 off ramp to J Street, which currently experiences queues during the a.m. peak hour that extend onto the freeway mainline. In addition, the proposed project, in combination with the other downtown projects would cause queues for the southbound I-5 off ramp to J Street to extend onto the freeway mainline during the a.m. peak hour. This is considered a *significant impact.*

Mitigation Measures

Mitigation measure (a) would reduce the queue for the southbound I-5 off ramp at J Street to 6,125 feet during the a.m. peak hour, but this would not be enough to eliminate the near-term cumulative impact. This mitigation measure would not affect the northbound I-5 off ramp queue at J Street, and no other feasible mitigation measures were identified that would reduce the impact of the projects at that location. Widening the freeway would reduce the impact but was not considered feasible. The impacts of the proposed projects on freeway ramp queues would remain ***significant and unavoidable***.

5.6-14 Impacts to the transit system under Near Term Plus Project Conditions. This is considered a *less-than-significant cumulative impact.*

The proposed project, in combination with other downtown projects, would increase demand for transit services. Peak period transit trips generated by the project are estimated to be approximately 259 during the a.m. peak hour, and approximately 288 during the p.m. peak hour. Although particular light rail trains and buses operate at or near capacity during the peak commuter periods, there is ample capacity on the Regional Transit system to support this increase in trips. Additional light rail service to Downtown is anticipated with the South Sacramento Corridor, Folsom Corridor

extension, and extension to the Amtrak Station. These light rail projects are scheduled for completion by the opening date of the proposed Downtown projects. Because the existing and future transit system capacity would be sufficient to accommodate the increased transit ridership, the impact would be ***less than significant***.

Mitigation Measures

None required.

5.6-15 Impacts to bikeways under Near Term Plus Project Conditions. This is a *less-than-significant cumulative impact.*

The proposed project, in combination with other downtown projects, would result in the addition of employees, visitors, and other patrons to each site, some who would travel by bicycle. The proposed project is not anticipated to hinder or eliminate an existing designated bikeway or interfere with implementation of a proposed bikeway. The proposed project is not anticipated to result in unsafe conditions for bicyclists, including unsafe bicycle / pedestrian or bicycle / motor vehicle conflicts under Near Term Conditions. Because the project's contribution is not considerable bicycle impacts would be ***less than significant***.

Mitigation Measures

None required.

5.6-16 Impacts to pedestrian circulation under Near Term Plus Project Conditions. This is considered a *less-than-significant cumulative impact.*

The proposed project, in combination with other downtown projects, would result in the addition of employees, visitors, and other patrons to each site. Considerable direct access would be by walking. The proposed project is not anticipated to result in unsafe conditions for pedestrians, including unsafe bicycle / pedestrian or pedestrian / motor vehicle conflicts under near term conditions. Because the project's contribution is not considerable, pedestrian impacts are considered ***less than significant***.

Mitigation Measures

None required.

Long-Term (2030) Impacts and Mitigation Measures

5.6-17 Impacts to study intersection under Long Term Plus Project Conditions. This is considered a *significant cumulative impact.*

The proposed project, in combination with other downtown projects, would add traffic to study intersections and cause significant impacts for long-term cumulative conditions at the following intersections:

(a) **3rd Street / J Street**, where the level of service without the proposed project in combination with other downtown projects would be LOS F during the a.m. peak hour and project generated traffic would increase the average vehicle delay by 34.2 seconds; and where the level of service without the proposed project in combination with other downtown projects would be LOS D during the p.m. peak hour and project generated traffic would increase the average vehicle delay by 6.8 seconds. This is considered a *significant impact.*

(b) **3rd Street / L Street**, where the level of service without the proposed project in combination with other downtown projects would be LOS E during the p.m. peak hour and project generated traffic would increase the average vehicle delay by 44.1 seconds. This is considered a *significant impact.*

(c) **3rd Street / N Street**, where the traffic generated by the proposed project in combination with other downtown projects would degrade the level of service from LOS C to LOS D during the a.m. peak hour. This is considered a *significant impact.*

(d) **3rd Street / P Street**, where the traffic generated by the proposed project in combination with other downtown projects would degrade the level of service from LOS C to LOS D during the p.m. peak hour. This is considered a *significant impact.*

(e) **5th Street / I Street**, where the level of service without the proposed project in combination with other downtown projects would be LOS E during the p.m. peak hour and project generated traffic would increase the average vehicle delay by 6.1 seconds. This is considered a *significant impact.*

(f) **5th Street / L Street**, where the traffic generated by the proposed project in combination with other downtown projects would degrade the level of service from LOS C to LOS D during the p.m. peak hour. This is considered a *significant impact.*

(g) **7th Street / L Street**, where the traffic generated by the proposed project in combination with other downtown projects would degrade the level of service from LOS B to LOS D during the p.m. peak hour. This is considered a *significant impact.*

(h) **8th Street / L Street**, where the traffic generated by the proposed project in combination with other downtown projects would degrade the level of service from LOS B to LOS D during the p.m. peak hour. This is considered a *significant impact.*

(i) **9th Street / J Street**, where the traffic generated by the proposed project in combination with other downtown projects would degrade the level of service from LOS B to LOS E during the p.m. peak hour. This is considered a *significant impact.*

(j) **10th Street / J Street**, where the traffic generated by the proposed project in combination with other downtown projects would degrade the level of service from LOS C to LOS E during the p.m. peak hour. This is considered a *significant impact.*

(k) **12th Street / J Street**, where the traffic generated by the proposed project in combination with other downtown projects would degrade the level of service from LOS C to LOS E during the p.m. peak hour. This is considered a *significant impact.*

(l) **15th Street / J Street**, where the level of service without the proposed project in combination with other downtown projects would be LOS D during the p.m. peak hour and project generated traffic would increase the average vehicle delay by 52.9 seconds. This is considered a *significant impact.*

(m) **15th Street / X Street**, where the level of service without the proposed project in combination with other downtown projects would be LOS E during the p.m. peak hour and project generated traffic would increase the average vehicle delay by 20.8 seconds. This is considered a *significant impact.*

(n) **16th Street / H Street**, where the traffic generated by the proposed project in combination with other downtown projects would degrade the level of service from LOS C to LOS D during the p.m. peak hour. This is considered a *significant impact.*

Mitigation Measures

This mitigation measure would reduce average vehicle delay during the a.m. peak hour by 32.5 seconds and would improve traffic operations during the p.m. peak hour to LOS C. This mitigation measure would reduce the long-term cumulative impact to a ***less-than-significant level****.*

5.6-17(a) ***3rd Street / J Street intersection***, *implement the near-term Mitigation Measure 5.6-10(a) (modification of signal phase splits) and also re-stripe the lanes on the southbound I-5 off-ramp approach (eastbound) to provide one combination left-through lane, one through lane, one combination through-right lane, and one exclusive right turn lane. The project applicant shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.*

This mitigation measure would reduce average vehicle delay by 43.5 seconds during the p.m. peak hour and provide LOS C traffic operations during the a.m. peak hour. This mitigation measure would reduce the near-term cumulative impact to a ***less-than-significant level****.*

(b) ***3rd Street / L Street intersection***, *implement the near-term Mitigation Measure 5.6-10(b) (modification of the westbound approach lanes) and also modify the traffic signal phase splits during the p.m. peak period by increasing the southbound 3rd Street approach to 23 seconds, decreasing the westbound L Street signal phase time to 38 seconds, and decreasing the northbound 3rd Street left-turning movement to 9 seconds. The project applicant shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.*

This mitigation measure would improve traffic operations to LOS C during the a.m. peak hour and would reduce the long-term cumulative impact to a ***less-than-significant level****.*

(c) ***3rd Street / N Street intersection***, *implement the near-term Mitigation Measure 5.5-10(c) (modification of signal phase splits). The project applicant shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.*

This mitigation measure would improve traffic operations to LOS C during the p.m. peak hour and would reduce the long-term cumulative impact to a ***less-than-significant level****.*

(d) ***3rd Street / P Street intersection***, *implement the near-term Mitigation Measure 5.6-10(d) (modification of signal phase splits). The project applicant shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.*

This mitigation measure would improve traffic operations to LOS C during the p.m. peak hour and would reduce the long-term cumulative impact to a ***less-than-significant level****.*

(e) ***5th Street / I Street intersection***, *modify the traffic signal phase splits during the p.m. peak period by increasing the signal phase time to 30 seconds for the northbound and southbound 5th Street approaches and decreasing the westbound I Street approach to 70 seconds. The project applicant shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.*

This mitigation measure would improve traffic operations to LOS C during the p.m. peak hour and would reduce the long-term cumulative impact to a ***less-than-significant level***.

(f) ***5th Street / L Street intersection***, *implement the near-term Mitigation Measure 5.6-10(e) (modification of signal phase splits). The project applicant shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.*

This mitigation measure would improve traffic operations to LOS C during the p.m. peak hour and would reduce the long-term cumulative impact to a ***less-than-significant level***.

(g) ***7th Street / L Street intersection***, *implement the near-term Mitigation Measure 5.6-10(f) (modification of signal phase splits). The project applicant shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.*

This mitigation measure would improve traffic operations to LOS B during the p.m. peak hour and would reduce the long-term cumulative impact to a ***less-than-significant level***.

(h) ***8th Street / L Street intersection***, *implement the near-term Mitigation Measure 5.6-10(g) (modification of signal phase splits). The project applicant shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.*

This mitigation measure would improve traffic operations to LOS C during the p.m. peak hour and would reduce the long-term cumulative impact to a ***less-than-significant level***.

(i) ***9th Street / J Street intersection***, *implement the near-term Mitigation Measure 5.6-10(h) (modification of signal phase splits). The project applicant shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.*

This mitigation measure would improve traffic operations to LOS C during the p.m. peak hour and would reduce the long-term cumulative impact to a ***less-than-significant level***.

(j) ***10th Street / J Street intersection***, *implement the near-term Mitigation Measure 5.6-10(i) (modification of signal phase splits). The project applicant shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.*

This mitigation measure would improve traffic operations to LOS C during the p.m. peak hour and would reduce the long-term cumulative impact to a ***less-than-significant level***.

(k) ***12th Street / J Street intersection***, *modify the traffic signal phase splits during the p.m. peak period by increasing the eastbound J Street approach to 23 seconds and decreasing the southbound 12th Street and northbound right-turn movement signal phase time to 27 seconds. The project applicant shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.*

This mitigation measure would reduce average delay by 59.2 seconds during the p.m. peak hour and would reduce the long-term cumulative impact to a ***less-than-significant level***.

(l) ***15th Street / J Street intersection***, *implement the near-term Mitigation Measure 5.6-10(k) (modification of signal phase splits). The project applicant shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.*

This mitigation measure would reduce average vehicle delay by 32.8 seconds during the p.m. peak hour and would reduce the long-term cumulative impact to a ***less-than-significant level****.*

(m) ***15th Street / X Street intersection***, *implement the near-term Mitigation Measure 5.6-10(l) (modification of signal phase splits). The project applicant shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.*

This mitigation measure would improve traffic operations to LOS C during the p.m. peak hour and would reduce the long-term cumulative impact to a ***less-than-significant level****.*

(n) ***16th Street / H Street intersection***, *implement the near-term Mitigation Measure 5.6-10(m) (modification of signal phase splits). The project applicant shall pay a fair share to recover the costs of the City's Traffic Operation Center monitoring and retiming of this intersection.*

5.6-18 Impacts to freeway mainline under Long Term Plus Project Conditions. This is a *significant cumulative impact.*

The proposed project, in combination with other downtown projects, would add traffic to freeway mainline segments but would not cause freeway levels of service to deteriorate beyond LOS E. The proposed project in combination with the other downtown projects would add traffic to I-5 freeway segments that would operate at LOS F even without the projects. This is considered a *significant impact.*

Mitigation Measures

No feasible mitigation measures were identified that would reduce the impact of the project on I-5 freeway mainline segments. Widening the freeway would reduce the impact but was not considered feasible. The impacts of proposed projects on I-5 freeway segments would remain ***significant and unavoidable*****.**

None available.

5.6-19 Impacts to freeway merge / diverge / weave areas under Long Term Plus Project Conditions. This is a *significant cumulative impact.*

The proposed project, in combination with other downtown projects, would add traffic to freeway ramps and weaving areas but would not cause levels of service to deteriorate beyond LOS E on these facilities. The proposed project in combination with other downtown projects would add traffic to I-5 and U.S. 50 freeway ramps that would operate at LOS F without the projects. This is considered a *significant impact.*

Mitigation Measures

No feasible mitigation measures were identified that would reduce the impact of the project on I-5 and U.S. 50 freeway ramps. Widening the freeway would reduce the impact but was not considered feasible. The impacts of proposed projects on freeway ramps would remain ***significant and unavoidable*****.**

5.6-20 Impacts to freeway ramp queues under Long Term Plus Project Conditions. This is a *significant cumulative impact.*

The proposed project, in combination with other downtown projects, would add traffic to the northbound I-5 off ramp to J Street during both the a.m. and p.m. peak hours, when the queue would exceed the ramp's storage capacity without the proposed projects. Similarly, the proposed Downtown projects would add traffic to the southbound I-5 off ramp to J Street during the a.m. peak hour, when the queue would exceed the ramp's storage capacity without the proposed projects. This is considered a *significant impact.*

Mitigation Measures

Mitigation for the 3rd Street/J Street intersection would reduce the queue for the northbound I-5 off ramp queue at J Street during the p.m. peak hour to 1,725 lane feet and would reduce the long-term cumulative impact during this time period to a less-than-significant level. This mitigation measure would not significantly affect this northbound I-5 off ramp queue at J Street during the a.m. peak hour. The mitigation measure would reduce the queue for the southbound I-5 off ramp at J Street to 6,100 feet during the a.m. peak hour, but this would not be enough reduction to eliminate the long-range cumulative impact. Widening the freeway would reduce the impact but was not considered feasible. Therefore, the project's cumulative contribution is considerable and the impact would remain ***significant and unavoidable.***

Mitigation Measures

None available.

6. ALTERNATIVES

6.0 ALTERNATIVES

INTRODUCTION

The purpose of this chapter is to identify and describe the alternatives to the proposed project. Project alternatives are developed to reduce or eliminate the significant or potentially significant adverse environmental effects identified as a result of the proposed project, while still meeting most if not all of the basic project objectives.

California Environmental Quality Act Requirements

An EIR must evaluate a reasonable range of alternatives to the proposed project, or to the location of the proposed project, that could feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives (CEQA Guidelines, section 15126.6). An EIR need not evaluate the environmental effects of alternatives in the same level of detail as the proposed project, but must include enough information to allow meaningful evaluation, analysis, and comparison with the proposed project. CEQA provides the following guidelines for discussing alternatives to a proposed project:

> The specific alternative of the "no project" shall also be evaluated along with its impacts....If the environmentally superior alternative is the "no project" alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives (CEQA Guidelines, section 15126.6 subd.(e)(2)).
>
> The discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the proposed objectives, or would be more costly (CEQA Guidelines, section 15126.6 subd.(b)).
>
> If an alternative would cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternative shall be discussed, but in less detail than the significant effects of the project as proposed (CEQA Guidelines, section 15126.6 subd.(d)).
>
> The range of alternatives required in an EIR is governed by a "rule of reason" that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice....The range of feasible alternatives shall be selected and discussed in a manner to foster meaningful public participation and informed decision making....An EIR need not consider an alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative (CEQA Guidelines, section 15126.6 subd.(f)).

The requirement that an EIR evaluate alternatives to the proposed project or alternatives that address the location of the proposed project is a broad one; the primary intent of the alternatives analysis is to disclose other ways that the objectives of the project could be attained while reducing the magnitude of, or avoiding, the environmental impacts of the proposed project. Alternatives that are included and evaluated in the EIR must be feasible alternatives. However, the Public Resources Code and the CEQA Guidelines direct that the EIR need "set forth only those alternatives necessary to permit a reasoned choice." The CEQA Guidelines provide a definition for "a range of reasonable alternatives" and, thus, limit the number and type of alternatives that need to be evaluated in a given EIR. According to the CEQA Guidelines (Section 15126.6(b)):

> The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project. Of those alternatives, the EIR need examine in detail only the ones that the lead agency determines could feasibly attain most of the basic objectives of the project.

First and foremost, alternatives in an EIR must be feasible. In the context of CEQA, "feasible" is defined as:

> …capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social and technological factors.

Further, the following factors may be taken into consideration in the assessment of the feasibility of alternatives: site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and the ability of the proponent to attain site control (Section 15126.6(f)(1)). Finally, an EIR is not required to analyze alternatives when the effects of the alternative "cannot be reasonably ascertained and whose implementation is remote and speculative (Section 15126.b(f)(3))."

The selection of alternatives takes into account the project objectives provided in Chapter 2 (Project Description). The project objectives include:

- Develop an architecturally significant, premier highrise office building adjacent to Capitol Mall in the City of Sacramento.
- Provide for office, retail, and potential restaurant uses consistent with existing land use designations on the project site.
- Promote the development of high quality office opportunities within the Capitol Mall corridor of the City of Sacramento.
- Foster economic and employment opportunities within the City of Sacramento's Central Business District through the utilization of a currently underutilized property.
- Provide necessary circulation and infrastructure improvements associated with development of the site.
- Promote site design and building orientation that is compatible with adjacent uses and the Capitol Mall Corridor.

Equally important to attaining the project objectives is the reduction of some or all significant impacts, particularly those that could not be mitigated to a level below the threshold of significance. The project-specific and cumulative significant and unavoidable impacts of the proposed project, after mitigation, are:

Project-Specific Significant and Unavoidable Impacts

5.2-4 Operation of the proposed project would contribute to emissions of ozone precursors.

5.4-1 Construction of the proposed project would temporarily produce noise.

5.4-2 Construction activity would temporarily produce ground-borne vibration.

5.6-2 The project would increase traffic volumes on the freeway mainline.

5.6-3 The project would increase traffic volumes at the freeway interchanges.

Cumulative Significant and Unavoidable Impacts

5.6-11 Impacts to freeway mainline under Near Term Plus Project Condition.

5.6-12 Impacts to freeway merge / diverge / weave areas under Near Term Plus Project Condition.

5.6-13 Impacts to freeway ramp queues under Near Term Plus Project Conditions.

5.6-18 Impacts to freeway mainline under Long Term Plus Project Conditions.

5.6-19 Impacts to freeway merge / diverge / weave areas under Long Term Plus Project Conditions.

5.6-20 Impacts to freeway ramp queues under Long Term Plus Project Conditions.

ALTERNATIVES CONSIDERED AND DISMISSED FROM FURTHER CONSIDERATION

Consistent with CEQA, primary consideration was given to alternatives that would reduce significant impacts while still meeting most of the project objectives. Those alternatives that would have impacts identical to or more severe than the proposed project, or that would not meet most of the project objectives, were rejected from further consideration. The alternatives included in this chapter were derived after the establishment of significance thresholds for those issue areas with significant and unavoidable post-construction impacts, which are construction and operational air emissions, construction and operational noise, and traffic impacts. Alternatives that would exceed the significance thresholds for the aforementioned issue areas would not substantially lessen any significant environmental impacts identified in Chapter 5 of the EIR and were rejected from further analysis. Although any number of alternatives could be designed that could result in the reduction or elimination of project impacts, a total of three representative alternatives, each intended to reduce or eliminate one or more of the significant impacts identified for the proposed project, are evaluated in this Draft EIR.

ALTERNATIVES CONSIDERED IN THIS EIR

- **No Project/ No Development Alternative,** which assumes that the proposed project would not occur and there would be no new development of the site. This alternative assumes the existing building on the site would remain.
- **Reduced Intensity Development Alternative**, which would include the construction of a smaller building on the project site with approximately 310,000 sf of office use and 27,000 sf of retail.
- **Off-Site Alternative**, in which the proposed land uses are developed at another location in the Central Business District.

Each of the alternatives is described in more detail, below, followed by an assessment of the alternative's impacts relative to the proposed project. The focus of this analysis is the difference between the alternative and the proposed project, with an emphasis on addressing the significant impacts identified under the proposed project. For each issue area, the analysis indicates which mitigation measures would be required of the alternative and which significant and unavoidable impacts would be avoided. In some cases, the analysis could indicate additional mitigation measures, if any, that may be required for the alternative being discussed, and what significant and unavoidable impacts would be more or less severe. Unless otherwise indicated, the level of significance and required mitigation would be the same for the alternative as for the proposed project and no further statement of the level of significance is made. Table 6-1 provides a summary comparison of the severity of impacts for each alternative by topic.

TABLE 6-1

ALTERNATIVE IMPACT COMPARISON

Issue Area	Proposed Project	No Project/No Development	Reduced Intensity	Off-Site
Aesthetics	LS	NI	Equal	Equal
Air Quality	SU	NI	Reduced	Equal
Cultural	LS	NI	Equal	Equal
Noise	SU	NI	Reduced	Equal
Public Utilities and Services	LS	NI	Reduced	Equal
Transportation and Circulation	SU	NI	Reduced	Equal

Notes:
SU= Significant and Unavoidable
LS= Less than Significant
Reduced = Level of significance is reduced compared to the proposed project, but not necessarily to a less-than-significant level.
Source: EIP Associates, a division of PBS&J, 2006.

No Project/No Development Alternative

Under CEQA, the No Project Alternative must consider the effects of forgoing the project. The purpose of analyzing the No Project Alternative is to allow decision-makers to compare the impacts of the proposed project versus no project. The No Project Alternative describes the environmental conditions that exist at the time that the environmental analysis is commenced (CEQA Guidelines, section 15126.6(e)(2)).

Under the No Project Alternative, the existing structure on the site would remain and the site would not be redeveloped. Although the existing building is currently unoccupied, it is assumed that the building could be occupied with office uses in the future. Because the existing building would not be removed, there would be no change in the visual character of the area. The occupants of the site would generate increased traffic and parking demand when compared to existing conditions (unoccupied), but not on the same scale as the proposed project. It is unlikely that the traffic generated under this alternative would result in significant traffic impacts. Air emissions and noise generated by construction of the proposed project would be eliminated under this alternative (if renovations are done to the existing building there would be some noise and air emissions, but substantially less than the proposed project). Operational air and noise impacts would be substantially reduced compared to the proposed project, because traffic associated with the existing building would be less than the proposed project. Because there would be no demolition or excavation associated with the No Project Alternative, there would be no potential for impacts on cultural resources. Drainage on the site would not change from current conditions, so flows to the Basin 52 system would not change. If the building is occupied, wastewater generation would be greater than under current conditions and could contribute to overflows in the Combined Sewer System, but the magnitude of the flows from the existing building would be substantially less than under the proposed project.

Mitigation That Would No Longer Be Required

None of the mitigation measures identified in this EIR would be required under the No Project/No Development Alternative.

Significant and Unavoidable Impacts That Would No Longer Occur

It is likely that none of the significant and unavoidable impacts identified in this EIR would occur under the No Project/No Development Alternative.

Relationship of the No Project/No Development Alternative to the Project Objectives

The No Project/No Development Alternative would not achieve any of the project objectives. The No Project/No Development Alternative would not promote the development of high quality office opportunities within the Capitol Mall corridor of the City of Sacramento. The existing building is not a mixed-use development and lacks the size and scale to provide the office, retail, and restaurant amenities provided under the proposed project. The No Project/No Development Alternative would provide some office space in the Central Business District, but would not foster economic and employment opportunities within the City of Sacramento's Central Business District through utilization of a currently underutilized property.

Reduced Intensity Alternative

The Reduced Intensity Alternative would include development of a high-rise building with approximately 310,000 sf of office use and 27,000 sf of retail, resulting in the construction of a building approximately 75 percent of the square footage of the proposed project. Assuming approximately 23,000 sf for each upper floor, this alternative could eliminate 5 floors from the proposed project. This would reduce the height of the building by approximately 75 feet, for a total height of approximately 320 feet. It is assumed that the design of the building would remain the same as the proposed project.

There were no significant impacts related to aesthetics identified for the proposed project. Like the proposed project, there would not be any impacts related to aesthetics for the Reduced Intensity Alternative. This alternative would include a shorter building (20 stories compared to 25 stories under the proposed project), which would be less prominent on the city's skyline, the effect of which would be viewed differently by different people. It would not however, result in a significant impact.

Both construction and operational air quality impacts would be reduced under this alternative due to a slightly shorter construction period and less intense use, hence fewer auto trips associated both with construction worker trips and operational (employee) trips, resulting in fewer auto emissions. The construction impacts would likely not be reduced substantially from that of the proposed project, because the site preparation, such as demolition and excavation would be the same. Because the building would not be as large, the duration of construction would be shorter, but the types of equipment used would be the same and daily emissions would likely be similar. Operational emissions, a large portion of which would be traffic generated by employees, would be less than the proposed project because there would be fewer employees. As discussed in section 5.2, Air Quality, the proposed project would generate approximately 85.5 pounds per day of oxides of nitrogen (NO_x) prior to mitigation, which exceeds the threshold of 65 pounds per day. URBEMIS modeling shows that the Reduced Intensity Alternative would generate 65 pounds per day prior to mitigation. Mitigation measures applied to the proposed project would reduce project emissions, but not to a less-than-significant level. Because the Reduced Intensity Alternative is at the threshold, a minor reduction in emissions would achieve a level below the threshold. Therefore, with implementation of the mitigation measures, or portions of them, the impact related to NO_x would be reduced to a less-than-significant level under this alternative.

The Reduced Intensity Alternative would be developed on the same site as the proposed project and would require the same site preparation, such as demolition and excavation. Therefore, the potential for impacts on cultural resources would be the same as the proposed project, which was found to be less than significant.

A significant and unavoidable impact was identified for the proposed project for construction noise and vibration and operational noise. Construction of a high-rise building requires the use of heavy

equipment, which generates noise, some of which is substantial. Therefore, construction of even a reduced-size project would still produce construction noise and vibration. As stated above, although the building would not be as large and the duration of construction would be shorter, the types of equipment used would be the same and noise levels on any given day would likely be similar. Consequently, construction noise and vibration impacts would remain significant and unavoidable under this alternative, although slightly less severe than the proposed project. Operational noise increases under the Reduced Intensity Alternative would be approximately 1.2 dB, which would not be considered a significant impact. The operational noise impact of the Reduced Intensity Alternative would be less severe than the proposed project and would also be less than significant.

The Reduced Intensity Alternative would contribute wastewater to the City's Combined Sewer System, but because there would be less development, the wastewater generated would be less than the proposed project. Nonetheless, payment of the City's Combined Sewer Development fee would still be required to ensure that the system would be upgraded to accommodate development. This would be a less than significant impact the same as the project. The Reduced Intensity Alternative's water demand would also be less than the proposed project, and also less than significant, the same as the project.

Traffic impacts identified for the project that could not be reduced to a less-than-significant level included traffic increases on freeway mainlines and interchanges. Because these facilities are already impacted, any increase in traffic was determined to be significant. Therefore, there is no development alternative that would reduce impacts on freeway mainlines and interchanges to a less-than-significant level. The Reduced Intensity Alternative would add fewer cars to these impacted facilities, but the impact would remain significant, although slightly less severe than that identified for the proposed project.

Mitigation That Would No Longer Be Required

All of the mitigation measures applied to the proposed project would be required as a part of the Reduced Intensity Alternative, although the 15 percent reduction called for in Mitigation Measure 5.2-4 would not be required for this alternative. The operational air impact of the Reduced Intensity Alternative would be reduced to a less-than-significant level with any reduction in emissions, since it is at the threshold without mitigation.

Significant and Unavoidable Impacts That Would No Longer Occur

With implementation of Mitigation Measure 5.2-4 (or with any reduction in emissions), the Reduced Intensity Alternative would result in a less-than-significant impact from operational air emissions.

Relationship of the Reduced Intensity Alternative to the Project Objectives

The Reduced Intensity Alternative would achieve the proposed project objectives of an architecturally significant high-rise office building adjacent to Capitol Mall and would include office, retail, and potential restaurant uses within the Capitol Mall corridor; however, the Reduced Intensity Alternative would be a shorter building than the proposed project, which is approximately the same height as the existing Wells Fargo Center. This alternative, therefore, would be less prominent then the project as proposed. The Reduced Intensity Alternative would foster economic and employment opportunities within the City of Sacramento's Central Business District, although to a lesser extent than the proposed project. It is assumed that the Reduced Intensity Alternative would also provide necessary circulation and infrastructure improvements associated with development of the site.

Off-Site Alternative

For the Off-Site Alternative, it is assumed that the proposed project could be developed at another location in order to best meet the goals and objectives of the proposed project and to minimize or reduce any of the significant impacts identified as part of the project. One of the project objectives is to provide a premier high-rise office building adjacent to Capitol Mall. There are no viable sites along Capitol Mall with the exception of the block bounded by L Street to the north, 6th Street to the west, Capitol Mall (621 Capitol Mall) to the south, and 7th Street to the east. However, this site has been approved for an office high-rise and is currently being developed. Due to the high-intensity nature of the proposed project, it is assumed that the Off-Site Alternative would need to occur within the Central Business District (CBD), since a project of this size and intensity would not be appropriate in lower-scale areas of the City. There are several sites within the CBD that could be considered "under-utilized", or at least are currently developed less intensively than is proposed under the proposed project. However, the determination as to whether a particular site is under-utilized is dependent upon market conditions of the existing use and the proposed use, the analysis of which is beyond the scope of this EIR. For this reason, a single off-site location was not analyzed.

Development of the project at any site within the CBD would include the same uses as the proposed project and many of same impacts related to aesthetics, construction and operational air emissions, construction and operational noise, public utilities, and transportation would still occur. An alternative location within the CBD would generally displace, but not necessarily eliminate, the impacts identified for the proposed project because the CDB is already developed. Different sites, due to particular characteristics of the site, proximity to sensitive uses, or other factors, could result in more or less intense impacts than the proposed project, which could include impacts that were not identified for the proposed project. However, these impacts would generally be localized (such as affecting an intersection immediately adjacent to an alternative site), since all project effects would contribute to those already existing and those that would occur in the future within the CBD (such as adding traffic to the CBD, which already experiences some traffic effects).

Air emissions from construction of the project on an alternative site would be identical to that of the proposed project. However, depending on whether there is an existing building on the alternative site and the size of the existing building if present, effects of demolition could differ or may not be required. Overall emissions associated with building demolition could be less than the proposed project if there is no existing building on the alternative site or if the existing building is small than on the project site. Assuming some demolition, noise impacts would be similar during the demolition phase, although operational impacts would be the same as the proposed project. If the alternative site includes nearby residential uses, residents would likely be affected by construction noise, as would residents of the buildings to the south of the proposed project.

While the Off-Site Alternative would generate the same peak hour trips as the proposed project, their distribution on City streets would be different. Therefore, it is likely that some road segments and intersections could be affected by project traffic, although the affected intersections would differ from those identified for the proposed project. Impacts at affected intersections may be reduced to a less-than-significant level with mitigation similar to that identified for the proposed project (i.e., changing the timing on signal lights or re-striping). It is also likely that a similar number of trips would occur at the impacted I-5 on- and off-ramps, so the impact would remain significant and unavoidable. Therefore, it is anticipated that traffic impacts associated with this alternative would be similar to the proposed project.

Additional drainage and runoff impacts associated with the proposed project would be similar under the Off-Site Alternative. It is assumed the alternative site would likely include some sort of development, so development of the alternative site would not substantially increase runoff when

compared to existing conditions, similar to the proposed project. If the site is served by Basin 52, it is not anticipated this alternative would contribute to capacity problems in the Basin 52 system, the same as the project. The alternate location could contribute the same flows to the City's Combined Sewer System as the proposed project. Therefore, payment of the City's Combined Sewer Development fee would still be required to ensure that the system would be upgraded to accommodate development. Similarly, with water demand, because the Off-Site Alternative would include the same amount of development as the proposed project, the water demand would be the same. Therefore, the difference in the level of mitigation required under the proposed project and the Off-Site Alternative is negligible.

Mitigation That Would No Longer Be Required

It is likely that all of the mitigation measures applied to the proposed project or measures of similar intensity would be required as a part of the Off-Site Alternative, although traffic measures could differ somewhat because different intersections would be affected at another site.

Significant and Unavoidable Impacts That Would No Longer Occur

As previously mentioned, the Off-Site Alternative would include the same development as the proposed project; therefore, the significant and unavoidable impacts identified in the impacts analysis in Chapter 5 would remain. The majority of the environmental impacts would remain the same under the Off-Site Alternative.

Relationship of the Off-Site Alternative to the Project Objectives

The Off-Site Alternative would generally achieve the project objectives of an architecturally significant high-rise office building and would include office, retail, and potential restaurant uses; however, it may not be feasible to achieve the objective of developing the use on a site within the Capitol Mall corridor. The Off-Site Alternative would foster economic and employment opportunities within the City of Sacramento's Central Business District and necessary circulation and infrastructure improvements associated with development of the site would be provided.

Environmentally Superior Alternative

The environmentally superior alternative is the No Project/No Development Alternative, due to the limited environmental impacts associated with this alternative. However the No Project/No Development Alternative does not achieve any of the project's objectives. The Off-Site Alternative would achieve most of the project objectives; however, physical environmental effects under this alternative would be similar to the proposed project. The Reduced Intensity Alternative would reduce environmental impacts associated with traffic, air, noise, and utilities, and reduce operational air quality and operational noise impacts to a less-than-significant level. The Reduced Intensity Alternative would meet most of the objectives of the project, but the extent to which the Reduced Intensity Alternative would foster economic and employment opportunities within the City of Sacramento's Central Business District would be approximately 25 percent less than the proposed project. Nonetheless, with the exception of the No Project/ No Development Alternative, the Reduced Intensity Alternative would be the environmentally superior alternative.

7. CEQA CONSIDERATIONS

7.0 CEQA CONSIDERATIONS

INTRODUCTION

Section 15126 of the California Environmental Quality Act (CEQA) Guidelines requires that all aspects of a project must be considered when evaluating its impact on the environment, including planning, acquisition, development, and operation. As part of this analysis, the EIR must also identify (1) significant environmental effects of the proposed project, (2) significant environmental effects that cannot be avoided if the proposed project is implemented, (3) significant irreversible environmental changes that would result from implementation of the proposed project, (4) growth-inducing impacts of the proposed project.

Significant Environmental Effects

Chapter 3 of this EIR, Summary of Environmental Effects, and Sections 5.1 through 5.6 of this EIR provide a comprehensive identification of the proposed project's environmental effects, including the level of significance both before and after mitigation.

Significant and Unavoidable Impacts

Section 15126.2(b) of the CEQA Guidelines requires that an EIR describe any significant impacts that cannot be avoided, even with the implementation of feasible mitigation measures. The environmental effects of the proposed project on various aspects of the environment are discussed in detail in Chapter 5 of this EIR. Project-specific and cumulative impacts that cannot be avoided if the project is approved as proposed include:

Project-Specific Significant and Unavoidable Impacts

5.2-4 Operation of the proposed project would contribute to emissions of ozone precursors.

5.4-1 Construction of the proposed project would temporarily produce noise.

5.4-2 Construction activity would temporarily produce ground-borne vibration.

5.6-2 The project would increase traffic volumes on the freeway mainline.

5.6-3 The project would increase traffic volumes at the freeway interchanges.

Cumulative Significant and Unavoidable Impacts

5.6-11 Impacts to freeway mainline under Near Term Plus Project Condition.

5.6-12 Impacts to freeway merge / diverge / weave areas under Near Term Plus Project Condition.

5.6-13 Impacts to freeway ramp queues under Near Term Plus Project Conditions.

5.6-18 Impacts to freeway mainline under Long Term Plus Project Conditions.

5.6-19 Impacts to freeway merge / diverge / weave areas under Long Term Plus Project Conditions.

5.6-20 Impacts to freeway ramp queues under Long Term Plus Project Conditions.

Significant Irreversible Environmental Effects

Section 15126.2(c) of the CEQA Guidelines requires a discussion of any significant irreversible environmental changes that would be caused by the proposed project. Section 15126.2(c) states:

> Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible, since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.

Generally, a project would result in significant irreversible environmental changes if:

- The primary and secondary impacts would generally commit future generations to similar uses;
- The project would involve uses in which irreversible damage could result from any potential environmental accidents associated with the project;
- The project would involve a large commitment of nonrenewable resources;
- The proposed consumption of resources is not justified (e.g., the project involves the wasteful use of energy).

Development of the proposed project would result in the continued commitment of the project site to more intense urban development, thereby precluding any other uses for the lifespan of the project. Restoration of the site to a less developed condition would not be feasible given the degree of disturbance, the urbanization of the area, and the level of capital investment.

The CEQA Guidelines also require a discussion of the potential for irreversible environmental damage caused by an accident associated with the project. While the project would result in the use, transport, storage, and disposal of hazardous wastes, as described in the Initial Study (see Appendix A, Hazards and Hazardous Materials), all activities would comply with applicable State and federal laws related to hazardous materials, which significantly reduces the likelihood and severity of accidents that could result in irreversible environmental damage.

Implementation of the proposed project would result in the long-term commitment of resources to urban development. The most notable significant irreversible impacts are alteration of the visual character of the site, increased generation of pollutants, and the short-term commitment of non-renewable and/or slowly renewable natural and energy resources, such as mineral resources and water resources during construction activities. Operations associated with future uses would also consume natural gas and electrical energy. These unavoidable consequences of urban growth are described in the appropriate sections in Chapter 5 of this EIR and the Initial Study in Appendix A.

Resources that would be permanently and continually consumed by project implementation include water, electricity, natural gas, and fossil fuels; however, the amount and rate of consumption of these resources would not result in the unnecessary, inefficient, or wasteful use of resources. With respect to operational activities, compliance with all applicable building codes, as well as mitigation measures, planning policies, and standard conservation features, would ensure that natural resources are conserved to the maximum extent possible. It is also possible that new technologies or systems will emerge, or will become more cost-effective or user-friendly, to further reduce the reliance upon nonrenewable natural resources. Nonetheless, construction activities related to the proposed project would result in the irretrievable commitment of nonrenewable energy resources,

primarily in the form of fossil fuels (including fuel oil), natural gas, and gasoline for automobiles and construction equipment.

As previously discussed, the proposed project would include up-to-date energy-saving equipment, lighting, windows, and other energy conservation measures. Although specific features have not been determined at this time, lighting conservation would include installation of such features as occupancy sensors to automatically turn off lights when not in use, lighting reflectors, electronic ballasts, and energy-efficient lamps. Glazing for the project would include insulated, low-E glass. Conservation efforts are also expected to involve improved HVAC systems with microprocessor-controlled energy management systems.

Growth Inducing Impacts

As required by Section 15126.2(d) of the CEQA Guidelines, an EIR must discuss ways in which a proposed project could foster economic or population growth or the construction of additional housing, either directly or indirectly, in the surrounding environment. Also, the EIR must discuss the characteristics of the project that could encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. Growth can be induced in a number of ways, such as through the elimination of obstacles to growth, through the stimulation of economic activity within the region, or through the establishment of policies or other precedents that directly or indirectly encourage additional growth.

In general, a project may foster spatial, economic, or population growth in a geographic area if the project removes an impediment to growth (e.g., the establishment of an essential public service, the provision of new access to an area; a change in zoning or general plan amendment approval); or economic expansion or growth occurs in an area in response to the project (e.g., changes in revenue base, employment expansion, etc). These circumstances are further described below:

- **Elimination of Obstacles to Growth:** This refers to the extent to which a proposed project removes infrastructure limitations or provides infrastructure capacity, or removes regulatory constraints that could result in growth unforeseen at the time of project approval.
- **Economic Effects:** This refers to the extent to which a proposed project could cause increased activity in the local or regional economy. Economic effects can include effects such as the “multiplier effect.” A “multiplier” is an economic term used to describe inter-relationships among various sectors of the economy. The multiplier effect provides a quantitative description of the direct employment effect of a project, as well as indirect and induced employment growth. The multiplier effect acknowledges that the on-site employment and population growth of each project is not the complete picture of growth caused by the project.

Elimination of Obstacles to Growth

The elimination of physical obstacles to growth is considered a growth-inducing effect. The proposed project would be developed in a built-out, highly urbanized area in Downtown Sacramento; however, some physical constraints to growth currently exist in the vicinity of the project site. The primary growth obstacles in the project area include:

- Limited capacity of the storm drainage system serving this portion of the City of Sacramento;
- Limited capacity of the wastewater system serving this portion of the City of Sacramento; and
- The immediate surrounding developed urban environment.

Both the storm drainage and wastewater systems serving the project site are at or beyond capacity during severe storm events. Although the proposed project would contribute flows to these systems and would likely contribute funding to their expansion or other improvements, these improvements would be made regardless of whether the proposed project is constructed. In addition, the proposed project would be developed on a previously developed site and would not require the removal of any residences.

Economic Effects

In addition to the employment generated by the proposed project, additional local employment can be generated through the multiplier effect. The multiplier effect tends to be greater in regions with larger diverse economies due to a decrease in the requirement to import goods and services from outside the region.

Two different types of additional employment are tracked through the multiplier effect. *Indirect* employment includes those additional jobs that are generated through the expenditure patterns of direct employment associated with the project. For example, workers in the office and retail portions of the proposed project would spend money in the local economy, and the expenditure of that money would result in additional jobs. Indirect jobs tend to be in relatively close proximity to the places of employment and residence.

The multiplier effect also calculates *induced* employment. Induced employment follows the economic effect of employment beyond the expenditures of the employees within the proposed project area to include jobs created by the stream of goods and services necessary to support businesses within the proposed project. For example, when a manufacturer buys or sells products, the employment associated with those inputs or outputs are considered *induced* employment.

When an employee from the project goes out to lunch, the person who serves the project employee lunch holds a job that was *indirectly* caused by the proposed project. When the server then goes out and spends money in the economy, the jobs generated by this third-tier effect are considered *induced* employment.

The multiplier effect also considers the secondary effect of employee expenditures. Thus, it includes the economic effect of the dollars spent by those employees who support the employees of the project.

Increased future employment generated by employee spending ultimately results in physical development of space to accommodate those employees. It is the characteristics of this physical space and its specific location that will determine the type and magnitude of environmental impacts of this additional economic activity. Although the economic effect can be predicted, the actual environmental implications of this type of economic growth are too speculative to predict or evaluate, since they can be spread throughout the Sacramento metropolitan region and beyond.

It should be noted that, while the proposed project would contribute to direct, indirect, and induced growth in the area, enhancing the vitality of the Central Business District is a goal of the City's General Plan, the Central City Community Plan, and the zoning (C-3-SPD) for the site. Contributing to the vitality of the community is also a goal of the proposed project.

Impacts of Induced Growth

While growth in the Central Business District of the City is an intended consequence of the proposed project, growth induced directly and indirectly by the proposed project could also affect the greater Sacramento area. Potential impacts associated with induced growth in the area could include: traffic

congestion; air quality deterioration; loss of agricultural land and open space; loss of habitat and wildlife; impacts on utilities and services, such as fire and police protection, water, recycled water, wastewater, solid waste, energy, and natural gas; and increased demand for housing.

Specifically, an increase in population-growth-induced housing demand in the greater Sacramento region could cause significant environmental effects as new residential development would require governmental services, such as schools, libraries, and parks. Indirect and induced employment and population growth would further contribute to the loss of open space because it would encourage conversion to urban uses for housing and infrastructure.

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8.0 REFERENCES

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9. REPORT PREPARATION

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APPENDICES

Appendix A

INITIAL STUDY

APPENDIX A – INITIAL STUDY (P05-108)

This Initial Study has been prepared for the Development Services Department, Environmental Planning Services, 2101 Arena Boulevard, Second Floor, Sacramento, CA 95834, pursuant to Title 14, Section 15070 of the California Code of Regulations; the Sacramento Local Environmental Regulations (Resolution 91-892) adopted by the City of Sacramento, and the Sacramento City Code.

This Initial Study is organized into the following sections:

SECTION I. - BACKGROUND: Page A-1 - Provides summary background information about the project name, location, sponsor, when the Initial Study was completed, and a project description.

SECTION II. - ENVIRONMENTAL CHECKLIST AND DISCUSSION: Page A-4 - Contains the Environmental Checklist form together with a discussion of the checklist questions. The Checklist Form is used to determine the following for the Proposed Project: 1) "Potentially Significant Impacts" that may not be mitigated with the inclusion of mitigation measures, 2) "Potentially Significant Impacts Unless Mitigated" which could be mitigated with incorporation of mitigation measures, and 3) "Less-than-significant Impacts" which would be less-than-significant and do not require the implementation of mitigation measures.

SECTION III. - ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED: Page A-46 - Identifies which environmental factors were determined to have either a "Potentially Significant Impact" or "Potentially Significant Impacts Unless Mitigated," as indicated in the Environmental Checklist.

SECTION IV. - DETERMINATION: Page A-47 - Identifies the determination of whether impacts associated with development of the Proposed Project are significant, and what, if any, additional environmental documentation may be required.

SECTION I. BACKGROUND

File Number, Project Name:

P05-108, 500 Capitol Mall Highrise Office Building project (proposed project)

Project Applicant, Project Planner, and Environmental Planner Contact Information:

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PROJECT DESCRIPTION

Project Location

The project site is 1.13 acres on the western portion of the block between 5th and 6th Streets and Capitol Mall and N Street in the Central Business District of downtown Sacramento. The proposed project site is within the Central Business District (CBD) Special Planning District and is zoned for general commercial use (C-3-SPD). The proposed project site is also within the Capitol View Protection Corridor.

The CBD is typified by mixed-use commercial, retail, residential, and office uses of medium to high density. There are currently no residential structures located along Capitol Mall, but two residential projects have been approved: the Towers on Capitol Mall, a 53-story building (comprised of two separate towers on a single pedestal) that would include residential and hotel uses at 301 Capitol Mall, and the Aura Condos, a 35-story residential building at 601 Capitol Mall, with occupancy expected in 2007-2008. Residential uses are also located south of the proposed project along N Street.

Project Description

The 500 Capitol Mall project (proposed project) includes the development of a 25-story, 396-foot-tall highrise building with office, retail, and restaurant uses and a parking garage. The gross area of the building would be 467,942 square feet with 264,353 square feet for the parking garage for a total building area, including office, retail, and parking uses, of 732,295 gross square feet. The net area within the building is as follows: 406,384 square feet of rentable office area and 27,124 square feet of rentable retail / restaurant area, for a net square footage of 433,508. The project would include retail uses on the ground floor, and a restaurant on two penthouse floors. A total of 794 parking stalls would be provided on one sub-grade floor and ten parking levels that would be constructed adjacent to portions of floors one through eight in the office portion of the project.

The ground floor of the proposed project would include the entrance lobby, retail uses, storage and maintenance facilities, bicycle lockers and racks, a parking garage entry/exit fronting on N Street, and a loading dock fronting on 5th Street. Floors two through eight would include parking and office space. Floors nine through 24 (there would be no 13th floor) would house office space exclusively. Above floor 24, the lower penthouse floor would be divided between a mechanical equipment area and restaurant use. The upper penthouse floor would comprise restaurant use exclusively. An elevator machine room would be located above the penthouse floors. It is possible that office uses could occupy the areas currently designated for restaurant use.

Permits and Approvals

The proposed project would require the following entitlements: 1) Environmental Determination: EIR; 2) Mitigation Monitoring Plan; 3) Tentative Map to merge parcels and to designate the site for condominium use; 4) Special Permit to construct condominium units in the C-3-SPD zone; 5) Special Permit for a Major Project over 75,000 square feet in the C-3-SPD zone; 6) Variance to

reduce maneuvering width in the parking garage; and 7) Variance to reduce the required setback for a portion of the building on I Street from 15-feet to 0-feet. The project would also require review and approval by the City's Design Review Preservation Board.

Other Public Agencies Whose Approval is Required

- Sacramento Metropolitan Air Quality Management District (SMAQMD) – Will issue a permit to operate.
- State Water Resources Control Board – Will issue a Construction Storm Water Discharge permit, if required.
- Federal Aviation Administration – Reviews all buildings over 200-feet in height to ensure there are no airspace conflicts.

SECTION II. ENVIRONMENTAL CHECKLIST AND DISCUSSION

Issues:	Potentially Significant Impact	Less-than-Significant with Mitigation Incorporated	Less-than-Significant Impact
1. LAND USE *Would the proposal:* A) Result in a substantial alteration of the present or planned use of an area?			✓
B) Affect agricultural resources or operation (e.g., impacts to soils or farmlands, or impact from incompatible land uses?)			✓

Existing Setting

The proposed project site is located in the Central Business District in downtown Sacramento. The project site currently developed, but the existing building is unoccupied. The site is within the City of Sacramento's CBD, with I-5 to the west and business uses on the north, east, and west. The development of the project site would occur within the existing block and would not remove access to the project site or the surrounding area.

Standards of Significance

For the purposes of this environmental document, an impact is considered significant if the proposed project would:

- Substantially alter an approved land use plan that would result in a physical change to the environment.

Answers to Checklist Questions

A) The proposed project site currently contains an existing building. Development of the proposed project would require removal of the existing building and replace it with a 25-story office high rise that also includes retail, and a 794-space integrated parking structure. Project development would intensify current area uses but would not alter the present or planned use of the area. This would be considered a ***less-than-significant impact***; however, in order to fully evaluate consistency with applicable plans and compatibility with surrounding land uses, this issue will be further addressed in the EIR.

B) The project site is located in an urban area and is currently developed with a paved surface parking lot. There are no agricultural activities on-site or in the surrounding area that could be impacted by the proposed project. Impacts to agricultural operations or resources would be ***less than significant.***

Mitigation Measures

No mitigation is required.

Findings

The proposed project is anticipated to result in a less-than-significant impact associated with land use issues. However, the project's consistency with applicable plans and compatibility with adjacent land uses will be addressed further in the EIR.

Issues:	Potentially Significant Impact	Less-than-Significant with Mitigation Incorporated	Less-than-Significant Impact
2. POPULATION AND HOUSING *Would the proposal:* A) Induce substantial growth in an area either directly or indirectly (e.g., through projects in an undeveloped area or extension of major infrastructure)?			✓
B) Displace existing housing, especially affordable housing?			✓

Environmental Setting

The proposed project site is located in the Central Business District Special Planning District and is currently zoned Commercial (C-3-SPD). The City of Sacramento General Plan designates the site as Regional Commercial and Office. The Central City Community Plan designates the site Multi Use. The surrounding area is developed with a mix of office, commercial, and residential uses.

Standards of Significance

For the purposes of this environmental document, an impact is considered significant if the proposed project would:

- Induce substantial growth that is inconsistent with the approved land use plan for the area or displace existing affordable housing.

Answers to Checklist Questions

A) The proposed project includes the construction of an office building, which would not directly result in an increased population. There would, therefore, be ***no impact*** and this issue will not be discussed further in the EIR.

B) The proposed project would be built on a site that currently contains a vacant building. The building would be removed to accommodate the project. No housing is located on the project site; therefore, no housing would be displaced as a result of the proposed project. This would result in a ***less-than-significant impact***.

Mitigation Measures

No mitigation is required.

Findings

The proposed project would not directly result in an increased population in the City and would not displace existing housing, especially affordable housing. These issues will not be discussed further in the EIR.

Issues:	Potentially Significant Impact	Less-than-Significant with Mitigation Incorporated	Less-than-Significant Impact
3. SEISMICITY, SOILS, AND GEOLOGY *Would the proposal result in or expose people to potential impacts involving:* A) Seismic hazards?			✓
B) Erosion, changes in topography or unstable soil conditions?			✓
C) Subsidence of land (groundwater pumping or dewatering)?			✓
D) Unique geologic or physical features?			✓

Existing Setting

Geology

Sacramento is located within the Great Valley geomorphic province of California. The Great Central Valley is a deep trough extending 400 miles from the Klamath Mountains in the north to the Tehachapi Mountains in the south. The geologic formations of the Great Valley are typified by thick sequences of alluvial sediments derived primarily from the erosion of the Sierra Nevada to the east and, to a lesser extent, erosion of the Klamath Mountains and Cascade Range to the north. The sediments from these mountains were transported downstream and deposited onto the valley floor as river channel and flood plain deposits and alluvial fans. The subsurface materials beneath the project site have been mapped as recent (Holocene to Pleistocene-aged) alluvial deposits attributed to the Sacramento and American Rivers.[1] The younger alluvial soils are underlain by older (Pleistocene) alluvial fan sediments of the Riverbank Formation. The Riverbank Formation is composed of semi-consolidated gravels, sands and silts.

Seismicity

Reportedly, earthquakes that have occurred in Northern California since the 1800s have had only moderate effects in the Sacramento area with intensities not exceeding about VI on the Modified Mercalli Scale (MMS). For example, the 1906 earthquake on the San Andreas Fault, which had a maximum intensity of XI (MMS) and a moment magnitude (Mw) of about 7.9 in the San Francisco bay area, produced only an intensity of V (MMS) in the Sacramento area. The Health and Safety Element of the General Plan for the County of Sacramento shows two faults as being influential to Sacramento County: the Midland fault zone, located approximately 20 miles west of the site, and the Bear Mountain fault zone, located approximately 24 miles east of the site. These faults are mapped by the California Geological Survey (CGS) as pre-Quaternary and late-Quaternary, respectively. The Midland fault zone is considered to be a deep pre-Pleistocene subsurface feature extending nearly 50 miles along the west side of the Sacramento Valley. This fault has been only approximately located as a result of natural gas exploration work. Subsurface data indicate that there has been no appreciable movement on the Midland fault in the last 24 to 36 million years, and no evidence of surface expression has yet

1 Wagner D.L., et. al., State of California, Department of Conservation, State Mining and Geology Board, *Geologic Map of the Sacramento Quadrangle*, 1981.

been found. The Bear Mountain fault is the westerly-most fault within the Foothills fault zone, which consists of numerous northwesterly trending faults along the western edge of the Sierra Nevada range. The Foothills fault zone is generally bounded by the Bear Mountains and Melones fault zones, located approximately 25 and 40 miles east of the site, respectively. The Green Valley, Concord, Cleveland Hill, and Hayward faults are considered to be "Active" as defined by the Alquist-Priolo Earthquake Fault Zoning Act, meaning they have experienced activity within the last 11,000 years. The Cleveland Hill fault, located approximately 60 miles north of the site, was last active in 1975, producing a magnitude 5.7 earthquake event. The Green Valley, Concord and Hayward Faults historically rupture by fault creep, that is, they move continually at a slow rate; however, these faults are considered capable of producing significant earthquake events if a large segment of the fault slips at one time.

Soils

The results of a geotechnical investigation and soil test from the project site were presented in the Geotechnical Investigation Report, Proposed 30-Story Office Building, 500 Capitol Mall, Sacramento, California, Kleinfelder, Inc. (September 12, 2005). The results presented in this report confirm that near-surface soils on the eastern side of the project site consist of very soft lean clays and silts with clay underlain by loose, poorly graded gravels and clayey gravel fill materials, which extend to depths of 15 to 20 feet below street grade. Near-surface soils at the western side of the project site consist of very soft lean clays and silts with clay to depths of 10 to 15 feet below street grade.

Near-surface soils at the project site are underlain by alternating layers of very soft to stiff lean clay, silt and silt with clay, sandy silt, and loose to medium dense poorly graded sand extending to depths of 40 to 55 feet below street grade. At this depth, layers of dense sandy gravel 4 to 5 feet thick exist beneath the project site, though no such material was discovered at the northeast portion of the project site. Cobbles less than 6 inches in size were found to be present in the gravel layers. Below this extending to depths ranging from about 80 to 95 feet are soils consisting of interlayered, medium dense to dense poorly graded sands with silt, silty sands, poorly graded gravels with silt and/or clay, and stiff to very stiff sandy silts. Below this up to a maximum depth of 111 ½ feet below site grade are soils consisting of very stiff to hard silts and lean clays with sand, and dense to very dense poorly graded sands and gravels with silt and/or clay.

Groundwater levels could not be reliably measured at the time of the field investigation at the project site, although free groundwater was encountered at relatively shallow depths in two of the four borings drilled. Groundwater levels and soil conditions in the area vary depending on rainfall, irrigation practices, local groundwater pumping, Sacramento and American River stage, and/or runoff conditions. The Sacramento County Department of Environmental Health and Department of Water Resources indicate that seasonal groundwater levels at the project site may be as high as 12 feet mean sea level (msl), or 4 feet below the elevation of 5th Street.

Standards of Significance

For the purposes of this environmental document, an impact is considered significant if the proposed project would:

- Allow a project to be built that would introduce geologic or seismic hazards by allowing the construction of the project on a site without protection against those hazards.

Answers to Checklist Questions

A-C) The closest known fault to the project site mapped by the California Department of Conservation's Division of Mines and Geology is the Dunnigan Hills Fault, located approximately 19 miles northwest of Sacramento. There are no known active faults in or adjacent to the City of Sacramento. Construction contractors are required to comply with the CUBC and the California State Building Code (Title 24) to ensure that the project is designed and constructed to meet specific minimum seismic safety and structural design requirements.

The project site and surrounding areas are flat and do not contain any steep slopes or other features that could result in landslide or mudflow hazards. It is not anticipated that landslides or mudflows would result due to project implementation.

Liquefaction is a phenomenon in which saturated, cohesionless soil experiences a temporary loss of strength due to the buildup of excess pore water pressure, especially during cyclic loading, such as that induced by earthquakes. Soil most susceptible to liquefaction is loose, clean, saturated, uniformly graded, fine-grained sand and silt of low plasticity that is relatively free of clay. Flow failure, lateral spreading, differential settlement, loss of bearing strength, ground fissures, lurch cracking, and sand boils are evidence of liquefaction.

The Kleinfelder Inc. geotechnical report found that, with an assumed groundwater depth of 4 feet below ground surface, sand and non-plastic silt layers below a depth of about 20 to 50 feet may liquefy during a major earthquake generating a peak ground acceleration of 0.19g The potential for ground surface disruption at the project site was found to be low to moderate due to the presence of the non-liquefiable clayey soils in the upper 20 to 35 feet below the ground surface. The potential for lateral spreading is low.

It is anticipated that project construction would require demolition, grading, excavation, pile driving, and trenching activities. It is anticipated that buildings would be supported on concrete piles below the existing surface level. It is also anticipated that exposed soils at the basement level would be soft, wet, and unstable. Dewatering activities may be required for excavation of basement levels to maintain adequate construction conditions. The foundation would be a deep foundation that could include, but would not be limited to, steel H-piles or drilled piles , as described in the Geotechnical Investigation Report, Proposed 30-Story Office Building, 500 Capitol Mall, Sacramento, California, Kleinfelder, Inc. (September 12, 2005), or other methods deemed appropriate and effective by the City of Sacramento.

Common structural engineering methods would be implemented by the proposed project and would reduce the potential for liquefaction to affect project structures and reduce potential impacts associated with unstable soil conditions during dewatering activities. The project applicant would have the engineering and design of foundational structures reviewed and approved of by the City of Sacramento Engineering Department prior to approval of grading and construction plans for the proposed project. The following will be included in the project design.

- Design and engineering of the building structures that is compliant with the California Uniform Building Code for structures built in Seismic Zone 3.

- The proposed project construction would include an indicator pile program, pile load test, and pile driving analyzer program, as recommended in the Geotechnical Investigation Report, *Proposed 30-Story Office Building, 500 Capitol Mall*, Sacramento, California, Kleinfelder, Inc. (September 12, 2005), to evaluate the driving behavior of piles across the project site, the

driving refusal depth of piles, and to determine the maximum load capacity of piles for support of the towers. Results of these tests shall be used to determine the appropriate number and depth of support piles to prevent structural failure due to liquefaction.

- For below grade construction, preparation of a site-specific geotechnical investigation (by a State licensed and qualified engineer or geologist) prior to the start of excavation to determine the exact depth to groundwater in the site, and the need for subsurface drainage and the potential for excavation walls to become unstable or fail.

- Dewatering of the site during the seasonal rise in the groundwater levels under the project site according to the subdrain plan. A subdrain plan could include subdrains, reinforced concrete retaining walls, and/or waterproofing methods shall be used to eliminate the effects of subsurface groundwater conditions on subgrade foundations.

- Preparation of a subdrain plan based on recommendations from a State licensed and qualified engineer or geologist that would form part of the final plans for the project.

- Design below-grade walls and foundation for a water level at a minimum elevation of approximately seven feet below street grade, and check the foundation system for potential uplift conditions during and after building construction.

- Any dewatering would comply with applicable requirements established by the Central Valley Regional Water Quality Control Board and shall be coordinated with the City's Flood Control and Sewer Division.

- Where required due to high groundwater, excavations would be shored as required by the Office of Safety and Health Administration (OSHA) to preclude slope failures during the construction period. Shoring would use standard stabilizing methods, such as tiebacks, as necessary to retain excavation areas.

Compliance with the above construction methods would ensure that hazards associated with construction in unstable soils would be reduced to a ***less-than-significant*** level. This issue will not be further addressed in the EIR.

D) The project site is currently developed and is located in a developed urban environment where there are no unique geologic features or physical features present. Therefore, impacts related to geologic or physical features are considered ***less than significant***.

Mitigation Measures

No mitigation is required.

Findings

The proposed project is anticipated to result in less-than-significant impacts to seismicity, soils, and geology. These issues will not be discussed further in the EIR.

Issues:	Potentially Significant Impact	Less-than-Significant with Mitigation Incorporated	Less-than-Significant Impact
4. WATER *Would the proposal result in or expose people to potential impacts involving:* A) Changes in absorption rates, drainage patterns, or the rate and amount of surface/stormwater runoff (e.g. during or after construction; or from material storage areas, vehicle fueling/maintenance areas, waste handling, hazardous materials handling or storage, delivery areas, etc.)?			✓
B) Exposure of people or property to water related hazards such as flooding?			✓
C) Discharge into surface waters or other alterations to surface water quality that substantially impact the temperature, dissolved oxygen, turbidity, beneficial uses of receiving waters or areas that provide water quality benefits, or cause harm to the biological integrity of the waters?			✓
D) Changes in flow velocity or volume of stormwater runoff that cause environmental harm or significant increases in erosion of the project site or surrounding areas?			✓
E) Changes in currents, or the course or direction of water movements?			✓
F) Change in the quantity of ground waters, either through direct additions or withdrawal, or through interception of an aquifer by cuts or excavations or through substantial loss of recharge capability?			✓
G) Altered direction or rate of flow of groundwater?			✓
H) Impacts to groundwater quality?			✓

Existing Setting

Surface Water/Drainage

The project area is located approximately ½ mile east of the Sacramento River and a little over one mile south of the American River in an urbanized portion of Downtown Sacramento. The City of Sacramento is located at the confluence of the Sacramento River and the American River in the

Sacramento River Basin. The Sacramento River Basin encompasses approximately 26,500 square miles and is bounded by the Sierra Nevada to the east, the Coast Range to the west, the Cascade Range and Trinity Mountains to the north, and the Delta to the south. Six small tributaries of the Sacramento River pass through and provide drainage for the Sacramento area. These tributaries include Dry Creek, Magpie Creek, and Arcade Creek in the northern portion of the city, and Morrison Creek, Elder Creek, and Laguna Creek in the southern portion of the City. The tributaries in the southern portion of the City join to form a single Sacramento River tributary.

Water Quality

The Sacramento and American Rivers have been classified by the Central Valley Regional Water Quality Control Board (CVRWQCB) as having numerous beneficial uses, including providing municipal, agricultural, and recreational water supply. Other beneficial uses include freshwater habitat, spawning grounds, wildlife habitat, navigation on the Sacramento River, and industrial uses on the American River.[2] Ambient water quality in the Sacramento River is significantly influenced by agricultural drainage, mine drainage, urban runoff, and NPDES industrial, municipal and construction discharges. The reaches of the Sacramento and American Rivers that flow through the Sacramento urban area are considered impaired and listed on the EPA approved 2002 Section 303(d) list of impaired and threatened waters for California.

With few exceptions, ambient water quality characteristics monitored by the Ambient Program consistently meet applicable regulatory limits in the Sacramento River. Although mercury concentrations appear to meet current regulatory limits, mercury has been identified as a potential regulatory problem in the Sacramento River. The highest concentrations of diazinon (an organophosphate pesticide) were observed in the Sacramento River during the orchard dormant spray season and exceeded the Department of Fish and Game Guidance level. Diazinon concentrations are of regulatory significance because diazinon is a cause for the listing of Delta waterways and other urban runoff-affected waterbodies in the Sacramento area on the CVRWQCB's 2002 303(d) list of impaired California waterbodies. Fecal coliform bacteria and total coliform bacteria numbers met the Basin Plan objective 94-97 percent and greater than 97 percent of the time, respectively. Concentrations of total organic carbon exceeded the Disinfection/Disinfection By-Product Rule treatment threshold value more than 50 percent of the time. The trace organic compounds do not appear to pose a significant human health risk or compliance problem in the Sacramento River. Other conventional pollutants generally met applicable water quality limits more than 95 percent of the time.

Flood

According to the Federal Emergency Management Agency, the project site is not located within the 100-year flood hazard zone.[3]

Standards of Significance

For the purposes of this environmental document, an impact is considered significant if the proposed project would:

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4 California Regional Water Quality Control Board, Central Valley Region, The Water Quality Control Plan (Basin Plan), Fourth Edition – 1998, revised 2004.

3 U.S. Army Corps of Engineers certified area flood protection improvements as achieving 100-year flood protection, effective February 18,2005.

- Substantially degrade water quality and violate any water quality objectives set by the State Water Resources Control Board, due to increased sediments and other contaminants generated by construction and/or operation activities; or

- Substantially increase exposure of people and/or property to the risk of injury and damage in the event of a 100-year flood.

Answers to Checklist Questions

A, C) The project site is in an urban setting and is mostly covered in impervious surfaces (i.e., an existing office building and parking lots). The project site is surrounded by other urban development and impervious surfaces (e.g., office buildings, streets, etc.). Development of the proposed project would replace existing impervious surfaces with new impervious surfaces. The amount of impervious surface would not substantially increase with development of the project relative to existing conditions; therefore, current absorption rates, drainage patterns, and the rate and amount of surface runoff would not change substantially.

Development associated with the proposed project would involve soil-disturbing construction activities, such as grading, excavation, and drilling. These activities would result in soil being exposed to erosion by wind or rain, depending on the time of year. Runoff from the construction site could contain constituents such as sediment and urban pollutants that could enter storm drains or the sewer that ultimately drains to the Sacramento River. Increased turbidity in the Sacramento River could have adverse impacts on fish and wildlife habitat and other established beneficial uses. Increased sediment deposition could also result in increased water treatment costs for turbidity removal, and reduction in the Sump 52 conveyance capacity.

The City has established mechanisms that are required as part of the building permit process. These requirements implement federal and state water quality laws and regulations and are monitored during construction to minimize adverse effects on water quality. Applicant responsibilities are described below.

The proposed project would be required to apply for a National Pollution Discharge Elimination System (NPDES) General Construction Permit. In accordance with NPDES regulations, to minimize the potential effects of erosion and construction runoff on receiving water quality, the State requires that any construction activity affecting one or more acres obtain a General Construction Activity Stormwater Permit (General Permit). Performance standards for obtaining and complying with the General Permit are described in NPDES General Permit No. CAS000002, Waste Discharge Requirements, Order No. 99-08-DWQ. Sacramento Water Resources Control Board (SWRCB) Resolution No. 2001-046 requires permittees to implement specific sampling and analytical procedures to determine whether the Best Management Practices (BMPs) used at permitted construction sites are effective.

General Permit applicants are required to prepare a Stormwater Pollution Prevention Plan (SWPPP), an Erosion Control Plan, and implement BMPs to reduce construction effects on receiving water quality by implementing erosion control measures. Examples of typical construction BMPs included in SWPPPs include, but are not limited to: using temporary mulching, seeding, or other suitable stabilization measures to protect uncovered soils; storing materials and equipment to ensure that spills or leaks cannot enter the storm drain

system or surface water; developing and implementing a spill prevention and cleanup plan; installing traps, filters, or other devices at drop inlets to prevent contaminants from entering storm drains; and using barriers, such as straw bales or plastic, to minimize the amount of uncontrolled runoff that could enter drains or surface water.

In addition, the City's Land Grading and Erosion Control Ordinance requires project applicants to prepare erosion, sediment, and pollution control plans for during and after project construction and preliminary and final grading plans. BMPs are required to be approved by the City's Department of Utilities.

For the reasons listed above, impacts would be ***less than significant.***

B) Effective February 2005, the U.S Army Corps of Engineers certified area flood protection improvements as achieving 100-year flood protection. Accordingly, the proposed project site is not considered to be in a 100-year flood hazard zone. However, the project area is located within the dam failure inundation zone for Folsom Dam. Dam failures can result from any one or a number of natural causes such as prolonged periods of rainfall, flooding, earthquake, inadequate spillway capacity, or design or maintenance problems. Two factors that influence the potential severity of a full or partial dam failure are the amount of water impounded and the density, type, and value of development downstream in the inundation area. Since 1950, there have been only nine dam failures in California, and none were in Sacramento County. The possibility of a dam failure exists, but the likelihood as a result of natural hazards is extremely low.[4] Accordingly, impacts would be ***less than significant***.

D) The proposed project is located in an urban setting with pre-existing drainage infrastructure that serves the area. As previously stated, the project site is covered with impervious surfaces, so development of the proposed project would not substantially alter the existing drainage pattern of the site or area. The project site is in an urban area that would not be subject to substantial erosion. As discussed above, the proposed project would be required to apply for a NPDES General Construction Permit and prepare a SWPPP with BMPs to protect receiving waters from potential discharges of contaminants and soil during project construction. The proposed project would not result in a significant increase in rate or volume of runoff or in erosion. Impacts would be considered ***less than significant.***

E) The proposed project would be constructed in an urbanized area approximately ½ mile east of the Sacramento River and one mile south of the American River. The project would not affect water movements; therefore, impacts are ***less than significant.***

F, G) The seasonal depth to groundwater on the project site may be as high as 5 feet below the elevation of 5th Street (about 12 feet above mean sea level).[5] In the event that excavation reaches the groundwater table, dewatering would be required. Because the City is an urbanized area and largely covered in impervious surfaces, groundwater recharge to the local aquifers is through open space land uses surrounding the City and from the American and Sacramento Rivers. Because the groundwater aquifer that would be affected does not supply water to the city for its domestic water needs, it is not anticipated that the loss of this water would constitute a significant impact.

In addition to excavation, building piles would be constructed to support the structure; however, the building piles are not anticipated to interfere with the movement of groundwater either

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4 Sacramento County, California Multi-Hazard Mitigation Plan, November 2004, pages 4-22 to 4-23.

5 Kleinfelder, Geotechnical Investigation Report, Proposed 30-Story Office Building 500 Capitol Mall, Sacramento California, September 12, 2005. p. 5.

horizontally or vertically. In this instance, groundwater would be displaced rather than removed. If some dewatering becomes necessary, it would be temporary and groundwater supplies would not be substantially depleted.

The proposed project would be served water through the City's water supply system, which relies entirely on Sacramento and American River water. The proposed project would not use groundwater resources during project operation. Therefore, the proposed project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level. The site is not identified by any agency as a significant groundwater recharge area. Impacts to groundwater supplies and recharge would be ***less than significant.***

H) Consistent with City Codes and Ordinances, the applicant must submit grading and drainage plans prior to receiving a building permit. These plans must include BMPs to prevent pollutant discharges to surface soils and discharges that could affect groundwater quality. Impacts to groundwater quality would be ***less than significant.***

Mitigation Measures

No mitigation is required.

Findings

The proposed project is anticipated to result in less-than-significant impacts on water resources. These issues will not be discussed further in the EIR.

issues:	Potentially Significant Impact	Less-than-Significant with Mitigation Incorporated	Less-than-Significant Impact
5. AIR QUALITY *Would the proposal:* A) Violate any air quality standard or contribute to an existing or projected air quality violation?	✓		
B) Exposure of sensitive receptors to pollutants?	✓		
C) Alter air movement, moisture, or temperature, or cause any change in climate?			✓
D) Create objectionable odors?			✓

Existing Setting

Air quality is monitored, evaluated and regulated by federal, state, regional, and local regulatory agencies and jurisdictions, including the United States Environmental Protection Agency (EPA), the California Air Resources Board (CARB), and the Sacramento Metropolitan Air Quality Management District (SMAQMD). The EPA, CARB and the SMAQMD develop rules and/or regulations to attain the goals or directives imposed by legislation. Both state and regional regulations may be more, but not less, stringent than federal regulations.

The CARB establishes state ambient air quality standards and motor vehicle emission standards, conducts research, and oversees the activities of regional Air Pollution Control Districts and Air Quality Management Districts. The CARB has designated the Sacramento Valley as a non-attainment area with respect to ozone and particulate matter under 10 microns (PM_{10}). The Sacramento Urbanized Area has recently been redesignated to attainment status with respect to the state carbon monoxide (CO) standard, bringing the entire county into attainment. The Sacramento Valley is an attainment area for nitrogen dioxide (NO_2) and sulfur dioxide (SO_2).

Standards of Significance

For the purposes of this environmental document, an impact is considered significant if the proposed project would:

- Result in an increase in short-term effects (construction) of nitrogen oxides (NO_x) above 85 pounds per day and in increase in long-term effects (operation) of either ozone precursor, nitrogen oxides (NO_x) and/or organic gases (ROG), above 65 pounds per day would result in a significant impact; or

- Result in carbon monoxide (CO) concentrations that exceed the 1-hour state ambient air quality standard of 20.0 parts per million (ppm) or the 8-hour state ambient standard of 9.0 ppm (state ambient air quality standards are more stringent than their federal counterparts).

Answers to Checklist Questions

A-B) The proposed project would result in construction and operational air emissions. These emissions may exceed thresholds set by federal, state, and local regulations. Sensitive receptors in the area include users of nearby existing facilities and residents in surrounding neighborhoods. Construction and operation of the project could result in ***potentially significant impacts*** to air quality. These issues will be further addressed in the EIR.

C) The proposed project would develop a 396-foot tall office high-rise with an integrated parking facility; the uses of the building are typical of a developed urban environment. The project would not alter moisture or substantially affect temperature. Consequently, there would be a ***less-than-significant impact***.

D) The project would develop land uses, including office, retail, and restaurant, that are typical in an urban environment. Restaurant uses could produce some odors, but these uses already exist in the project vicinity, and restaurants are not generally considered incompatible due to odors. The proposed uses typically do not produce odors that people would consider offensive; consequently, there would be a ***less-than-significant impact***.

Mitigation Measures

No mitigation is required.

Findings

The proposed project could potentially result in violations of air quality standards or contribute to existing or projected air quality violations. In addition, the project could result in changes to air movement and/or temperature and potentially expose sensitive receptors to pollutants. These impacts are potentially significant and will be discussed further in the EIR. Impacts associated with odors are less than significant and will not be discussed further.

Issues:	Potentially Significant Impact	Less-than-Significant with Mitigation Incorporated	Less-than-Significant Impact
6. TRANSPORTATION/CIRCULATION *Would the proposal result in:* A) Increased vehicle trips or traffic congestion?	✓		
B) Hazards to safety from design features (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			✓
C) Inadequate emergency access or access to nearby uses?			✓
D) Insufficient parking capacity on-site or off-site?	✓		
E) Hazards or barriers for pedestrians or bicyclists?			✓
F) Conflicts with adopted policies supporting alternative transportation (e.g., bus turnouts, bicycle racks)?			✓
G) Rail, waterborne or air traffic impacts?			✓

Environmental Setting

Regional automobile access to the project area, the Sacramento Central City and Downtown area, is provided primarily by the freeway system that serves the Richards Boulevard area and Downtown Sacramento, including US 50, the Capital City Freeway (Business Route 80), State Route 99 (SR 99), and Interstate 5 (I-5).

US 50 is an east-west freeway that is located along the south side of the Central City, about 14 blocks south of the project area. Access to this freeway is primarily via interchanges at Business Route 80, Stockton Boulevard, and 26th Street. To the east, US 50 serves eastern portions of the City and County of Sacramento and extends into El Dorado County. To the west, US 50 extends via the Pioneer Bridge to West Sacramento and Yolo County.

The Capital City Freeway (Business Route 80) is a north-south freeway that is located along the east side of the Central City area. Access to this freeway is primarily via interchanges at E Street, H Street, J Street, N Street, P Street and T Street. To the northeast, the Capital City Freeway provides access to northeastern portions of the City and County of Sacramento, and Interstate 80 extending into Placer County. To the south, the freeway provides access to US 50 and continues as SR 99 south of US 50. SR 99 provides access to southern portions of the City and County, as well as other Central Valley communities.

I-5 is a north-south freeway located along the western side of the Central City area. It provides access to the Central City area via off-ramps at J and Q Streets.

Downtown and Midtown Sacramento are served by a grid street system. Numbered streets exist in a north-south orientation; lettered streets exist in an east-west orientation.

Important east-west streets for Downtown access include H, J, N, Q, and X Streets, which are one-way eastbound, and I, L, P, and W Streets, which are one-way westbound. Capitol Mall is a two-way east-west facility that extends from the Tower Bridge to the State Capitol at 10th Street. Capitol Mall has two to three lanes in each direction between the Tower Bridge and 9th Street, separated by a grass median. Between 9th and 10th Streets, the roadway includes a mid-block traffic circle.

Important north-south streets for Downtown access include 3rd, 7th, 9th, 12th, and 15th Streets, which are one-way southbound (except for a portion of 3rd street between L and J Street) and 5th, 8th, 10th, and 16th Streets, which are one-way northbound (except for a portion of 5th Street between J and L Streets).

Adjacent to the project site, Capitol Mall is a median-divided roadway with two eastbound and three westbound lanes. 5th Street is one-way northbound with five lanes – two left turn lanes to Capitol Mall westbound, two through lanes, and one shared through –right turn lane. N Street is one way eastbound with three through travel lanes.

Designated bike lanes are located on streets throughout the City. No designated bike lanes are located on streets adjacent to the project site.

The nearest light rail stations are located at 7th Street north of Capitol Mall (southbound) and on 8th Street south of Capitol Mall (northbound). Capital Shuttle Bus Routes 140 and 141 operate along N Street adjacent to the site, and Route 38 operates along 5th Street adjacent to the site. Many other RT bus routes operate within a few blocks of the site, particularly along L Street, 7th Street, and 8th Street.

Standards of Significance

Impact significance criteria are summarized below for study area intersections, bicycle and pedestrian facilities, and transit facilities).

Intersections and Roadways: The City of Sacramento defines the threshold of significance for traffic impacts at intersections as follows:

- The traffic generated by the project degrades peak period intersection LOS from A, B, or C (without the project) to D, E, or F (with the project); or,
- The existing intersection LOS (without project) is D, E, or F and project generated traffic increases the average vehicle delay by 5 seconds or more.

These standards have been developed consistent with a goal set forth in the City of Sacramento General Plan Update (1988). Specifically, section 5-11 – Goal D, states to "Work towards achieving a LOS C on the City's local and major street system."

- *Signal Warrant Analysis:* A significant impact with regard to signal warrants would occur if the project would generate enough traffic to warrant a traffic signal.

  Bicycle Facilities: A significant bikeway impact would occur if:

- The project hindered or eliminated an existing designated bikeway, or if the project interfered with implementation of a proposed bikeway, or
- The project was to result in unsafe conditions for bicyclists, including unsafe bicycle/pedestrian or bicycle/motor vehicle conflicts.

- *Pedestrian Circulation:* A significant pedestrian circulation impact would occur if the project was to result in unsafe conditions or hindrance for pedestrians, including unsafe pedestrian/bicycle or pedestrian/motor vehicle conflicts.

- *Transit System:* A significant impact to the transit system would occur where project generated ridership, when added to existing or future ridership, exceeds available or planned system capacity. Capacity is defined as the total number of passengers the system of busses and light rail vehicles can carry during the peak hours of operations.

- *Parking:* A significant impact to parking would occur if the anticipated parking demand of the proposed project exceeds the available or planned parking supply for typical day conditions. However, the impact would not be significant if the project is consistent with the parking requirements stipulated in the City Code.

Answers to Checklist Questions

A) The proposed project would increase traffic both temporarily during construction and permanently during operation. Increased congestion could result in traffic queuing and affect traffic operations in the area. Although the proposed project is located near a light rail stop and would encourage the use of mass transit, development of the project would result in increased traffic congestion in this area. This additional traffic could result in a ***potentially significant*** impact to neighboring intersections, freeways, and light rail operations. This issue will be further addressed in the EIR.

B) The project does not propose any changes to the road network that would create dangerous conditions. The proposed project would include uses similar to those in adjacent areas, and thus would not be incompatible with the area. Therefore, the proposed project would not create a hazard to safety due to design features or result in any incompatibilities. Therefore, this would be a ***less-than-significant*** impact. This issue will not be further addressed in the EIR.

C) The project may require some road closures during construction to accommodate installation of utilities in adjacent roads. However, the project proponent would be required to submit a plan and receive approval from the City for any road closures. This process would ensure that construction of the proposed project would not result in inadequate emergency access. Therefore, this would be a ***less-than-significant*** impact. This issue will not be further addressed in the EIR.

D) Development of the proposed project would result in intensified usage of the project area and increased parking demand. The project is proposing to include 794 parking spaces to accommodate the proposed office uses and would be available during evening hours. According to the City's parking requirement adequate parking would be provided on-site to meet the demand of the proposed project. However, this issue will be further addressed in the EIR.

E, F) Although construction of the proposed project could create hazards or barriers for pedestrians and bicyclists in the project area, any such situation would be short-term and temporary during project construction. The proposed project would not conflict with any policies supporting

alternative transportation, in fact, the project's close proximity to light rail would encourage the use of the City's mass transit system. These impacts would be considered ***less-than-significant.***

G) The proposed project would not affect rail traffic or watercraft travel patterns. It is not anticipated that air traffic would be affected by the project, but to ensure compliance with aeronautical laws, the project would be reviewed by Caltrans Department of Aeronautics and the Federal Aviation Administration. This impact would be ***less than significant.***

Mitigation Measures

No mitigation is required.

Findings

Development of the proposed project could increase traffic congestion, create hazards to safety due to design features, result in inadequate emergency access during project construction, or result in insufficient parking capacity. These issues could result in potentially significant impacts; therefore, these issues will be addressed in the EIR. Since issues associated with pedestrians, bicyclists, policies supporting alternative transportation, and rail, waterborne, and air traffic impacts would result in less-than-significant impacts, these issues will not be discussed further in the EIR.

Issues:	Potentially Significant Impact	Less-than-Significant with Mitigation Incorporated	Less-than-Significant Impact
7. BIOLOGICAL RESOURCES *Would the proposal result in impacts to:* A) Endangered, threatened or rare species or their habitats (including plants, insects, fish, amphibians, reptiles, birds and mammals)?			✓
B) Locally designated species (e.g., heritage or City street trees)?			✓
C) Wetland habitat (e.g., marsh, riparian and vernal pool)?			✓

Environmental Setting

Information in this biological resource section was obtained from a site visit conducted on June 5, 2006 and a query of the January 2006 version of the California Natural Diversity Database. The results of the CNDDB search are attached as Appendix A.

The project site is located in Downtown Sacramento, and because the site is currently developed, there are limited biological resources. The vegetation on the site consists of turf areas and ornamental shrubs, such as Japanese mock orange (*Pittosporum tobira*) and Glossy privet (*Ligustrom lucidum*), and 19 ornamental trees. Trees on the site include Smoothleaf elm (Ulmus minor), Chinese elm (*Ulmus parvifolia*), pine trees (*Pinus* sp.), western sycamore (*Platanus racemosa*), Cottonwood (*Populus* sp.), and sweetgum (*Liquidambar styraciflua*) The majority of the trees on the site are less than 10 inches in diameter. The largest tree on the site is a 27-inch sweetgum on the southwest corner of the project site.

Trees on the interior of the project site are outside of the City's right-of-way and would not be under City jurisdiction and, therefore, would not be subject to the City's Tree Ordinance, as defined by the City of Sacramento Code of Ordinance, Chapter 12.56, Trees Generally, and Chapter 12.64, Heritage Trees (discussed below). However, the proposed project could require the removal of, or result in damage to, street trees, which would require compliance with the ordinance.

Urban wildlife is largely limited to birds like the common crow (*Corvus brachyrhynchos*) and introduced species such as rock dove (*Columba livia*), house sparrow (*Passer domesticus*), and European starling (*Sturnus vulgaris*).

The CNDDB query revealed recorded occurrences of the following within the Sacramento East and Sacramento West 7.5-minute topographic quadrangles (which includes the project site):

- two special-status plants: Sanford's arrowhead (*Sagittaria sanfordii*), rose mallow (*Hibiscus lasiocarpus*);
- four special-status invertebrates: California linderiella (*Linderiella occidentalis*), valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), vernal pool fairy shrimp (*Branchinecta lynchi*), and vernal pool tadpole shrimp (*Lepidurus packardi*);
- two special status fish: Sacramento perch (*Archoplites interruptus*), and Sacramento splittail

(*Pogonichthys macrolepidotus*);

- six special-status birds: bank swallow (*Riparia riparia*), burrowing owl (*Athene cunicularia*), Cooper's hawk (*Accipiter cooperii*), purple martin (*Progne subis*), Swainson's hawk (*Buteo swainsoni*) and tricolored blackbird (*Agelaius tricolor*);
- one mammal: American badger (*Taxidea taxus*); and
- two sensitive habitats: elderberry savannah, Great Valley cottonwood riparian forest.

All of the above species except burrowing owl, Cooper's hawk, purple martin and Swainson's hawk have specific habitat requirements (either wetlands or elderberry plants) that are not present on the project site. None of the above species or nests were observed during a site visit conducted in June 2006. Because the site is developed, it provides no foraging habitat for any of the birds, and no nesting habitat for burrowing owls (subterranean burrows). Given the absence of foraging habitat and the high disturbance associated with the urban setting, it is possible, but unlikely, that the large trees on site could serve as nesting sites for Cooper's hawk or Swainson's hawk. No Cooper's hawk or Swainson's hawk nests were observed during the June 2006 visit. A visit to the garage building revealed that there are no potential bat roosting sites.

Standards of Significance

For purposes of this environmental document, an impact would be significant if any of the following conditions or potential thereof, would result with implementation of the proposed project:

- Creation of a potential health hazard, or use, production or disposal of materials that would pose a hazard to plant or animal populations in the area affected;

- Substantial degradation of the quality of the environment, reduction of the habitat, reduction of population below self-sustaining levels of threatened or endangered species of plant or animal;

- Affect other species of special concern to agencies or natural resource organizations (such as regulatory waters and wetlands); or

- Violate the Heritage Tree Ordinance (City Code 12.64.040).

Answers to Checklist Questions

A) The California Natural Diversity Database (CNDDB) search revealed 10 special-status plant and wildlife species occurring within the Sacramento East and Sacramento West quadrangles, none of which are recorded within the project site.[6] As discussed above, only two special status birds could potentially use the site for nesting. Swainson's hawk has occurred along the Sacramento River, approximately one and a half mile northwest of the site and Cooper's hawk has occurred along the Natomas East Main Drainage Canal near Northgate Boulevard,[7] several miles from the project site.

The lack of available native habitat greatly reduces the potential occurrence of special-status wildlife species in urban areas. In addition, all work to implement the proposed project would take place within existing rights-of-way and on existing paved areas. However, tree removal could result in potentially significant impacts on nesting birds protected by the Migratory Bird Treaty Act. Mitigation Measure Bio-1 would ensure that tree removal occurs

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6 California Department of Fish and Game, *California Natural Diversity Database*, January 4, 2006 version, printed June 5, 2006.

7 California Department of Fish and Game, *California Natural Diversity Database*, January 4, 2006 version, printed June 5, 2006.

outside of the breeding period. Mitigation Measure Bio-2 would identify active nests within and adjacent to the proposed project site. If none are found, no additional mitigation would be required. Mitigation Measure Bio-3 outlines avoidance measures and Mitigation Measure Bio-4 outlines necessary permits, should the avoidance measures not be feasible. Implementation of these measures would reduce this impact to ***less than significant***. This issue will not be analyzed in the EIR.

Mitigation Measure Bio-1

To prevent direct impacts on nesting birds, tree removal shall occur between September 16 and February 28.

Mitigation Measure Bio-2

If construction activities would occur during the breeding season (approximately March 1 through September 15), the project applicant, in consultation with the CDFG and USFWS, shall conduct a pre-construction, breeding season survey of the project site during the same calendar year that construction is planned to begin. The survey shall be constructed by a qualified avian biologist to determine if any birds are nesting on or directly adjacent to the project site.

If phased construction procedures are planned for the proposed project, the results of the above survey shall be valid only for the season when it is conducted.

A report shall be submitted to the project applicant and the City of Sacramento, following the completion of the nesting survey that includes, at a minimum, the following information:

- *A description of methodology including dates of field visits, the names of survey personnel with resumes, and a list of references cited, and persons contacted.*
- *A map showing the location(s) of any nests observed within the project site.*

If the above survey does not identify any nesting bird species on the project site, no further mitigation would be required. However, should any active bird nests be found on or within close proximity to the project site, one of the following mitigation measures shall be implemented.

Mitigation Measure Bio-3

The project applicant, in consultation with CDFG and USFWS, shall avoid all active nest sites within the project area while the nest is occupied with adults and/or young. The occupied nest shall be monitored by a qualified avian biologist to determine when the nest is no longer used. Avoidance shall include the establishment of a non-disturbance buffer zone, to be determined in consultation with CDFG, around the nest site, which will be delineated by highly visible temporary construction fencing.

Active nest trees that would not be removed but are in close proximity to construction activities shall be monitored weekly to determine if construction activities are disturbing the adult or young birds, until the birds have left the nest.

Mitigation Measure Bio-4

If an active nest site cannot be avoided and would be destroyed, special permits would be required, depending on the bird species.

a. *For a State-listed bird (i.e. Swainson's hawk), the project applicant shall obtain a Section 2081 permit. Standard mitigation for the loss of an active nest tree generally requires planting 15 trees (a mix of cottonwood, sycamore and valley oaks) and monitoring the success of the trees for five years with a 55% success rate. Locating these trees would likely not be feasible so an alternative approach could be to participate in mitigation deemed appropriate by the CDFG.*

b. *For any bird covered by the Migratory Bird Treaty Act, the project applicant would consult with the USFWS to determine appropriate mitigation measures.*

B) The City of Sacramento has a tree ordinance that protects Street and Heritage trees, as defined above. Some street trees could be affected by construction activities (removal or pruning for equipment access or scaffolding). Compliance with the City's Tree Ordinance would be required of the proposed project and would ensure that tree removal and/or protection would only occur after initial consultation with the City's Arborist. Compliance with the City's Tree Ordinance would reduce this impact to a ***less-than-significant level***. This issue will not be addressed in the EIR.

C) The project site is located in a developed urban environment. The CNDDB search identified two sensitive habitats: elderberry savannah (approximately three miles northeast) and Great Valley cottonwood riparian forest (approximately one mile northwest), within the Sacramento East and Sacramento West quads.[8] There are no streams or creeks located within the vicinity of the proposed construction areas. In addition, construction would occur on currently developed area. Therefore, the proposed project would not have an adverse effect on any sensitive natural communities or riparian habitat. There are no wetlands or marshes located on the project site; therefore, the impact would be ***less than significant.*** This issue will not be analyzed in the EIR.

Mitigation Measures

Mitigation Measures Bio-1 through Bio-4. No further mitigation is required.

Findings

The proposed project is anticipated to result in less-than-significant impacts on biological resources with implementation of the mitigation measures identified. These issues will not be discussed further in the EIR.

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8 California Department of Fish and Game, *California Natural Diversity Database*, December 5, 2004 version, printed January 14, 2005.

Issues:	Potentially Significant Impact	Less-than-Significant with Mitigation Incorporated	Less-than-significant Impact
8. ENERGY *Would the proposal result in impacts to*: A) Power or natural gas?			✓
B) Use non-renewable resources in a wasteful and inefficient manner?			✓
C) Substantial increase in demand of existing sources of energy or require the development of new sources of energy?			✓

Existing Setting

The project site is within the Downtown area of the City of Sacramento. Electricity within the City is supplied by the Sacramento Municipal Utility District (SMUD). High voltage 230,000 volt and 115,000 volt transmission lines provide power to substations, where the power is stepped down and routed to neighborhood communities throughout the area. Pacific Gas and Electric (PG&E) provides natural gas service within the area.

Standards of Significance

For the purposes of this environmental document, an impact is considered significant if the proposed project would:

- Require PG&E to secure a new gas source beyond their current supplies; or
- Result in the need for a new electrical source (e.g., hydroelectric and geothermal plants).

Answers to Checklist Questions

A-C) The proposed project would include lighting and other energy conservation measures and would construct all structures with up-to-date energy-saving equipment. Lighting conservation efforts in new construction include installation of occupancy sensors to automatically turn off lights when not in use, lighting reflectors, electronic ballasts, and energy-efficient lamps. Conservation efforts are also expected to involve improved HVAC systems with microprocessor-controlled energy management systems. In addition, all development would be required to comply with specifications contained in Title 24 of the California Code of Regulations.

With respect to operational activities, compliance with all applicable building codes, planning policies, and standard conservation features, would ensure that all natural resources are conserved to the maximum extent possible. It is also possible that new technologies or systems will emerge, or will become more cost-effective or user-friendly, to further reduce the reliance upon nonrenewable natural resources. Nonetheless, construction activities related to the proposed project would result in the irretrievable commitment of nonrenewable energy resources, primarily in the form of fossil fuels (including fuel oil), natural gas, and gasoline for automobiles, and construction equipment.

The proposed project is a high-density mixed-use project in an urban area, in close proximity to transit, activity centers, and other existing and planned infrastructure. This type of project in such an environment would result in energy savings (vehicle fuel) due to reductions in vehicle miles traveled. While the energy savings due to reduced trips cannot be easily quantified, there would be a reduction compared to an equally intense development in a less dense urban area.

Electricity for the proposed project would be provided by the Sacramento Municipal Utility District (SMUD). SMUD has indicated that it is prepared to meet the project's electrical needs.[9] It is anticipated that there would be minimal impact to the electrical system due to the proposed project and no new energy generation would be required. Accordingly, the project would not result in the need for accelerated system improvements, although it is possible that there may be some minor line work required to efficiently serve the project, the location of which is not known at this time.

Natural gas would be provided to the project site via a connection to a simple main located in the intersection of 6th Street and N Street. The natural gas provider for the proposed project site, PG&E, indicated that existing facilities in the area could adequately serve the proposed project and no new natural gas supplies would need to be obtained. No major infrastructure improvements are expected.[10]

Due to the nature of construction of the proposed project, it is possible that public service disruptions may occur in the area, affecting surrounding businesses and residences. City staff and private service providers such as SMUD and PG&E take steps during construction planning to minimize disruptions to adjacent uses. City staff and private service providers may inform adjacent businesses and residences prior to any work that may interfere with public services or schedule such work during evenings or weekends, to minimize impacts.

Although resources would be permanently and continually consumed by the proposed project, the amount and rate of consumption of these resources would not be considered inefficient or wasteful use of these resources. Impacts relating to electricity and natural gas service disruptions to neighboring businesses and residences would be minimized with planning and by informing adjacent uses prior to possibly disruptions. Therefore, this would be considered a ***less-than-significant impact***.

Mitigation Measures

No mitigation is required.

Findings

The proposed project is anticipated to result in less-than-significant impacts to energy resources. These issues will not be discussed further in the EIR.

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9 May 30, 2006 letter from Bob Bunge, Engineering Designer, SMUD.

10 Larry Schlaht, Pacific Gas and Electric, Service Planning Department, personal communication, May 10, 2006

Issues:	Potentially Significant Impact	Less-than-Significant with Mitigation Incorporated	Less-than-Significant Impact
9. HAZARDS *Would the proposal involve:* A) A risk of accidental explosion or release of hazardous substances (including, but not limited to: oil, pesticides, chemicals or radiation)?			✓
B) Possible interference with an emergency evacuation plan?			✓
C) The creation of any health hazard or potential health hazard?			✓
D) Exposure of people to existing sources of potential health hazards?			✓
E) Increased fire hazard in areas with flammable brush, grass, or trees?			✓

Existing Setting

Hazardous materials are formally defined as a substance or combination of substances that, because of quantity, concentration, physical, chemical or infectious characteristics, may pose a potential hazard to human health or the environment when improperly handled.

Phase I Environmental Site Assessments

The proposed project site and surrounding environment is dominated by urban land uses. Urban land uses are associated with hazardous materials use and storage because of the application of pesticides and fertilizers for landscaping and the use of petroleum-related compounds and other chemicals for general maintenance of facilities and equipment. Phase I Environmental Site Assessments (ESAs) are used to assess whether potentially hazardous materials are located on a property. Standards for Phase I ESAs have been developed by the American Society for Testing and Materials (ASTM) and are used routinely to determine the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products, onto the surface or into the ground, groundwater or surface water of the property. If a Phase I ESA finds that hazardous materials found on the property may have been released, then certain recommendations (e.g., further monitoring or clean-up or Phase 2 ESA) is usually recommended. A Phase 2 ESA typically includes collection and analysis of soil and water samples. Based on the results, the Phase 2 ESA may recommend additional testing, remediation, or other controls to address contamination.

A Phase I ESA was completed for the project site in 2006. A previous Phase 1 ESA was completed for the site in 2000. The Phase 1 ESAs identified historical uses on the project site that could have resulted in releases of hazardous materials in the soil or groundwater. These include a Union Oil service station, once located in the northwest corner of the site from about 1940 to 1961 and an automotive repair facility from about 1950 through at least 1957.

The Phase I ESA completed in 2000 identified a release of an unknown quantity of gasoline on the site. Additional monitoring was conducted, and the case has since been closed with no further action required. Other observations of potentially hazardous materials on site include a lead acid battery attached to a generator in the mechanical equipment room, and grease likely associated with a grease trap in the former kitchen in the basement of the vacant building currently occupying the site. Also identified were releases of petroleum compounds (oils, fuel, and residues) and volatile organic compounds (mostly solvents) in the vicinity which could impact the soil and groundwater underlying the project site. The most notable site indicated in the Phase I ESAs is the Union Pacific Railroad Company (UPRR) rail yard located approximately ½ mile north of the project site in the vicinity of 4th and I streets. Long term groundwater monitoring is ongoing for the UPRR contamination. Groundwater at the project site may be affected. Monitoring was conducted as part of the prior Phase I ESA, but the case was closed in 2001 with no further action required. However, if evidence of groundwater contamination, such as odor or discoloration, is observed during construction, further assessment may be required.

Other nearby sites with reported releases of hazardous substances include the Greyhound Bus Station, located approximately ¼ mile east-northeast of the project site at 715 L Street and the Jess Unruh Building, approximately ¼ mile east at 915 Capitol Mall. It was determined that both sites were not considered likely to adversely impact the project site.

A Phase 2 ESA was conducted in 2000 to investigate the possibility of the presence of underground storage tanks (USTs) or contamination at the site. Results of this investigation did not reveal any USTs on the site but did detect petroleum hydrocarbons as gasoline (TPH-g) in two of five samples taken and low concentrations of benzene, toluene, ethylbenzene, and xylenes (BTEX) in four of five samples taken. MTBE was not detected. The case was closed in 2001 and required no further action is required. If stained or odiferous soil is encountered during excavation, additional assessment may be required.

During site reconnaissance conducted during the 2000 Phase I ESA, observations included a lead acid battery used for a generator in the mechanical equipment room on the top floor and grease likely associated with a grease trap in the basement. No release of hazardous material from the lead acid battery was observed. Mechanical equipment and grease trap material should be removed and properly disposed of in accordance with applicable requirements.

Standards of Significance

For the purposes of this environmental document, an impact is considered significant if the proposed project would:

- Expose people (e.g., residents, pedestrians, construction workers) to existing contaminated soil during construction activities;
- Expose people (e.g., residents, pedestrians, construction workers) to asbestos-containing materials; or
- Expose people (e.g., residents, pedestrians, construction workers) to existing contaminated groundwater during dewatering activities.

Answers to Checklist Questions

A,C,D) The proposed project would include the development of a highrise office building. The project site is not included on a list of hazardous material sites compiled pursuant to Government

Code Section 65962.5 (Cortese List).[11] Construction of the proposed project would be required to comply with applicable building, health, fire and safety codes. Hazardous materials would be used in varying amounts during construction and occupancy of the project. Construction and maintenance activities would use hazardous materials such as fuels (gasoline and diesel), oils and lubricants; paints and paint thinners; glues; cleaners (which could include solvents and corrosives in addition to soaps and detergents); and possibly pesticides and herbicides. The amount of materials used would be small, so the project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, assuming such use complies with applicable federal, state, and local regulations including, but not limited to, Titles 8 and 22 of the Code of California Regulations, Uniform Fire Code, and Chapter 6.95 of the California Health and Safety Code.

Hazardous materials regulations, which are codified in Titles 8, 22, and 26 of the California Code of Regulations (CCR), and their enabling legislation set forth in Chapter 6.95 of the California Health and Safety Code, were established at the state level to ensure compliance with federal regulations to reduce the risk to human health and the environment from the routine use of hazardous substances. These regulations must be implemented by employers/businesses, as appropriate, and are monitored by the state (e.g., Cal OSHA in the workplace or DTSC for hazardous waste) and/or local jurisdictions (e.g., the City of Sacramento Fire Department and Sacramento County Emergency Management Department (SCEMD)).

By ensuring that businesses in or adjacent to the project site comply with the above regulations, the City would reduce impacts associated with the potential for accidental release of hazardous materials during occupancy of the proposed project that would result in increased risk of exposure to accidental release of hazardous materials, and the potential for an increased demand for incident emergency response. This would be accomplished by ensuring that regulated activities (e.g., businesses) are managed in accordance with applicable regulations such as Hazardous Materials Release Response Plans and Inventories (Business Plans), the California Accidental Release Prevention (CalARP) Program, and the California Uniform Fire Code: Hazardous Material Management Plans and Hazardous Material Inventory Statements.

Compliance with Title 26, Division 6, of the CCR, which would be monitored by the City, would reduce impacts associated with potential for accidental release during construction or occupancy of the project site and the potential for an increased demand for incident emergency response. Compliance with this regulation would ensure that businesses and public facilities where hazardous materials are used or stored adhere to regulations designed to prevent leakage and spills of material in transit and provide detailed information to clean-up crews in the event of an accident.

Workplace regulations addressing the use, storage, and disposal of hazardous materials in Title 8 of the CCR would apply to businesses and public facilities in and adjacent to the project site. Compliance with these regulations would be monitored by the City of Sacramento Fire Department and the SCEMD when they perform inspections for flammable and hazardous materials storage. Other mechanisms in place to enforce the Title 8 regulations include compliance audits and reporting to local and State agencies. Implementation of the workplace regulations would further reduce the potential for hazardous materials releases.

Implementation of Title 49, Parts 171-180, of the Code of Federal Regulations would reduce

11 DTSC's Hazardous Waste and Substances Site List (Cortese List) for Sacramento County, http://www.dtsc.ca.gov/database/Calsites/Cortese_List.cfm?county=34, accessed January 26, 2006.

any impacts associated with the potential for accidental release during construction or occupancy of the proposed project or by transporters delivering hazardous materials to the project site or picking up hazardous waste. These regulations establish standards by which hazardous materials would be transported, within and adjacent to the proposed project. Where transport of these materials occurs on roads, the California Highway Patrol (CHP) is the responsible agency for enforcement of regulations.

The results of the Phase I ESA completed in 2006 indicated that there was no obvious evidence of Recognized Environmental Conditions (RECs) on site. Additionally, it was determined that sites of hazardous substances releases in the vicinity, including groundwater contamination from the UPRR, have not adversely affected the project site. Because no evidence of hazardous materials currently exists at the project site, this would be a *less-than-significant* impact.

Implementation of and compliance with applicable federal and state laws and regulations that are administered and enforced by the SCDEM, and City of Sacramento Fire Department standards (the local agency that implements applicable hazardous materials-related sections of the Uniform Fire Code and Uniform Building Code) would reduce impacts associated with the routine use, storage, and transportation of hazardous materials in the proposed project to a ***less-than-significant level***. This issue will not be addressed in the EIR.

B) No modifications to the street system are proposed and it is unlikely that project generated traffic could impair emergency evacuation. Since the project would be subject to the requirements contained within the City's emergency response and evacuation plans, impacts related to impaired implementation or physical interference with an adopted emergency response or evacuation plan are considered ***less than significant*** and will not be further addressed in the EIR.

E) As discussed in the project description, the project site is located in a developed, urban environment. The project site is not intermixed with wildlands; therefore, impacts related to increased fire hazard are considered ***less than significant*** and will not be further addressed in the EIR.

Mitigation Measures

No mitigation is required.

Findings

The proposed project is anticipated to result in less-than-significant impacts associated with hazardous materials and public safety. These issues will not be discussed further in the EIR.

Issues:	Potentially Significant Impact	Less-than-Significant with Mitigation Incorporated	Less-than-Significant Impact
10. NOISE *Would the proposal result in:* A) Increases in existing noise levels? Short-term Long Term	✓		
B) Exposure of people to severe noise levels? Short-term Long Term	✓		

Existing Setting

The three major noise sources in the City of Sacramento are surface traffic, aircraft, and the railroad. The project site is located in close proximity to light rail and city streets and would be subject to associated noise levels. The closest sensitive receptors would be the residential uses to the south of the project site.

Standards of Significance

Thresholds of significance are those established by the Title 24 standards and by the City's General Plan Noise Element and the City Noise Ordinance.

Noise and vibration impacts resulting from the implementation of the proposed project would be considered significant if they cause any of the following results:

- Exterior noise levels at the proposed project which are above the upper value of the normally acceptable category for various land uses (SGPU DEIR AA-27) caused by noise level increases due to the project;
- Residential interior noise levels of 45 L_{dn} or greater caused by noise level increases due to the project;
- Construction noise levels not in compliance with the City of Sacramento Noise Ordinance;
- Occupied existing and project residential and commercial areas are exposed to vibration peak particle velocities greater than 0.5 inches per second due to project construction;
- Project residential and commercial areas are exposed to vibration peak particle velocities greater than 0.5 inches per second due to highway traffic and rail operations; and
- Historic buildings and archaeological sites are exposed to vibration peak particle velocities greater than 0.25 inches per second due to project construction, highway traffic, and rail operations.

Answers to Checklist Questions

A, B) Construction and normal operation at the project site could result in both a short-term (construction) and long-term (operation) increase in existing noise levels and potentially expose people to increased noise levels. Impacts associated with these issues are ***potentially significant*** and will be further addressed in the EIR.

Findings

Noise issues could result in potentially significant impacts; therefore, these issues will be addressed in the EIR.

Issues:	Potentially Significant Impact	Less-than-Significant with Mitigation Incorporated	Less-than-Significant Impact
11. PUBLIC SERVICES *Would the proposal have an effect upon, or result in a need for new or altered government services in any of the following areas:* A) Fire protection?			✓
B) Police protection?			✓
C) Schools?			✓
D) Maintenance of public facilities, including roads?			✓
E) Other governmental services?			✓

Existing Setting

The project site would be served by the Sacramento Police Department (SPD) and Sacramento Fire Department (SFD). The SFD provides fire-related and emergency services to Downtown and surrounding areas. According to the SPD 2004 Annual Report, the SPD is staffed by 703 sworn officers and 382 non-sworn officers. Park and recreation facilities are provided by the City and County of Sacramento.

Standards of Significance

For the purposes of this environmental document, an impact would be considered significant if the project:

- Resulted in the need for new or altered services related to fire protection, police protection, school facilities, roadway maintenance, or other governmental services.

Answers to Checklist Questions

A) All new buildings that have floors used for human occupancy located more than 75 feet above the lowest level of fire department access are required to comply with the City's high-rise regulations (Chapter 15.100), which are enforced by the fire department and the building inspections division. Prior to issuance of certificate of compliance, elements of the life safety system must be installed in accordance with approved plans and specifications and must be tested, certified, and proved to be in proper working condition to the satisfaction of the building inspections division and fire department. The following systems are required (Chapter 15.100.40):

- Standby and emergency electrical power systems;
- Fire alarm and related equipment;
- Firefighters phone and voice communication systems;
- Enclosed stairway pressurization system;

- Smoke evacuation and control systems (mechanical equipment);
- Other fire protection and extinguishing systems;
- Fire department breathing air system;
- Fire hydrant system;
- Automatic fire sprinkler system;
- Fire apparatus access roadways;
- Elevators and controls;
- All equipment and their rooms;
- All applicable requirements in Titles 19 and 24, California Code of Regulations and the Uniform Building Code, Uniform Fire Code, and N.F.P.A. codes and standards shall also apply;
- All systems required by this title, including building, mechanical and electrical equipment;
- Complete exit systems.

The proposed project would include all features required by the code, such as fire department equipment storage rooms, fire suppression systems, automatic sprinklers, smoke detection systems, and fire separation doors, to ensure occupant safety in the case of a fire.

While the proposed project would increase the demand for fire protection services, the proposed project would include fire protection features required in the City's ordinance. Due to the requirements of the City's ordinance, the proposed project would not create an inordinate demand for fire protection services such that new or altered fire facilities would be required. In addition, the proposed project would be required to pay all applicable City fees toward the provision of fire protection services to meet demands created by the project. Therefore, this would be considered a ***less-than-significant impact***.

B) The project site would be served by the SPD. The proposed project would increase the demand for police services in the Central City area. The proposed project could require changes to patrols in the area, but it would not require the construction of a new station or expansion of an existing station. The Sacramento General Plan does not contain standard ratios of officers per capita. However, the proposed project would be required to pay all applicable development fees toward the provision of police services to meet demands created by the project. In addition, the City of Sacramento Police Department has reviewed the development application and included certain lighting and security requirements. Prior to project occupancy the project applicant would be required to demonstrate compliance with police department requirements. Therefore, the impact on police services would be considered ***less than significant***.

C) The proposed project would include office and retail uses that, in and of themselves, would not increase the demand for schools in the area. To the extent that future employees of the proposed project would move to the area and require school services, the residences where they locate would have already been accounted for in school demand calculations if the residences are existing, or, if the residences are new, the developer of the residence would be required to pay all applicable fees toward the provision of school services. This would ensure the impact would be ***less than significant***.

D) Public rights-of-way, driveways, and parking facilities would all be designed and developed in compliance with City standards. The proposed project would be required to pay their fair share of any roadway improvements, as required by the City. Accordingly, impacts are considered ***less than significant***.

E) The proposed project would create a temporary population during business hours for the office, retail, and commercial portions of the project. It is not anticipated that this increase in local population would create a need for new government services or altered government facilities. Accordingly, adverse impacts to government services are not anticipated and impacts are considered ***less than significant.***

Mitigation Measures

No mitigation is required.

Findings

Impacts to public services would be less than significant and will not be discussed further in the EIR.

Issues:	Potentially Significant Impact	Less-than-Significant with Mitigation Incorporated	Less-than-Significant Impact
12. UTILITIES *Would the proposal result in the need for new systems or supplies, or substantial alterations to the following utilities:* A) Communication systems?		✓	
B) Local or regional water supplies?	✓		
C) Local or regional water treatment or distribution facilities?	✓		
D) Sewer or septic tanks?	✓		
E) Storm water drainage?	✓		
F) Solid waste disposal?	✓		

Existing Setting

The Sacramento Regional County Sanitation District serves the greater Sacramento area. The project site is served by the City of Sacramento's Combined Sewer System (CSS) for wastewater and Sump 52 for stormwater. The CSS is a wastewater collection system designed to convey domestic sewage, commercial and industrial wastewater, and surface stormwater runoff in a single pipeline. Local flooding can occur during moderate and large storms when the inflows reaching the CSS exceed its capacity and the system backs up into low-lying areas.

Water Supply

The 2004 water demand was 143,764 acre-feet per year (AFY). The City has surface water entitlements to 326,800 AFY and has a treatment capacity of 360 million gallons per day (mgd) if both the Sacramento River Water Treatment Plant (WTP) and the Fairborn WTP are at maximum production.[12] The City of Sacramento has nine above ground storage reservoirs with a total capacity of 27 million gallons (each with a capacity of three million gallons)[13] and one underground reservoir with a capacity of 15 million gallons.[14] Therefore, total water storage capacity is 42 million gallons.

Wastewater

Initially, all combined wastewater is sent to the City's pump stations via underground pipes; the primary station is Sump 2, located on the east side of the Sacramento River. Sumps 1 and 2 direct combined

12 City of Sacramento, *The Towers on Capitol Mall Environmental Impact Report*, May 2005, page 5.5-19.

13 Michelle Carrey, City of Sacramento Utilities Department, personal communication, March 30, 2004 as referenced in City of Sacramento, *The Towers on Capitol Mall Environmental Impact Report*, May 2005, page 5.5-19.

14 Kathy Mullen, City of Sacramento Utilities Department, personal communication, March 25, 2004 as referenced in City of Sacramento, *The Towers on Capitol Mall Environmental Impact Report*, May 2005, page 5.5-19.

wastewater to the Sacramento Regional Wastewater Treatment Plant (SRWTP), the Combined Wastewater Treatment Plant (CWTP), and Pioneer Reservoir where it receives secondary and primary treatment, respectively, before it is discharged into the Sacramento River. The Sacramento Regional Wastewater Treatment Plant (Plant) is located in Elk Grove. The Plant is capable of processing up to 390 million gallons (mg) of wastewater daily during peak wet weather conditions.[15] The SRWTP currently receives an average 165 mg of wastewater a day.[16] The current dry seasonal-weather capacity of the Plant is approximately 181 mgd, and the Plant is currently processing an average of 151 to 155 mgd. The next incremental expansion is in the planning stages and is expected to increase capacity to 220 gallons per day by the year 2007. The Master Plan prepared for the Plant projects there is adequate capacity to serve new development through the year 2020.

Solid Waste

The City collects all residential solid waste. Commercial waste collection is performed by both City and permitted private haulers. Residential and commercial solid waste collected by the City is transported to the Sacramento Recycling and Transfer Station (8491 Fruitridge Road) and is then transported to Lockwood Landfill, near Sparks, Nevada. Commercial waste collected by private companies is disposed of at a variety of facilities including the Sacramento County Keifer Landfill, the Yolo County Landfill, Forward Landfill, L and D Landfill, Florin Perkins Landfill, and several privately run transfer stations. Private haulers can deliver waste to the landfill of their choice; they typically select the most cost-efficient option.

Chapter 17.72 of the City's Codes addresses recycling and solid waste disposal requirements. Pursuant to Chapter 17.72, a recycling plan must be submitted by the project applicant at the time plans are submitted to the Building Department. The recycling plan must include details regarding the handling and storage of recyclable materials and any plans for the use of recyclable materials during construction and any proposed recycling educational efforts. The project applicant would be required to submit a recycling plan to the City.

Communication Systems

Emergency and weather communication systems for local and state providers are located on the rooftops of many downtown buildings. New buildings taller than 100-feet could affect city and county emergency radio towers. Buildings taller than 180-feet could potentially affect flood control agencies and above 250-feet could affect the radar beam for the National Weather Service.

Sacramento Regional Radio Communications System (SRRCS)
The Sacramento Regional Radio Communications System (SRRCS) is a Sacramento County-owned radio system that is used by Sacramento County (including the Sheriffs Department, Department of Airports, and Department of Public Works), City of Sacramento, City of West Sacramento, , City of Folsom, Sacramento Regional Transit District, and all local fire districts agencies use the SRRCS. Mutual aid assistance is also run over this system.[17]

The SRRCS is a 49 channel dual backbone, multi-site, simulcast system that consists of nine microwave sites.[18] Seven radio repeater sites connect over 7,000 radios countywide, in addition to the City Dispatch Center at 111 Bercut Drive and the County Sheriff Building at 711 G Street. The

15 City of Sacramento, *The Towers on Capitol Mall Environmental Impact Report*, May 2005, page 5.5-11.
16 Sacramento Regional County Sanitation District, *Sacramento Regional Wastewater Treatment Plant,* www.srcsd.com/srwtp.html, accessed May 23, 2006.
17 Eldridge, Kent, Sacramento County Office of Communication and Technology, personal communication, June 16, 2006.
18 Eldridge, Kent, Sacramento County Office of Communication and Technology, personal communication, June 16, 2006.

repeater sites are located at:[19]

- Sacramento County Main Jain – 651 I Street
- Gibson Ranch – near the intersection of Tanwood Road and Kasser Road
- Carpenter Peak – north of Hwy 50, in the City of Folsom
- County Sheriff's Substation – 9250 Bond Road
- Walnut Grove – 14001 River Road
- Freeport Water Tower – 7788 Freeport Boulevard
- Brighton Heights – 7399 San Joaquin Street

The County backbone is 25 channels. The City backbone is 24 channels that serve the City of Sacramento and City of West Sacramento. This microwave system sends radio transmissions to repeater stations where the signal is then retransmitted by the repeater sites throughout the County.[20] The City backbone consists of three simulcast sites located at the County Jail, Freeport Water Tower, and Brighton Heights radio communication sites.

Automated Local Evaluation in Real Time (ALERT)

The Automated Local Evaluation in Real Time (ALERT) system allows the County to predict potential flood locations. Remote stream and rain gauges and stations transmit via radio waves information about weather, rainfall, and stream water levels. There is an antenna located at 700 H Street that receives the data. In 2005, the County installed a repeater on Carpenter Hill off of Highway 50.

State of California Public Safety Microwave Network

The Public Safety Microwave Network is a telecommunications microwave system with over 300 receiver sites in California. The Network serves state, federal and county agencies such as the California Department of Water Resources, Department of Transportation (CalTrans), Department of Forestry and Fire Protection, Department of Parks and Recreation, Department of Fish and Game, Department of Justice, Department of Corrections, California Youth Authority, California Highway Patrol and the Governor's Office of Emergency Services.[21] Additional clients include the Federal Bureau of Investigation, U.S. Coast Guard, and the National Weather Service.[22]

The Network has a major transmitter at the Sacramento Microwave Center located at 1416 9th Street (on the California Resources Agency building). There are also receiver sties at the Interstate 5 and Richards Boulevard intersection and on the CalTrans building downtown. The system operates on ling-of-sight, meaning that there needs to be an unobstructed pathway between receiver sites for the system to operate correctly.

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19 Eldridge, Kent, Sacramento County Office of Communication and Technology, personal communication, June 16, 2006.

20 Eldridge, Kent, Sacramento County Office of Communication and Technology, personal communication, June 16, 2006.

21 California Department of General Services webpage, Office of Public Safety Radio Services, Telecommunications Department, http://www.td.dgs.ca.gov/Services/OPSRS/default.htm, accessed June 28, 2006.

22 California Department of General Services webpage, Office of Public Safety Radio Services, Telecommunications Department, http://www.td.dgs.ca.gov/Services/OPSRS/default.htm, accessed June 28, 2006.

Standards of Significance

For purposes of this environmental document, an impact is considered significant if the Proposed Project would:

- Result in a detriment to microwave, radar, or radio transmissions;
- Create an increase in water demand of more than 10 million gallons per day;
- Substantially degrade water quality;
- Generate more than 500 tons of solid waste per year; or
- Generate stormwater that would exceed the capacity of the stormwater system.

Answers to Checklist Questions

A) Construction of the proposed project would not interrupt on-street coverage of the SRRCS system.[23] However, the SRRCS likely would not work within the building due to the building materials used (e.g., steel, reflective glass). The Sacramento City Fire Code requires that prior to building occupation, the Department test for radio coverage within the buildings. If the test fails, the building must include a radio antenna to transmit radio signals within the building.

The proposed project would not interfere with the ALERT system because the newly-installed repeater would be able to transmit the radio signal around the building.[24] Therefore, the proposed project would have no impact on the ALERT system.

It is possible that the proposed project could disrupt the line-of-sight requirement for the Public Safety Microwave Network to operate appropriately. Therefore, impacts on the Public Safety Microwave Network are considered potentially significant. Implementation of the following mitigation measure would ensure impacts on the system are considered ***less than significant with mitigation incorporated.***

Mitigation Measure UTIL-1

The project applicant shall install microwave dishes on the proposed project prior to building occupancy. The Public Safety Microwave Network shall be tested prior to building occupancy to ensure that there are no interruptions in service.

B, C) According to the General Plan, sufficient water supply and treatment capacity exists and is planned to exist through Year 2030. It is anticipated that the City of Sacramento would have sufficient water supply and treatment capacity to meet the demand of the proposed project; however, to ensure adequate capacity, a more thorough analysis will be performed in the EIR. In addition, the project is required to prepare a Water Supply Assessment to ensure adequate water is available to serve the project. Impacts are considered ***potentially significant*** and will be addressed further in the EIR.

D,E) Stormwater runoff from the project site would enter Sump 52, which flows to the Sacramento River. Wastewater from the proposed project would flow to the City's combined stormwater runoff and sanitary sewer system (CSS). During heavy storms, flows to the CSS can

23 Eldridge, Kent, Sacramento County Office of Communication and Technology, personal communication, June 16, 2006.

24 Johnson, Paul, Sacramento County Department of Water Resources, personal communication, June 28, 2006.

exceed its capacity, causing the system to overflow onto streets (outflows) or allow untreated combined wastewater to be discharged to the Sacramento River (combined sewer overflows, or CSOs). Local flooding can occur during moderate and large storms when the CSS is full and stormwater runoff cannot enter the collection system. Much of the flooding is due to undersized laterals and collectors, and is widespread in the CSS service area. The City has identified and implemented several projects to rehabilitate and improve the CSS system to remedy these problems, but has not completed the improvements to date. Because the proposed project could increase flows to the CSS by generating a significantly higher stream of wastewater than is currently produced by on-site uses, it could exceed the CSS capacity and exacerbate backflow and flooding conditions in the City. Thus, the proposed project would result in a ***significant*** impact that will be addressed in the Public Services and Utilities section of the EIR.

F) The proposed project would generate solid waste that could exceed the City's threshold of 500 tons of solid water per year. This would be considered a ***potentially significant*** impact and will be discussed in the EIR.

Mitigation Measures

No mitigation is required.

Findings

The proposed project would not result in adverse effects to communication systems. Accordingly, this issue will not be discussed in the EIR. Impacts concerning water supply and treatment capacity, wastewater, and solid waste are potentially significant and will be discussed further in the EIR.

Issues:	Potentially Significant Impact	Less-than-Significant with Mitigation Incorporated	Less-than-Significant Impact
13. AESTHETICS, LIGHT AND GLARE *Would the proposal:* A) Affect a scenic vista or adopted view corridor?	✓		
B) Have a demonstrable negative aesthetic effect?	✓		
C) Create light or glare?	✓		
D) Create shadows on adjacent property?	✓		

Environmental Setting

The area surrounding the proposed project site is currently developed. Views from the proposed project site are typical of a built-up urban environment. The surrounding area is mixed-use, incorporating commercial, office, residential, and retail uses. The majority of buildings in the area are multiple stories.

Standards of Significance

For the purposes of this environmental document impacts associated with shadows and glare would be considered significant if:

- New shadows from development would shade a recognized public gathering place (e.g., park) or place residences/child care centers in complete shade.
- Glare would be cast in such a way as to cause public hazard or annoyance for a sustained period of time.

Answers to Checklist Questions

A) Capitol Mall, adjacent to the project site, is defined in the Sacramento Urban Design Plan as a "Protected View Corridor." The Urban Design Plan goal regarding protected view corridors is to preserve views of landmarks. Because the proposed project would be constructed along Capitol Mall, there is potential for the proposed project to negatively affect the view of the Capitol Building. This impact is considered ***potentially significant*** and this issue will be addressed in the EIR.

B-D) The proposed project could produce light or glare, shadows, or have other demonstrable negative aesthetic effects. Impacts are considered ***potentially significant*** and will be discussed further in the EIR.

Mitigation Measures

No mitigation is required.

Findings

Issues associated with scenic vistas and adopted view corridors are less than significant and will not be addressed in the EIR. Impacts associated with aesthetics, light, glare, and shadows will be addressed further in the EIR.

Issues:	Potentially Significant Impact	Less-than-Significant with Mitigation Incorporated	Less-than-Significant Impact
14. CULTURAL RESOURCES *Would the proposal:* A) Disturb paleontological resources?		✓	
B) Disturb archaeological resources?	✓		
C) Affect historical resources?	✓		
D) Have the potential to cause a physical change which would affect unique ethnic cultural values?	✓		
E) Restrict existing religious or sacred uses within the potential impact area?			✓

Existing Setting

The project site is located in a geographic region that, at the time of European contact, was occupied by the Valley Nisenan. The Nisenan and their ancestors inhabited the American, Yuba, and Bear River drainages for at least 4,500 years before Euroamerican settlers arrived. Major prehistoric archaeological sites in this portion of Sacramento County tend to be situated on elevated ridges or terraces adjacent to creeks or major watercourses.

Spanish exploration of the Sacramento Valley began in the early nineteenth century. John Sutter, a German-born entrepreneur who had been granted Mexican citizenship, arrived at the confluence of the Sacramento and American rivers in 1839, settling in Nisenan territory. The knoll on which Sutter placed his fort was an abandoned Indian mound. Beginning in 1824, under Mexican rule, land in California was divided into large parcels or Mexican land grants, referred to as ranchos. By 1846, eight land grants were claimed in Sacramento County, including New Helvetia, the first settlement in the Sacramento area, granted to John Sutter in 1839.

In 1848, Sutter hired William Warner to conduct a survey, which imposed a grid pattern on the land east of the Sacramento River with east-west streets designated by letters and north-south streets by numbers. This original grid, which survives today, extended east from the Sacramento River (Front Street) to just beyond Sutter's Fort and south from Sutter's Slough (at approximately 6th and I Street) to where Broadway is today. As the "gateway" to the gold fields, mining and the business of supplying miners served as a basis for the city's early economy. The railroad played a role in making Sacramento the principal agricultural processing and transportation center for the Central Valley and drew people to the area.

Standards of Significance

For the purposes of this environmental document cultural resource impacts may be considered significant if the proposed project would result in one or more of the following:

- Cause a substantial change in the significance of a historical or archaeological resource as defined in CEQA Guidelines Section 15064.5; or

- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

Answers to Checklist Questions

A) While the project site has previously been disturbed, construction activities, such as construction of the sub-grade components of the project, may uncover paleontological resources. This would be a potentially significant impact. Implementation of Mitigation Measure Cult-1 would reduce this impact to a less-than-significant level. Therefore, this impact is considered ***less than significant with mitigation incorporated.***

Mitigation Measure Cult-1

Construction contractors involved in earth-moving activities shall be instructed on indicators that subsurface paleontological resources are present and shall be instructed in procedures to follow in the event that resources are encountered and the following measures shall be incorporated into all construction contracts:

(a) In the event any paleontological resources, such as fossils, are uncovered during construction, work within 100 feet of the find shall cease and a qualified paleontologist shall be contacted by the by the project proponent to determine if the resource is significant. If the find is determined to be of significance, an excavation plan shall be created and resources shall be donated to an appropriate cultural center. All work products and plans shall be reviewed and approved by the City prior to execution.

B-D) Due to the level of prehistoric habitation and historical activity in the vicinity of the project site, it is possible that there could be archeological resources present on the project site. Construction of the proposed project could reveal archeological or cultural resources on the site. In addition, there are several historic buildings located near the project site. The presence of the proposed project could affect the context of the surrounding historic buildings and areas. Development of the project could result in ***potentially significant impacts***. These issues will be addressed in the EIR.

E) No existing religious or sacred uses exist on the project site. This impact is considered ***less than significant.***

Mitigation Measures

Mitigation Measure CULT-1 is required to reduce potential impacts on paleontological resources to a less-than-significant level.

Findings

The proposed project's impacts to paleontological resources are anticipated to be less than significant with mitigation incorporated. This issue will not be discussed further in the EIR. The proposed project is anticipated to result in a less-than-significant impact to the restriction of existing religious or sacred

uses within the potential impact area. This issue will not be discussed further in the EIR. However, impacts to historical and archaeological resources and unique ethnic cultural values are potentially significant and will be addressed further in the EIR.

Issues:	Potentially Significant Impact	Less-than-Significant with Mitigation Incorporated	Less-than-Significant Impact
15. RECREATION *Would the proposal:* A) Increase the demand for neighborhood or regional parks or other recreational facilities?			✓
B) Affect existing recreational opportunities?			✓

Existing Setting

The project site is located within the City's Central City Planning Area, which contains 20 parks with a total of over 83 developed acres and approximately 185 parks city-wide. The closest park to the project site is Crocker Park, located three blocks to the west, at 211 O Street.

Standards of Significance

For the purposes of this environmental document recreation impacts would be considered significant if:

- The project created a new demand for additional recreational facilities or affected existing recreational opportunities.

Answers to Checklist Questions

A, B) The project site is located within the City's Central City Planning Area, which contains 20 parks with a total of over 83 developed acres[25] and approximately 185 parks city-wide.[26] In addition, the project proponent would be required to pay in-lieu fees, in accordance with the provisions of the Quimby Act, requiring residential developers to dedicate land or in-lieu funds toward park development. While workers in the project could use some of the park facilities in the vicinity of the project site and possibly other city-wide facilities, the workers generated by the proposed project would not increase the use of the parks in the project vicinity such that there would be substantial physical deterioration of the facility or that additional or expanded recreation facilities would be required. Therefore, this would be considered a ***less-than-significant impact*** and this issue will not be addressed in the EIR.

Mitigation Measures

No mitigation is required.

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25 City of Sacramento website, Central City Parks table, http://www.cityofsacramento.org/parksandrecreation/parks/central.htm, accessed March 1, 2005.

26 City of Sacramento website, Alpha List of park Sites, http://www.cityofsacramento.org/parksandrecreation/parks/alphalist.htm, accessed March 1, 2005.

Findings

Impacts to recreation would be less than significant and will not be discussed further in the EIR.

Issues:	Potentially Significant Impact	Less-than-Significant with Mitigation Incorporated	Less-than-Significant Impact
16. MANDATORY FINDINGS OF SIGNIFICANCE A. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	✓		
B. Does the project have the potential to achieve short-term, to the disadvantage of long-term environmental goals?			✓
C. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	✓		
D. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? Disturb paleontological resources?	✓		

Mandatory Findings of Significance Discussion

A) The project would be constructed in an urban area with little potential for occurrence of wildlife. Trees on the site could be habitat for migratory birds. With implementation of the mitigation measures identified for the proposed project, no special-status species would be affected by the construction or operation of the project. Therefore, the potential for the project to degrade the quality of the environment to the extent that wildlife would be negatively affected would be less than significant. As discussed in the previous sections, the project site is unlikely to yield historic or prehistoric resources; however, the possibility of unearthing unknown or buried resources during grading activities exists. Potential impacts to cultural resources will be further addressed in the EIR. Therefore, this impact is considered ***potentially significant***.

B) The proposed project consists of an office building and incorporated retail and restaurant services. The project would be required to comply with federal, state, and local laws and has

been designed as such. The intent of developing the proposed project is to provide the surrounding community with quality office, retail, and restaurant services. This goal would not include any activities or uses that would achieve short-term, to the disadvantage of long-term, environmental goals; therefore, impacts are considered ***less than significant***.

C) The proposed project would not contribute substantially to cumulative impacts related to population and housing, water resources, biological resources, public services, agricultural resources, energy, mineral resources, hazards, recreation, geology. Because impacts would be offset by compliance with existing regulations, construction specifications, and mitigation measures identified in this Initial Study, impacts associated with these issues would be less than significant and they will not be discussed in the EIR.

Impacts associated with aesthetics, air quality, cultural resources, noise, transportation and circulation, and utilities and service systems are ***potentially significant*** and will be further evaluated in the EIR to determine if potential impacts would be cumulatively considerable.

D) As discussed in the cultural resources section of this document, the project site is unlikely to yield paleontological resources; however, the possibility of unearthing unknown or buried resources during grading activities exists. Impacts associated with aesthetics, air quality, land use, cultural resources, noise, transportation and circulation, and utilities and service systems could result in ***potentially significant*** impacts and will be further evaluated in the EIR to determine if potential impacts would have a substantial adverse effect on human beings.

SECTION III. - ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below potentially would be affected by this project and will be further addressed in the EIR.

___	Land Use and Planning	___	Hazards
___	Population and Housing	✓	Noise
___	Seismicity, Soils, and Geology	___	Public Services
___	Water	✓	Utilities and Service Systems
✓	Air Quality	✓	Aesthetics, Light and Glare
✓	Transportation/Circulation	✓	Cultural Resources
___	Biological Resources	___	Recreation
___	Energy and Mineral Resources	✓	Mandatory Findings of Significance
___	None Identified		

SECTION IV. - DETERMINATION

On the basis of the initial evaluation:

_____ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

_____ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the project-specific mitigation measures described in Section III have been added to the project. A NEGATIVE DECLARATION will be prepared.

✓ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

_____ _____

Signature Date

_____

Printed Name

APPENDIX A. CNDDB QUERY RESULTS

Accipiter cooperii

Cooper's hawk

Element Code: ABNKC12040

Status	NDDB Element Ranks	Other Lists
Federal: None	**Global:** G5	**CDFG Status:** SC
State: None	**State:** S3	

Habitat Associations

General: (NESTING) WOODLAND, CHIEFLY OF OPEN, INTERRUPTED OR MARGINAL TYPE.

Micro: NEST SITES MAINLY IN RIPARIAN GROWTHS OF DECIDUOUS TREES, AS IN CANYON BOTTOMS ON RIVER FLOOD-PLAINS; ALSO, LIVE OAKS.

Occurrence No. 61 **Map Index:** 33435 **EO Index:** 29285

Occ Rank: Fair
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: WALKER, R. 1996 (OBS)

Dates Last Seen
Element: 1996-07-17
Site: 1996-07-17
Record Last Updated: 1996-09-04

Quad Summary: SACRAMENTO EAST (3812154/512C)
County Summary: SACRAMENTO

Lat/Long: 38.60450° / -121.47256°
UTM: Zone-10 N4273995 E633000
Radius: 80 meters
Elevation: 25 ft

Mapping PrecisionSPECIFIC
Symbol Type:POINT

Township: 09N
Range: 05E
Section: 01 **Qtr:** NW
Meridian: M

Location: NATOMAS EAST MAIN DRAINAGE CANAL, SOUTH OF EAST LEVEE ROAD AND 0.2 MILE EAST OF NORTHGATE BLVD, SACRAMENTO.

Ecological: NEST TREE IS A VALLEY OAK; NEST IS 1/3 OF THE WAY DOWN FROM THE CANOPY TOP. HABITAT CONSISTS OF VALLEY OAK/COTTONWOOD RIPARIAN, INCLUDING AN UNDERSTORY OF GRAPES, WILLOWS, BUTTONWILLOW, AND BLACKBERRY; SURROUNDED BY URBAN DEVELOPMENT.

Threat: MAIN THREAT IS HUMAN DISTURBANCE FROM TRANSIENTS/HOMELESS PEOPLE THAT USE THE AREA.

General: 1 ADULT AND 3 YOUNG NEAR FLEDGING ("BRANCHERS") OBSERVED ON 17 JULY 1996.

Owner/Manager: SAC COUNTY-PARKS & REC

Agelaius tricolor

tricolored blackbird

Element Code: ABPBXB0020

Status
Federal: None
State: None

NDDB Element Ranks
Global: G2G3
State: S2

Other Lists
CDFG Status: SC

Habitat Associations
General: (NESTING COLONY) HIGHLY COLONIAL SPECIES, MOST NUMBEROUS IN CENTRAL VALLEY & VICINITY. LARGELY ENDEMIC TO CALIFORNIA.
Micro: REQUIRES OPEN WATER, PROTECTED NESTING SUBSTRATE, & FORAGING AREA WITH INSECT PREY WITHIN A FEW KM OF THE COLONY.

Occurrence No. 162 **Map Index:** 11126 **EO Index:** 24678

Occ Rank: None
Origin: Natural/Native occurrence
Presence: Possibly Extirpated
Trend: Unknown
Main Source: DE HAVEN, R. (OBS)

Dates Last Seen
Element: 197X-XX-XX
Site: 1992-06-25
Record Last Updated: 1992-07-02

Quad Summary: SACRAMENTO WEST (3812155/513D)
County Summary: YOLO

Lat/Long: 38.56407° / -121.56412°
UTM: Zone-10 N4269380 E625097
Radius: 1 mile
Elevation: 10 ft

Mapping PrecisionNON-SPECIFIC
Symbol Type:POINT

Township: 08N
Range: 04E
Section: 5 **Qtr:** XX
Meridian: M

Location: NEAR PORT OF SACRAMENTO, JUST SOUTH OF THE BUSINESS 80/ I-80 JUNCTION, WEST SACRAMENTO.
Ecological: NESTING IN MUSTARD AND THISTLE.
General: OBSERVED BY DE HAVEN BETWEEN 1969 AND 1974. SITE CHECKED BY SCHNEIDER AND BARTLETT IN 1992; NO BIRDS OBSERVED.
Owner/Manager: UNKNOWN

Archoplites interruptus

Sacramento perch

Element Code: AFCQB07010

Status
Federal: None
State: None

NDDB Element Ranks
Global: G3
State: S1

Other Lists
CDFG Status: SC

Habitat Associations
General: HISTORICALLY FOUND IN THE SLOUGHS, SLOW-MOVING RIVERS, AND LAKES OF THE CENTRAL VALLEY.
Micro: PREFER WARM WATER. AQUATIC VEGETATION IS ESSENTAL FOR YOUNG. TOLERATE WIDE RANGE OF PHYSICO-CHEMICAL WATER CONDITIONS.

Occurrence No. 4 **Map Index:** 42795 **EO Index:** 42795

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: ACEITUNO & NICOLA 1976 (LIT)

Dates Last Seen
Element: 1973-XX-XX
Site: 1973-XX-XX

Record Last Updated: 2000-04-19

Quad Summary: SACRAMENTO WEST (3812155/513D)
County Summary: SACRAMENTO

Lat/Long: 38.50841° / -121.53532°
UTM: Zone-10 N4263243 E627705
Area: 53.0 ac
Elevation: 10 ft

Mapping Precision SPECIFIC
Symbol Type: POLYGON

Township: 08N
Range: 04E
Section: 99 **Qtr:** XX
Meridian: X

Location: LAKE GREENHAVEN (AKA BRICKYARD POND), W OF HAVENSIDE DR & N OF GLORIA DR, BETWEEN I-5 & SACRAMENTO RIVER, SACRAMENTO.
Location Detail: PRESENT IN LAKE AS OF 1973, INFORMATION REPORTED AS BEING TAKEN FROM FISH & GAME FILES.
Ecological: PAST FLOODPLAIN LAKE, IN THE GARCIA BEND AREA OF THE SACRAMENTO RIVER.
Threat: INTRODUCED PREDATORS AND COMPETITORS, POOR WATER QUALITY
General: UNKNOWN POPULATION SIZE REPORTED AS STILL EXTANT IN 1973.
Owner/Manager: UNKNOWN

Athene cunicularia

burrowing owl

Element Code: ABNSB10010

Status
Federal: None
State: None

NDDB Element Ranks
Global: G4
State: S2

Other Lists
CDFG Status: SC

Habitat Associations
General: (BURROW SITES) OPEN, DRY ANNUAL OR PERENIAL GRASSLANDS, DESERTS & SCRUBLANDS CHARACTERIZED BY LOW-GROWING VEGETATION.
Micro: SUBTERRANEAN NESTER, DEPENDENT UPON BURROWING MAMMALS, MOST NOTABLY, THE CALIFORNIA GROUND SQUIRREL.

Occurrence No. 59 **Map Index:** 11348 **EO Index:** 25458
Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: VINCENTY, J. 1974 (PERS)

Dates Last Seen
Element: 1974-02-XX
Site: 1974-02-XX
Record Last Updated: 1989-08-10

Quad Summary: SACRAMENTO EAST (3812154/512C)
County Summary: SACRAMENTO

Lat/Long: 38.57712° / -121.46245°
UTM: Zone-10 N4270972 E633931
Radius: 1/5 mile
Elevation: 25 ft

Mapping PrecisionNON-SPECIFIC
Symbol Type:POINT

Township: 08N
Range: 05E
Section: 5 **Qtr:** XX
Meridian: M

Location: VICINITY OF MCKINLEY PARK, SW OF CALIFORNIA STATE EXPOSITION, SACRAMENTO.
General: SEVERAL COLONIES OBSERVED IN GROUND BURROWS IN 1974; NESTING WAS SUCCESSFUL.
Owner/Manager: UNKNOWN

Occurrence No. 60 **Map Index:** 11437 **EO Index:** 25460
Occ Rank: None
Origin: Natural/Native occurrence
Presence: Extirpated
Trend: Decreasing
Main Source: VINCENTY, J. 1974 (LIT)

Dates Last Seen
Element: 1974-02-XX
Site: 2000-10-19
Record Last Updated: 2003-05-07

Quad Summary: SACRAMENTO EAST (3812154/512C)
County Summary: SACRAMENTO

Lat/Long: 38.57270° / -121.41573°
UTM: Zone-10 N4270550 E638009
Radius: 1/10 mile
Elevation: 25 ft

Mapping PrecisionNON-SPECIFIC
Symbol Type:POINT

Township: 08N
Range: 05E
Section: 03 **Qtr:** XX
Meridian: M

Location: IMMEDIATELY SW OF THE JUNCTION OF HOWE AVE AND FAIR OAKS BLVD, SACRAMENTO.
Ecological: THE SITE IS NOW COMPLETELY DEVELOPED WITH OFFICE BUILDINGS, LANDSCAPING AND MANICURED LAWNS. THERE IS NO REMAINING HABITAT FOR BURROWING OWLS.
General: SEVERAL COLONIES OBSERVED IN GROUND BURROWS DURING 1974; NESTING WAS SUCCESSFUL.
Owner/Manager: UNKNOWN

Occurrence No. 61 **Map Index:** 11424 **EO Index:** 25459
Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: VINCENTY, J. 1974 (LIT)

Dates Last Seen
Element: 1974-02-XX
Site: 1974-02-XX
Record Last Updated: 2003-05-07

Quad Summary: SACRAMENTO EAST (3812154/512C)
County Summary: SACRAMENTO

Lat/Long: 38.55960° / -121.42387°
UTM: Zone-10 N4269084 E637326
Area: 343.4 ac
Elevation: 20 ft

Mapping PrecisionNON-SPECIFIC
Symbol Type:POLYGON

Township: 08N
Range: 05E
Section: 10 **Qtr:** XX
Meridian: M

Location: SACRAMENTO STATE COLLEGE AND ADJACENT LEVEE AREAS ALONG THE AMERICAN RIVER, SACRAMENTO.
Location Detail: LEVEE BURROWS WERE ON THE WEST SIDE OF THE LEVEE ON THE WEST BANK OF THE AMERICAN RIVER.
General: "LARGE NUMBERS" OBSERVED ALONG THE LEVEE IN LATE 1960'S & EARLY 1970'S. 14 NESTING COLONIES OBSERVED IN GROUND BURROWS ON THE UNIVERSITY IN 1974; MOST NESTING WAS UNSUCCESSFUL.
Owner/Manager: CSU-SACRAMENTO, UNKNOWN

Athene cunicularia

burrowing owl

Element Code: ABNSB10010

Status
Federal: None
State: None

NDDB Element Ranks
Global: G4
State: S2

Other Lists
CDFG Status: SC

Habitat Associations
General: (BURROW SITES) OPEN, DRY ANNUAL OR PERENIAL GRASSLANDS, DESERTS & SCRUBLANDS CHARACTERIZED BY LOW-GROWING VEGETATION.
Micro: SUBTERRANEAN NESTER, DEPENDENT UPON BURROWING MAMMALS, MOST NOTABLY, THE CALIFORNIA GROUND SQUIRREL.

Occurrence No. 127 **Map Index:** 20688 **EO Index:** 9327
Occ Rank: Good
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: KOFORD, E. 1990 (OBS)

Dates Last Seen
Element: 2003-XX-XX
Site: 2003-XX-XX
Record Last Updated: 2003-12-03

Quad Summary: SACRAMENTO EAST (3812154/512C)
County Summary: SACRAMENTO

Lat/Long: 38.51679° / -121.40308°
UTM: Zone-10 N4264365 E639219
Area: 163.9 ac
Elevation: 40 ft

Mapping PrecisionNON-SPECIFIC
Symbol Type:POLYGON

Township: 08N
Range: 05E
Section: 26 **Qtr:** XX
Meridian: M

Location: VICINITY OF THE B. T. COLLINS USAR CENTER, JUST SE OF THE JUNCTION OF FRUITRIDGE ROAD AND POWER INN ROAD, SACRAMENTO
Location Detail: MOST BURROWS ARE LOCATED ALONG BERMS EDGING THE PERIPHERY OF THE ARMY DEPOT.
Ecological: HABITAT CONSISTS OF ARTIFICIAL BERMS AND LEVEES PLANTED IN INTRODUCED GRASSLAND.
Threat: THREATENED BY POTENTIAL CLOSURE OF ARMY DEPOT AND CONVERSION TO DEVELOPMENT.
General: 1990: AT LEAST 6 NESTING BURROWS SCATTERED OVER THIS SITE, WITH AT LEAST 14 INDIVIDUAL BIRDS PRESENT. 4 ADULTS OBSERVED AT A BURROW SITE ON 7 MAR 2003. 11 ACTIVE BURROWS OBSERVED DURING A 2003 STUDY. BOTH ADULTS AND JUVENILES OBSERVED.
Owner/Manager: PVT, DOD-SACRAMENTO ARMY DEPOT

Occurrence No. 467 **Map Index:** 48312 **EO Index:** 48312
Occ Rank: Fair
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: STACKHOUSE, E. 2002 (OBS)

Dates Last Seen
Element: 2002-06-28
Site: 2002-06-28
Record Last Updated: 2002-07-18

Quad Summary: SACRAMENTO EAST (3812154/512C)
County Summary: SACRAMENTO

Lat/Long: 38.51921° / -121.49841°
UTM: Zone-10 N4264493 E630903
Radius: 80 meters
Elevation: 15 ft

Mapping PrecisionSPECIFIC
Symbol Type:POINT

Township: 08N
Range: 04E
Section: 25 **Qtr:** NW
Meridian: M

Location: SACRAMENTO; NORTHWEST CORNER OF SACRAMENTO EXECUTIVE AIRPORT.
Location Detail: 60 FT NORTH OF CDF&G HANGER.
Ecological: HABITAT CONSISTS OF FIELD WITH AVENA FATUA, LOLIUM MULTIFLORUM AND YELLOW STAR THISTLE. SUBSTRATE: SAN JOAQUIN SILT LOAM. 0% SLOPE. SURROUNDING LAND CONSISTS OF AN AIRPORT.
Threat: FREQUENTLY MOWED FIELD. PROPOSED FOR DEVELOPMENT IN 2002.
General: 5 ADULTS OBSERVED USING AREA FOR BREEDING ON 28 JUN 2002.
Owner/Manager: SAC COUNTY, CITY OF SACRAMENTO

Athene cunicularia

burrowing owl

Element Code: ABNSB10010

Status
Federal: None
State: None

NDDB Element Ranks
Global: G4
State: S2

Other Lists
CDFG Status: SC

Habitat Associations
General: (BURROW SITES) OPEN, DRY ANNUAL OR PERENIAL GRASSLANDS, DESERTS & SCRUBLANDS CHARACTERIZED BY LOW-GROWING VEGETATION.
Micro: SUBTERRANEAN NESTER, DEPENDENT UPON BURROWING MAMMALS, MOST NOTABLY, THE CALIFORNIA GROUND SQUIRREL.

Occurrence No. 488 **Map Index:** 48664 **EO Index:** 48664
Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: VICENTY, J. 1974 (LIT)

Dates Last Seen
Element: 1974-02-XX
Site: 1974-02-XX
Record Last Updated: 2003-05-07

Quad Summary: SACRAMENTO EAST (3812154/512C)
County Summary: SACRAMENTO

Lat/Long: 38.57733° / -121.43523°
UTM: Zone-10 N4271035 E636302
Area: 25.6 ac
Elevation: 25 ft

Mapping PrecisionNON-SPECIFIC
Symbol Type:POLYGON

Township: 08N
Range: 05E
Section: 04 **Qtr:** XX
Meridian: M

Location: VICINITY OF ELVAS AND 51ST STREET, SACRAMENTO.
General: 2 BURROWS OBSERVED IN AREA DURING 1974 NEST SURVEY.
Owner/Manager: UNKNOWN

Occurrence No. 525 **Map Index:** 49112 **EO Index:** 49112
Occ Rank: None
Origin: Natural/Native occurrence
Presence: Possibly Extirpated
Trend: Unknown
Main Source: BAXTER, R. 1997 (PERS COM)

Dates Last Seen
Element: 1997-03-06
Site: 1997-03-06
Record Last Updated: 2002-10-23

Quad Summary: SACRAMENTO WEST (3812155/513D)
County Summary: YOLO

Lat/Long: 38.55183° / -121.58357°
UTM: Zone-10 N4267995 E623423
Radius: 1/10 mile
Elevation: 10 ft

Mapping PrecisionNON-SPECIFIC
Symbol Type:POINT

Township: 08N
Range: 04E
Section: 07 **Qtr:** SW
Meridian: M

Location: ADJACENT TO THE DEEP WATER SHIP CHANNEL, 0.9 MILE SE OF GREENS LAKE, EAST SIDE OF YOLO BYPASS
Location Detail: BURROW WAS LOCATED 170' FEET SOUTH OF A LONE POWER POLE CONTAINING A "POSTED NO TRESPASSING" SIGN.
Ecological: HABITAT CONSISTS OF A SMALL BENCH ON THE LAND (EAST) SIDE OF SLOPE OF THE LEVEE; LEVEE SLOPE WAS VEGETATED BY ANNUAL GRASSES AND WEEDS AND ALSO SUPPORTED GROUND SQUIRRELS.
Threat: THREATENED BY ROAD/LEVEE MAINTENANCE ACTIVITIES.
General: BURROWING OWL OBSERVED AT ITS BURROW ON 4 AND 6 MAR 1997; OWL WAS NOT OBSERVED ON A 12 MAR 1997 REVISIT, AND GRADING ACTIVITIES MAY HAVE CAUSED ABANDONMENT.
Owner/Manager: RECLAMATION DISTRICT 900

Occurrence No. 569 **Map Index:** 51256 **EO Index:** 51256
Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: MVZ 2003 (MUS)

Dates Last Seen
Element: 1901-05-08
Site: 1901-05-08
Record Last Updated: 2004-02-17

Quad Summary: SACRAMENTO EAST (3812154/512C), RIO LINDA (3812164/512B)
County Summary: SACRAMENTO

Lat/Long: 38.62254° / -121.42968°
UTM: Zone-10 N4276060 E636699
Radius: 1 mile
Elevation: 45 ft

Mapping PrecisionNON-SPECIFIC
Symbol Type:POINT

Township: 09N
Range: 05E
Section: 21 **Qtr:** XX
Meridian: M

Location: HAGGINWOOD. VICINITY OF ARCADE CREEK, BUSINESS I-80 AND HAGGIN OAKS GOLF COURSE.
Location Detail: COLLECTION FROM "HAGGIN'S RANCH, 5 MILES NORTH OF SACRAMENTO". THIS IS NOW THE HAGGINWOOD NEIGHBORHOOD OF SACRAMENTO.
General: MVZ EGG SET #893 COLLECTED 8 MAY 1901 BY R. H. ELLIOTT
Owner/Manager: UNKNOWN

Branchinecta lynchi

vernal pool fairy shrimp

Element Code: ICBRA03030

Status
Federal: Threatened
State: None

NDDB Element Ranks
Global: G3
State: S2S3

Other Lists
CDFG Status:

Habitat Associations
General: ENDEMIC TO THE GRASSLANDS OF THE CENTRAL VALLEY, CENTRAL COAST MTNS, AND SOUTH COAST MTNS, IN ASTATIC RAIN-FILLED POOLS.
Micro: INHABIT SMALL, CLEAR-WATER SANDSTONE-DEPRESSION POOLS AND GRASSED SWALE, EARTH SLUMP, OR BASALT-FLOW DEPRESSION POOLS.

Occurrence No. 32 **Map Index:** 31558 **EO Index:** 6893

Occ Rank: Fair
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: FOSTER WHEELER ENVIRON. CORP. 1995 (LIT)

Dates Last Seen
Element: 1995-02-08
Site: 1995-04-21
Record Last Updated: 1995-08-25

Quad Summary: SACRAMENTO EAST (3812154/512C)
County Summary: SACRAMENTO

Lat/Long: 38.51137° / -121.39697°
UTM: Zone-10 N4263773 E639762
Area: 5.3 ac
Elevation: 40 ft

Mapping PrecisionNON-SPECIFIC
Symbol Type:POLYGON

Township: 08N
Range: 05E
Section: 26 **Qtr:** SE
Meridian: M

Location: FORMER SACRAMENTO ARMY DEPOT. B.T. COLLINS ARMY RESERVE TRAINING CENTER.
Location Detail: FOUND ONLY IN SEASONAL WETLAND IN THE IMMEDIATE VICINITY OF THE RUNNING TRACK.
Ecological: 53 PONDED WATER AREAS SAMPLED EVERY 2 WEEKS BETWEEN 12/19/95 & 4/21/95. AREAS SURVEYED INCLUDED SEASONAL WETLANDS, SHALLOW SWALES, TIRE TRACKS, PONDED AREAS IN RUNNING TRACK & BASEBALL DIAMOND, FIELD & ROADSIDE DRAINAGE DITCHES.
General: BRACHINECTA LYNCHI FOUND IN ONLY 3 OF 53 SITES. FOUND ONLY BETWEEN 1/31/95 & 2/8/95. 2 POOLS HAD POP. EST. <50, 1 POOL >50. ALSO FOUND LINDERIELLA OCCIDENTALIS; 11 ADULTS COLLECTED AND DEPOSITED IN CAS; MORE POOL INFO IN REPORT.
Owner/Manager: DOD-BT COLLINS RESERVE TR CNTR

Occurrence No. 35 **Map Index:** 32443 **EO Index:** 637

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: SUGNET & ASSOC. 1995 (LIT)

Dates Last Seen
Element: 1995-01-05
Site: 1995-01-05
Record Last Updated: 1996-03-11

Quad Summary: CARMICHAEL (3812153/512D), SACRAMENTO EAST (3812154/512C)
County Summary: SACRAMENTO

Lat/Long: 38.50564° / -121.37821°
UTM: Zone-10 N4263165 E641409
Area: 15.7 ac
Elevation: 40 ft

Mapping PrecisionNON-SPECIFIC
Symbol Type:POLYGON

Township: 08N
Range: 05E
Section: 36 **Qtr:** NE
Meridian: M

Location: 1.2 KM ESE OF ELDER CREEK ROAD X FLORIN PERKINS ROAD; SE OF THE FORMER SACRAMENTO ARMY DEPOT.
Location Detail: ELDER CREEK PROPERTY. BRANCHINECTA LYNCHI WERE FOUND IN TWO OF 90 SAMPLED WETLANDS.
Ecological: HARDPAN VERNAL POOL IN ANNUAL GRASSLAND.
Threat: RURAL AGRICULTURE; URBAN DEVELOPMENT OCCURING IN VICINITY.
General: POOL #46: 12/21/1994: >50 ADULTS OBSERVED, 1/5/1995: <50 ADULTS OBSERVED, 3 SPECIMENS COLLECTED AND DEPOSITED IN CAS; POOL #51: 12/21/94: >50 ADULTS OBSERVED, 1/5/95: >50 ADULTS OBSERVED.
Owner/Manager: PVT-PIPE TRADES TRUST FUND

Branchinecta lynchi

vernal pool fairy shrimp

Element Code: ICBRA03030

Status
Federal: Threatened
State: None

NDDB Element Ranks
Global: G3
State: S2S3

Other Lists
CDFG Status:

Habitat Associations
General: ENDEMIC TO THE GRASSLANDS OF THE CENTRAL VALLEY, CENTRAL COAST MTNS, AND SOUTH COAST MTNS, IN ASTATIC RAIN-FILLED POOLS.
Micro: INHABIT SMALL, CLEAR-WATER SANDSTONE-DEPRESSION POOLS AND GRASSED SWALE, EARTH SLUMP, OR BASALT-FLOW DEPRESSION POOLS.

Occurrence No. 122 **Map Index:** 33380 **EO Index:** 28755
Occ Rank: Poor
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: MARTIN, D. 1996 (OBS)

Dates Last Seen
Element: 1996-03-10
Site: 1996-03-10
Record Last Updated: 1996-08-05

Quad Summary: SACRAMENTO EAST (3812154/512C)
County Summary: SACRAMENTO

Lat/Long: 38.53209° / -121.39920°
UTM: Zone-10 N4266068 E639528
Area: 6.3 ac
Elevation: 40 ft

Mapping PrecisionSPECIFIC
Symbol Type:POLYGON

Township: 08N
Range: 05E
Section: 23 **Qtr:** XX
Meridian: M

Location: ALONG THE CENTRAL CALIFORNIA TRACTION COMPANY (RAILROAD) RIGHT-OF-WAY, AT THE NORTH END OF 83RD STREET, SACRAMENTO.
Location Detail: LOCATED IN A SERIES OF PONDED DEPRESSIONS ALONG THE RAILROAD RIGHT-OF-WAY. B. LYNCHI FOUND IN 5 OF 27 SAMPLED DEPRESSIONS.
Ecological: HABITAT CONSISTS OF PONDED DEPRESSIONS; OTHER RARE SPECIES FOUND INCLUDE BRANCHINECTA MESOVALLENSIS (UNDESCRIBED) AND LINDERIELLA OCCIDENTALIS.
Threat: CONSTANT DISTURBANCE BY RAILROAD TRUCKS & OTHERS DRIVING THROUGH POOLED AREAS. ALSO TIRES & DEBRIS IN POOLED AREAS.
General: >50 INDIVIDUALS OBSERVED IN FIVE OF THE DEPRESSIONS DURING SURVEYS CONDUCTED FROM 6 FEBRUARY TO 10 MARCH 1996.
Owner/Manager: PVT

Occurrence No. 131 **Map Index:** 34791 **EO Index:** 12989
Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: KOFORD, E. 1992 (PERS)

Dates Last Seen
Element: 1992-04-03
Site: 1992-04-03
Record Last Updated: 1996-08-05

Quad Summary: SACRAMENTO EAST (3812154/512C)
County Summary: SACRAMENTO

Lat/Long: 38.51058° / -121.40219°
UTM: Zone-10 N4263677 E639309
Radius: 80 meters
Elevation: 40 ft

Mapping PrecisionSPECIFIC
Symbol Type:POINT

Township: 08N
Range: 05E
Section: 26 **Qtr:** SW
Meridian: M

Location: RAILROAD DITCH AT 47TH AVENUE (ELDER CREEK RD) AND SPTRR, NEAR POWER INN ROAD; NEAR SW CORNER OF SACRAMENTO ARMY DEPOT.
Location Detail: SPTRR IS SOUTHERN PACIFIC TRACTION RR, WHICH RUNS SE FROM CORNER OF 65TH ST & HWY 50.
Ecological: RAILROAD DITCH.
General: KOFORD OBSERVED B. LYNCHI IN DITCH DURING SURVEY IN SPRING OF 1992; LINDERIELLA OCCIDENTALIS AND LEPIDURUS PACKARDI ALSO OBSERVED.
Owner/Manager: PVT-SPRR

Branchinecta lynchi

vernal pool fairy shrimp

Element Code: ICBRA03030

Status
Federal: Threatened
State: None

NDDB Element Ranks
Global: G3
State: S2S3

Other Lists
CDFG Status:

Habitat Associations
General: ENDEMIC TO THE GRASSLANDS OF THE CENTRAL VALLEY, CENTRAL COAST MTNS, AND SOUTH COAST MTNS, IN ASTATIC RAIN-FILLED POOLS.
Micro: INHABIT SMALL, CLEAR-WATER SANDSTONE-DEPRESSION POOLS AND GRASSED SWALE, EARTH SLUMP, OR BASALT-FLOW DEPRESSION POOLS.

Occurrence No. 166 **Map Index:** 33692 **EO Index:** 30609

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: SUGNET & ASSOC. 1993 (PERS)

Dates Last Seen
Element: 1992-04-03
Site: 1992-04-03
Record Last Updated: 1998-08-10

Quad Summary: FLORIN (3812144/496B), SACRAMENTO EAST (3812154/512C)
County Summary: SACRAMENTO

Lat/Long: 38.51048° / -121.39984°
UTM: Zone-10 N4263669 E639514
Area: 1,513.2 ac
Elevation: 35 ft

Mapping PrecisionSPECIFIC
Symbol Type:POLYGON

Township: 08N
Range: 05E
Section: 35 **Qtr:** XX
Meridian: M

Location: SOUTH OF FRUITRIDGE RD, NORTH OF FLORIN RD, EAST OF POWER INN RD, & WEST OF FLORIN PERKINS RD.
Location Detail: ROADSIDE DITCHES LOCATED SOMEWHERE IN SECTIONS 26 AND 35.
Ecological: MOST OF SECTION 26 IS URBANIZED.
General: A MANMADE ROADSIDE DITCH IN SECTION 35 CONTAINED B. LYNCHI AND LEPIDURUS PACKARDI.
Owner/Manager: UNKNOWN

Buteo swainsoni

Swainson's hawk

Element Code: ABNKC19070

Status
Federal: None
State: Threatened

NDDB Element Ranks
Global: G5
State: S2

Other Lists
CDFG Status:

Habitat Associations
General: (NESTING) BREEDS IN STANDS WITH FEW TREES IN JUNIPER-SAGE FLATS, RIPARIAN AREAS AND IN OAK SAVANNAH.
Micro: REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Occurrence No. 12 **Map Index:** 11220 **EO Index:** 7542
Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Stable
Main Source: DEPT OF FISH & GAME 1984 (PERS)

Dates Last Seen
Element: 1993-07-15
Site: 1993-07-15
Record Last Updated: 1993-09-08

Quad Summary: SACRAMENTO WEST (3812155/513D)
County Summary: SACRAMENTO

Lat/Long: 38.52605° / -121.52746°
UTM: Zone-10 N4265211 E628359
Radius: 80 meters
Elevation: 10 ft

Mapping PrecisionSPECIFIC
Symbol Type:POINT

Township: 08N
Range: 04E
Section: 22 **Qtr:** SE
Meridian: M

Location: SACRAMENTO RIVER, RM-54.20(L), ON THE SOUTH EDGE OF CHICORY BEND, WEST OF SACRAMENTO.

Ecological: NEST TREE IS A MEDIUM-SIZED COTTONWOOD, LOCATED ABOUT 60 FEET FROM THE RIVER; SURROUNDING FORAGE CONSISTS OF WHEAT FIELDS AND FALLOW FIELDS.

General: DFG SWHA #SA009. ACTIVE NEST SITE, 1979-91 (EXCEPT POSSIBLY IN 1980); 2 YOUNG FLEDGED IN 1979, 2 YOUNG FLEDGED IN 1981, 1 YOUNG FLEDGED IN 1984, AND 1 YOUNG FLEDGED IN 1988, 2 YOUNG PRODUCED IN 1993.

Owner/Manager: UNKNOWN

Occurrence No. 136 **Map Index:** 11217 **EO Index:** 27162
Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: DEPT OF FISH & GAME 1984 (PERS)

Dates Last Seen
Element: 1993-07-15
Site: 1993-07-15
Record Last Updated: 1998-11-10

Quad Summary: SACRAMENTO WEST (3812155/513D)
County Summary: YOLO

Lat/Long: 38.60358° / -121.53071°
UTM: Zone-10 N4273810 E627938
Radius: 80 meters
Elevation: 25 ft

Mapping PrecisionSPECIFIC
Symbol Type:POINT

Township: 09N
Range: 04E
Section: 27 **Qtr:** SW
Meridian: X

Location: SACRAMENTO RIVER, RM-61.5(R), WEST OF DISCOVERY PARK, SACRAMENTO

Ecological: NEST TREE IS A MEDIUM-SIZED COTTONWOOD, LOCATED 30 FEET FROM THE RIVER; SURROUNDING FORAGING HABITAT CONSISTS OF GRASSY/WEEDY FIELDS.

General: DFG SWHA #YO043. ONE HAWK OBSERVED SOARING IN 1983. NEST SITE DISCOVERED IN 1984, AND HAS BEEN ACTIVE EVERY YEAR (EXCEPT 1988) SINCE, SUCCESSFULLY FLEDGING 1-2 YOUNG EVERY YEAR EXCEPT 1991. 1992 ACTIVITY UNKNOWN; 1993, 1+ YOUNG PRODUCED.

Owner/Manager: PVT

Occurrence No. 196 **Map Index:** 11150 **EO Index:** 27102
Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: DEPT OF FISH & GAME 1984 (PERS)

Dates Last Seen
Element: 1991-XX-XX
Site: 1991-XX-XX
Record Last Updated: 1993-04-13

Quad Summary: SACRAMENTO WEST (3812155/513D)
County Summary: SACRAMENTO, YOLO

Lat/Long: 38.61295° / -121.55718°
UTM: Zone-10 N4274813 E625616
Radius: 1/5 mile
Elevation: 20 ft

Mapping PrecisionNON-SPECIFIC
Symbol Type:POINT

Township: 09N
Range: 04E
Section: 20 **Qtr:** SW
Meridian: M

Location: SACRAMENTO RIVER, RM-63.6(R), 1 MILE NW OF I-80, SACRAMENTO.

Ecological: NEST TREE IS A COTTONWOOD, LOCATED WITHIN GOOD RIPARIAN VEGETATION; SURROUNDING FORAGING HABITAT CONSISTS OF AGRICULTURAL FIELDS, PLANTED MAINLY IN TOMATOES.

General: DFG SWHA #SA032. 2 ADULTS AND NEST FOUND IN 1983. NO HAWKS OBSERVED IN 1984 OR 1986; 2 OBSERVED SOARING IN 1985. IN 1987 AND 1991, TWO HAWKS WERE OBSERVED NESTING; NESTING SUCCESS UNKNOWN.

Owner/Manager: PVT

Buteo swainsoni

Swainson's hawk

Element Code: ABNKC19070

Status
Federal: None
State: Threatened

NDDB Element Ranks
Global: G5
State: S2

Other Lists
CDFG Status:

Habitat Associations
General: (NESTING) BREEDS IN STANDS WITH FEW TREES IN JUNIPER-SAGE FLATS, RIPARIAN AREAS AND IN OAK SAVANNAH.
Micro: REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Occurrence No. 287 **Map Index:** 11256 **EO Index:** 27027

Occ Rank: Fair
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: DEPT. OF FISH & GAME 1986 (LIT)

Dates Last Seen
Element: 1991-XX-XX
Site: 1991-XX-XX
Record Last Updated: 1998-11-10

Quad Summary: SACRAMENTO WEST (3812155/513D)
County Summary: SACRAMENTO

Lat/Long: 38.60226° / -121.51233°
UTM: Zone-10 N4273690 E629541
Radius: 80 meters
Elevation: 20 ft

Mapping PrecisionSPECIFIC
Symbol Type:POINT

Township: 09N
Range: 04E
Section: 26 **Qtr:** SE
Meridian: X

Location: SACRAMENTO RIVER, RM-60.5(L), JUST UPSTREAM FROM DISCOVERY PARK, SACRAMENTO.

Ecological: NEST TREE IS A MEDIUM-SIZED COTTONWOOD, 40 FEET FROM THE RIVER; SURROUNDING FORAGING HABITAT CONSISTS OF GRASSY, WEEDY FIELDS.

Threat: POSSIBLE THREAT FROM DISTURBANCE ACROSS THE RIVER FROM MAJOR LAND DEVELOPMENT/CONSTRUCTION.

General: DFG SWHA #SA016. NEST WITH TWO YOUNG FOUND ON 19 JUNE 1981. BIRDS WERE OBSERVED SOARING 1983-85. IN 1986, ONE YOUNG WAS FLEDGED. IN 1990, TWO ADULTS NESTED, FLEDGING TWO YOUNG. IN 1991, ONE YOUNG WAS FLEDGED

Owner/Manager: CITY OF SACRAMENTO

Occurrence No. 326 **Map Index:** 21079 **EO Index:** 9026

Occ Rank: Good
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: WILKINSON, C. 1990 (OBS)

Dates Last Seen
Element: 1991-XX-XX
Site: 1993-XX-XX
Record Last Updated: 1999-10-25

Quad Summary: SACRAMENTO WEST (3812155/513D)
County Summary: SACRAMENTO

Lat/Long: 38.62265° / -121.56098°
UTM: Zone-10 N4275885 E625269
Radius: 80 meters
Elevation: 30 ft

Mapping PrecisionSPECIFIC
Symbol Type:POINT

Township: 09N
Range: 04E
Section: 20 **Qtr:** NE
Meridian: M

Location: SACRAMENTO RIVER, RM-64.5(L), 2.5 MILES WEST OF THE I-5/I-80 JUNCTION, SACRAMENTO.

Ecological: NEST TREE IS A TALL COTTONWOOD, LOCATED 20 FEET FROM THE RIVER IN RIPARIAN; SURROUNDING FORAGING HABITAT CONSISTS OF AGRICULTURAL FIELDS.

Threat: POTENTIAL THREAT FROM THE SACRAMENTO URBAN LEVEE RECONSTRUCTION PROJECT.

General: DFG SWHA #SA066. 2 ADULTS OBSERVED NESTING IN 1990; NO YOUNG FLEDGED. IN 1991, 2 ADULTS NESTED, FLEDGING 2 YOUNG. NO BIRDS OBSERVED IN 1993.

Owner/Manager: UNKNOWN

Buteo swainsoni

Swainson's hawk

Element Code: ABNKC19070

Status
Federal: None
State: Threatened

NDDB Element Ranks
Global: G5
State: S2

Other Lists
CDFG Status:

Habitat Associations
General: (NESTING) BREEDS IN STANDS WITH FEW TREES IN JUNIPER-SAGE FLATS, RIPARIAN AREAS AND IN OAK SAVANNAH.
Micro: REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Occurrence No. 498 **Map Index:** 23024 **EO Index:** 27192

Occ Rank: Good
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: BRADBURY, M. 2001 (OBS)

Dates Last Seen
Element: 2001-06-22
Site: 2001-06-22
Record Last Updated: 2003-04-10

Quad Summary: SACRAMENTO WEST (3812155/513D)
County Summary: YOLO

Lat/Long: 38.58066° / -121.57082°
UTM: Zone-10 N4271212 E624484
Radius: 80 meters
Elevation: 10 ft

Mapping PrecisionSPECIFIC
Symbol Type:POINT

Township: 09N
Range: 04E
Section: 32 **Qtr:** XX
Meridian: M

Location: 0.4 MILE NORTH OF I-80, 0.5 MILE NW OF THE I-80/HIGHWAY 50 JUNCTION, WEST SACRAMENTO

Location Detail: NEST TREE IS LOCATED ALONG THE SOUTH SIDE OF THE UNION PACIFIC RR TRACKS.

Ecological: NEST TREE IS AN 85' COTTONWOOD, SURROUNDED BY WELL-DEVELOPED RIPARIAN HABITAT AROUND THE RAILROAD TRACKS. MANY LARGE, POTENTIAL NEST TREES ARE FOUND IN THE VICINITY.

General: DFG SWHA #YO160. ONE ADULT OBSERVED SOARING NEAR NEST SITE ON 7 APR 1988. 2 ADULTS AND 3 JUVENILES (YOUNG BANDED) OBSERVED AT THE NEST SITE ON 22 JUN 2001.

Owner/Manager: PVT-UNION PACIFIC RR

Occurrence No. 499 **Map Index:** 23018 **EO Index:** 13259

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: MAIER, L. 1990 (OBS)

Dates Last Seen
Element: 1991-XX-XX
Site: 1993-XX-XX
Record Last Updated: 1999-10-19

Quad Summary: SACRAMENTO WEST (3812155/513D)
County Summary: SACRAMENTO, YOLO

Lat/Long: 38.51541° / -121.54157°
UTM: Zone-10 N4264011 E627147
Radius: 1/5 mile
Elevation: 10 ft

Mapping PrecisionNON-SPECIFIC
Symbol Type:POINT

Township: 08N
Range: 04E
Section: 28 **Qtr:** SW
Meridian: M

Location: SACRAMENTO RIVER, RM-52.7(L), BETWEEN CLAY BANK BEND AND OAK HALL BEND, SACRAMENTO

Ecological: NEST TREE IS A SMALL COTTONWOOD, 25 FEET FROM THE RIVER; SURROUNDING FORAGING HABITAT CONSISTS OF AGRICULTURAL FIELDS (ALFALFA AND WHEAT).

Threat: THREATENED BY DEVELOPMENT OF FORAGING HABITAT AND HIGH DISTURBANCE (PEDESTRIAN/BIKE TRAFFIC) IN VICINITY OF NEST SITE.

General: DFG SWHA #SA054. ONE BIRD OBSERVED SOARING AT THIS SITE IN 1986; NO NEST FOUND. TWO ADULTS OBSERVED NESTING IN 1990 AND 1991; NO YOUNG PRODUCED. NEST INACTIVE IN 1993.

Owner/Manager: UNKNOWN

Buteo swainsoni

Swainson's hawk

Element Code: ABNKC19070

Status
Federal: None
State: Threatened

NDDB Element Ranks
Global: G5
State: S2

Other Lists
CDFG Status:

Habitat Associations
General: (NESTING) BREEDS IN STANDS WITH FEW TREES IN JUNIPER-SAGE FLATS, RIPARIAN AREAS AND IN OAK SAVANNAH.
Micro: REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Occurrence No. 500 **Map Index:** 23019 **EO Index:** 20415
Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: LEVY, C. ET AL 1990 (OBS)

Dates Last Seen
Element: 1991-XX-XX
Site: 1991-XX-XX
Record Last Updated: 1993-04-28

Quad Summary: SACRAMENTO WEST (3812155/513D)
County Summary: SACRAMENTO, YOLO

Lat/Long: 38.53454° / -121.52451°
UTM: Zone-10 N4266157 E628601
Radius: 1/5 mile
Elevation: 20 ft

Mapping PrecisionNON-SPECIFIC
Symbol Type:POINT

Township: 08N
Range: 04E
Section: 22 **Qtr:** XX
Meridian: M

Location: SACRAMENTO RIVER, RM-55.05(R), JUST UPSTREAM FROM CHICORY BEND, SACRAMENTO.
Ecological: NEST TREE IS A TALL COTTONWOOD; SURROUNDING FORAGING HABITAT CONSISTS OF ROW CROPS.
Threat: THREATENED BY VARIOUS DISTURBANCES (TREE CLEARING ACTIVITIES, MARINA OPERATIONS)
General: DFG SWHA #YO202. TWO ADULTS FLEDGED TWO YOUNG IN 1990. TWO ADULTS OBSERVED NESTING IN 1991; NESTING SUCCESS UNKNOWN.
Owner/Manager: UNKNOWN

Occurrence No. 501 **Map Index:** 23020 **EO Index:** 20410
Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: LEVY, C. ET AL 1990 (OBS)

Dates Last Seen
Element: 1990-08-08
Site: 1990-08-08
Record Last Updated: 1993-04-28

Quad Summary: SACRAMENTO WEST (3812155/513D)
County Summary: SACRAMENTO, YOLO

Lat/Long: 38.54155° / -121.51335°
UTM: Zone-10 N4266951 E629561
Radius: 1/5 mile
Elevation: 20 ft

Mapping PrecisionNON-SPECIFIC
Symbol Type:POINT

Township: 08N
Range: 04E
Section: 14 **Qtr:** XX
Meridian: M

Location: SACRAMENTO RIVER, RM-55.9(R), NEAR RIVER ROAD AND SOUTH RIVER ROAD INTERSECTION, SACRAMENTO.
Ecological: NEST TREE IS A MEDIUM-SIZED WALNUT TREE; SURROUNDING FORAGING HABITAT CONSISTS OF FALLOW FIELDS, ROW CROPS, AND WHEAT FIELDS.
Threat: THREATENED BY AGRICULTURAL PRACTICES - WHEAT FIELD WAS SPRAYED AND HARVESTED DURING THE HAWK'S REPRODUCTIVE PERIOD.
General: DFG SWHA #YO203. TWO ADULTS FLEDGED ONE JUVENILE DURING 1990.
Owner/Manager: UNKNOWN

Occurrence No. 502 **Map Index:** 23021 **EO Index:** 7541
Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: LEVY, C. & C. WILKINSON 1991 (OBS)

Dates Last Seen
Element: 1993-07-15
Site: 1993-07-15
Record Last Updated: 1993-08-02

Quad Summary: SACRAMENTO WEST (3812155/513D)
County Summary: SACRAMENTO

Lat/Long: 38.54759° / -121.51076°
UTM: Zone-10 N4267625 E629776
Radius: 80 meters
Elevation: 20 ft

Mapping PrecisionSPECIFIC
Symbol Type:POINT

Township: 08N
Range: 04E
Section: 14 **Qtr:** XX
Meridian: M

Location: SACRAMENTO RIVER, RM-56.30(R), 0.5 MILE NORTH OF LINDEN ROAD/SOUTH RIVER ROAD JUNCTION, SACRAMENTO.
Ecological: NEST TREE IS A LONE OAK, 1200 FEET FROM THE RIVER; SURROUNDING FORAGING HABITAT CONSISTS OF FALLOW AGRICULTURAL FIELDS.
General: DFG SWHA #YO204. TWO ADULTS OBSERVED NESTING IN 1991; NESTING SUCCESS UNKNOWN. 2 ADULTS OBSERVED NESTING IN 1993; NESTING SUCCESS UNKNOWN.
Owner/Manager: UNKNOWN

Buteo swainsoni

Swainson's hawk

Element Code: ABNKC19070

Status
Federal: None
State: Threatened

NDDB Element Ranks
Global: G5
State: S2

Other Lists
CDFG Status:

Habitat Associations
General: (NESTING) BREEDS IN STANDS WITH FEW TREES IN JUNIPER-SAGE FLATS, RIPARIAN AREAS AND IN OAK SAVANNAH.
Micro: REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Occurrence No. 503 **Map Index:** 23022 **EO Index:** 15855
Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: MAIER, L. 1990 (OBS)

Dates Last Seen
Element: 1991-XX-XX
Site: 1991-XX-XX
Record Last Updated: 1993-04-28

Quad Summary: SACRAMENTO WEST (3812155/513D)
County Summary: SACRAMENTO, YOLO

Lat/Long: 38.55347° / -121.51514°
UTM: Zone-10 N4268271 E629384
Radius: 1/5 mile
Elevation: 25 ft
Mapping PrecisionNON-SPECIFIC
Symbol Type:POINT
Township: 08N
Range: 04E
Section: 11 **Qtr:** XX
Meridian: M

Location: SACRAMENTO RIVER, RM-56.6(R), 0.5 MILE SOUTH OF MILLER PARK.
Ecological: NEST TREE IS A SMALL OAK, LOCATED 1200 FEET FROM THE RIVER; SURROUNDING FORAGING HABITAT INCLUDES FALLOW AGRICULTURAL FIELDS.
General: DFG SWHA #YO205. TWO ADULTS FLEDGED ONE YOUNG IN 1990. TWO ADULTS FLEDGED ONE YOUNG IN 1991.
Owner/Manager: UNKNOWN

Occurrence No. 504 **Map Index:** 23023 **EO Index:** 14240
Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: MAIER, L. 1990 (OBS)

Dates Last Seen
Element: 1990-08-XX
Site: 1990-08-XX
Record Last Updated: 1993-04-28

Quad Summary: SACRAMENTO WEST (3812155/513D)
County Summary: SACRAMENTO, YOLO

Lat/Long: 38.56391° / -121.52208°
UTM: Zone-10 N4269420 E628760
Radius: 1/5 mile
Elevation: 35 ft
Mapping PrecisionSPECIFIC
Symbol Type:POINT
Township: 08N
Range: 04E
Section: 99 **Qtr:** XX
Meridian: X

Location: SACRAMENTO RIVER, RM-57.6(R), ACROSS FROM MILLER PARK, SACRAMENTO.
Ecological: NEST TREE IS A MEDIUM-SIZED COTTONWOOD; SURROUNDING FORAGING HABITAT CONSISTS OF FALLOW FIELDS AND ROW CROPS.
Threat: THREATENED BY THE HIGH DEGREE OF DISTURBANCE AT THIS SITE.
General: DFG SWHA #YO206. TWO ADULTS FLEDGED ONE YOUNG IN 1990.
Owner/Manager: UNKNOWN

Occurrence No. 595 **Map Index:** 23629 **EO Index:** 20518
Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: ENGLAND, S. 1992 (PERS)

Dates Last Seen
Element: 1992-XX-XX
Site: 1992-XX-XX
Record Last Updated: 1996-01-03

Quad Summary: SACRAMENTO WEST (3812155/513D), TAYLOR MONUMENT (3812165/513A)
County Summary: SACRAMENTO

Lat/Long: 38.62357° / -121.54405°
UTM: Zone-10 N4276010 E626741
Radius: 1/5 mile
Elevation: 10 ft
Mapping PrecisionNON-SPECIFIC
Symbol Type:POINT
Township: 09N
Range: 04E
Section: 21 **Qtr:** NE
Meridian: M

Location: 0.25 MILE WEST OF EL CENTRO ROAD AND 0.25 MILE SOUTH OF SAN JUAN ROAD, 2 MILES NORTH OF BRYTE.
Location Detail: NEST TREE IS LOCATED ALONG A SMALL DRAINAGE CANAL.
Ecological: NEST TREE IS A COTTONWOOD.
General: DFG SWHA #SA. 1 YOUNG FLEDGED IN 1992.
Owner/Manager: UNKNOWN

Buteo swainsoni

Swainson's hawk

Element Code: ABNKC19070

Status
Federal: None
State: Threatened

NDDB Element Ranks
Global: G5
State: S2

Other Lists
CDFG Status:

Habitat Associations
General: (NESTING) BREEDS IN STANDS WITH FEW TREES IN JUNIPER-SAGE FLATS, RIPARIAN AREAS AND IN OAK SAVANNAH.
Micro: REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Occurrence No. 634 **Map Index:** 23875 **EO Index:** 7539
Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: MORENO, L. A. 1993 (OBS)

Dates Last Seen
Element: 1993-07-15
Site: 1993-07-15
Record Last Updated: 1993-08-02

Quad Summary: SACRAMENTO WEST (3812155/513D)
County Summary: YOLO

Lat/Long: 38.51501° / -121.55084°
UTM: Zone-10 N4263954 E626340
Radius: 80 meters
Elevation: 20 ft

Mapping PrecisionSPECIFIC
Symbol Type:POINT

Township: 08N
Range: 04E
Section: 28 **Qtr:** XX
Meridian: M

Location: SACRAMENTO RIVER, RM-52.20(R), AT CLAY BANK BEND, WEST OF SACRAMENTO.
General: DFG SWHA #YO. 2 ADULTS AND AT LEAST 1 JUVENILE PRESENT AT THE NEST SITE.
Owner/Manager: UNKNOWN

Occurrence No. 635 **Map Index:** 23874 **EO Index:** 7540
Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: MORENO, L. A. 1993 (OBS)

Dates Last Seen
Element: 1993-07-15
Site: 1993-07-15
Record Last Updated: 1993-08-02

Quad Summary: SACRAMENTO WEST (3812155/513D)
County Summary: YOLO

Lat/Long: 38.60285° / -121.51936°
UTM: Zone-10 N4273745 E628927
Radius: 80 meters
Elevation: 25 ft

Mapping PrecisionSPECIFIC
Symbol Type:POINT

Township: 09N
Range: 04E
Section: 26 **Qtr:** SW
Meridian: M

Location: SACRAMENTO RIVER, RM-60.90(R), JUST UPSTREAM FROM DISCOVERY PARK, SACRAMENTO.
General: DFG SWHA #YO. 2 ADULTS AND 2 JUVENILES OBSERVED AT NEST SITE.
Owner/Manager: UNKNOWN

Occurrence No. 636 **Map Index:** 23873 **EO Index:** 7537
Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: MORENO, L. A. 1993 (OBS)

Dates Last Seen
Element: 1993-07-15
Site: 1993-07-15
Record Last Updated: 1999-10-25

Quad Summary: SACRAMENTO WEST (3812155/513D)
County Summary: SACRAMENTO

Lat/Long: 38.60202° / -121.54078°
UTM: Zone-10 N4273623 E627064
Radius: 80 meters
Elevation: 25 ft

Mapping PrecisionSPECIFIC
Symbol Type:POINT

Township: 09N
Range: 04E
Section: 99 **Qtr:** SE
Meridian: X

Location: SACRAMENTO RIVER, RM-62.10(L), JUST DOWNSTREAM FROM THE PIONEER BRIDGE (I-80) OVER THE SACRAMENTO RIVER, SACRAMENTO.
General: DFG SWHA #SA???. 2 ADULTS AND 1 JUVENILE OBSERVED AT THE NEST SITE IN 1993.
Owner/Manager: UNKNOWN

Buteo swainsoni

Swainson's hawk

Element Code: ABNKC19070

Status
Federal: None
State: Threatened

NDDB Element Ranks
Global: G5
State: S2

Other Lists
CDFG Status:

Habitat Associations
General: (NESTING) BREEDS IN STANDS WITH FEW TREES IN JUNIPER-SAGE FLATS, RIPARIAN AREAS AND IN OAK SAVANNAH.
Micro: REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Occurrence No. 758 **Map Index:** 41771 **EO Index:** 41771
Occ Rank: Good
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: DEPT. OF FISH & GAME 1994 (PERS)

Dates Last Seen
Element: 2000-05-25
Site: 2000-05-25
Record Last Updated: 2000-06-22

Quad Summary: SACRAMENTO WEST (3812155/513D)
County Summary: SACRAMENTO

Lat/Long: 38.61927° / -121.52435°
UTM: Zone-10 N4275560 E628464
Radius: 80 meters
Elevation: 25 ft

Mapping PrecisionSPECIFIC
Symbol Type:POINT

Township: 09N
Range: 04E
Section: 22 **Qtr:** SE
Meridian: M

Location: WEST EDGE OF NATOMAS MAIN DRAIN, BETWEEN ORCHARD LANE AND I-5, NW OF SACRAMENTO

Location Detail: SITE IS LOCATED WEST OF THE BIKE TRAIL, ~70 METERS SW OF THE END OF GATEWAY OAKS BLVD. 1994 NEST TREE WAS A WILLOW GROWING ON THE EAST EDGE OF THE MAIN DRAIN.

Ecological: NEST TREE IS A BLACK WALNUT; NEST IS OVERGROWN BY GRAPEVINES AND IS BARELY VISIBLE.

General: ACTIVE NEST, WITH 2 JUVENILES AND 2 ADULTS ATTENDING, OBSERVED ON 3 JUN 1994. NEST IN A NEW NEST TREE WITH AN INCUBATING ADULT AND AN ATTENDING ADULT OBSERVED, 25 MAY 2000.

Owner/Manager: UNKNOWN

Occurrence No. 769 **Map Index:** 41792 **EO Index:** 41792
Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: DEPT. OF FISH & GAME 1994 (PERS)

Dates Last Seen
Element: 1993-XX-XX
Site: 1993-XX-XX
Record Last Updated: 1999-10-26

Quad Summary: SACRAMENTO WEST (3812155/513D)
County Summary: SACRAMENTO, YOLO

Lat/Long: 38.53086° / -121.52857°
UTM: Zone-10 N4265744 E628253
Radius: 80 meters
Elevation: 40 ft

Mapping PrecisionSPECIFIC
Symbol Type:POINT

Township: 08N
Range: 04E
Section: 22 **Qtr:** XX
Meridian: M

Location: SACRAMENTO RIVER, RM-54.72(L), AT CHICORY BEND, SOUTH SACRAMENTO

Location Detail: LOCATION HAS VARIED, BETWEEN RM-54.72(L) AND RM-55.10(R).

Ecological: NEST TREE WAS A COTTONWOOD IN 1990.

General: DFG SWHA #SA087. 2 ADULTS/1 JUVENILE AND NEST OBSERVED IN 1990. 3 ADULTS AND NEST OBSERVED IN 1991. 2 ADULTS NESTING IN 1992. 2 ADULTS/2 JUVENILES AND NEST OBSERVED IN 1993.

Owner/Manager: UNKNOWN

Occurrence No. 770 **Map Index:** 41793 **EO Index:** 41793
Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: DEPT. OF FISH & GAME 1994 (PERS)

Dates Last Seen
Element: 1993-XX-XX
Site: 1993-XX-XX
Record Last Updated: 1999-10-26

Quad Summary: SACRAMENTO WEST (3812155/513D)
County Summary: SACRAMENTO

Lat/Long: 38.55020° / -121.51153°
UTM: Zone-10 N4267914 E629704
Radius: 80 meters
Elevation: 40 ft

Mapping PrecisionSPECIFIC
Symbol Type:POINT

Township: 08N
Range: 04E
Section: XX **Qtr:** XX
Meridian: M

Location: SACRAMENTO RIVER, RM-56.60(L), ABOUT 1 MILE SOUTH OF MILLER PARK, SOUTH SACRAMENTO

General: DFG SWHA #SA088. 2 ADULTS PRODUCED 1 YOUNG IN 1992. 2 ADULTS NESTED, BUT THE NESTING ATTEMPT FAILED, IN 1993.

Owner/Manager: UNKNOWN

Buteo swainsoni

Swainson's hawk

Element Code: ABNKC19070

Status
Federal: None
State: Threatened

NDDB Element Ranks
Global: G5
State: S2

Other Lists
CDFG Status:

Habitat Associations
General: (NESTING) BREEDS IN STANDS WITH FEW TREES IN JUNIPER-SAGE FLATS, RIPARIAN AREAS AND IN OAK SAVANNAH.
Micro: REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Occurrence No. 931 **Map Index:** 45347 **EO Index:** 45347
Occ Rank: Fair
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: ZETTLE, B. 2001 (OBS)

Dates Last Seen
Element: 2001-04-20
Site: 2001-04-20
Record Last Updated: 2001-05-15

Quad Summary: SACRAMENTO EAST (3812154/512C)
County Summary: SACRAMENTO

Lat/Long: 38.61009° / -121.49006°
UTM: Zone-10 N4274590 E631466
Radius: 80 meters
Elevation: 20 ft

Mapping PrecisionSPECIFIC
Symbol Type:POINT

Township: 09N
Range: 04E
Section: 25 **Qtr:** XX
Meridian: M

Location: ALONG NATOMAS EAST MAIN DRAIN, JUST NORTH OF THE GARDEN HIGHWAY, 0.5 MILE EAST OF TRUXEL, SACRAMENTO

Ecological: NEST TREE IS A COTTONWOOD, LOCATED WITHIN RIPARIAN ALONG THE NATOMAS EAST MAIN DRAIN; SURROUNDED BY AN URBAN AREA ADJACENT TO THE GARDEN HIGHWAY TO THE NORTH AND A RECREATIONAL AREA ALONG THE JEDIDIAH SMITH BIKE TRAIL TO THE SOUTH.

Threat: POSSIBLE THREAT FROM HUMAN USE OF THE NEARBY RECREATIONAL AREA.

General: ON 20 APR 2001, THE MALE WAS OBSERVED PERCHED IN A COTTONWOOD, 100 FEET EAST OF THE NEST TREE; FEMALE WAS OBSERVED SITTING ON THE NEST.

Owner/Manager: UNKNOWN

Occurrence No. 939 **Map Index:** 45688 **EO Index:** 45688
Occ Rank: Good
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: BRADBURY, M. 1999 (OBS)

Dates Last Seen
Element: 1999-06-04
Site: 1999-06-04
Record Last Updated: 2001-10-09

Quad Summary: SACRAMENTO WEST (3812155/513D)
County Summary: YOLO

Lat/Long: 38.57959° / -121.57485°
UTM: Zone-10 N4271088 E624135
Radius: 1/10 mile
Elevation: 10 ft

Mapping PrecisionNON-SPECIFIC
Symbol Type:POINT

Township: 09N
Range: 04E
Section: 32 **Qtr:** XX
Meridian: M

Location: SOUTH SIDE OF RAILROAD TRACKS, NORTH OF I-80, 0.8 MILE WNW OF I-80/HIGHWAY 50 INTERSECTION, WEST SACRAMENTO

Ecological: HABITAT CONSISTS OF A WELL-DEVELOPED RIPARIAN CORRIDOR ALONG THE RAILROAD TRACKS, WITH THE YOLO BYPASS FLOOD-CONTROL FACILITY AND URBAN DEVELOPMENT SOUTH OF THE SITE.

Threat: THREATENED BY DISTURBANCE DUE TO PROXIMITY TO THE RAILROAD TRACKS AND I-80.

General: 2 ADULTS OBSERVED WITH 3 JUVENILES ON 4 JUN 1999.

Owner/Manager: UNKNOWN

Occurrence No. 940 **Map Index:** 45692 **EO Index:** 45692
Occ Rank: Good
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: BRADBURY, M. 1999 (OBS)

Dates Last Seen
Element: 2001-06-22
Site: 2001-06-22
Record Last Updated: 2003-04-10

Quad Summary: SACRAMENTO WEST (3812155/513D)
County Summary: YOLO

Lat/Long: 38.60024° / -121.56529°
UTM: Zone-10 N4273392 E624932
Radius: 80 meters
Elevation: 35 ft

Mapping PrecisionSPECIFIC
Symbol Type:POINT

Township: 09N
Range: 04E
Section: 29 **Qtr:** XX
Meridian: M

Location: ALONG THE SOUTH SIDE OF THE SACRAMENTO BYPASS, JUST NORTH OF THE CHP ACADEMY, NORTH OF I-80, WEST OF SACRAMENTO

Ecological: NEST TREE IS A LARGE COTTONWOOD ON THE INSIDE LEVEE SLOPE OF THE SACRAMENTO BYPASS; SURROUNDED BY UNDISTURBED GRASSLAND IN THE BYPASS. CHP FACILITY TO THE SOUTH AND AGRICULTURE TO THE NORTH.

Threat: THREATENED BY HUMAN DISTURBANCES.

General: 2 ADULTS OBSERVED NESTING ON 4 JUN 1999; NEST FAILED. 2 ADULTS AND 3 JUVENILES (YOUNG BANDED) OBSERVED AT THE NEST SITE ON 22 JUN 2001.

Owner/Manager: UNKNOWN

Buteo swainsoni

Swainson's hawk

Element Code: ABNKC19070

Status
Federal: None
State: Threatened

NDDB Element Ranks
Global: G5
State: S2

Other Lists
CDFG Status:

Habitat Associations
General: (NESTING) BREEDS IN STANDS WITH FEW TREES IN JUNIPER-SAGE FLATS, RIPARIAN AREAS AND IN OAK SAVANNAH.
Micro: REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Occurrence No. 941 **Map Index:** 45700 **EO Index:** 45700

Occ Rank: Excellent
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: BRADBURY, M. 1999 (OBS)

Dates Last Seen
Element: 1999-06-04
Site: 1999-06-04
Record Last Updated: 2003-04-09

Quad Summary: SACRAMENTO WEST (3812155/513D)
County Summary: YOLO

Lat/Long: 38.59972° / -121.58631°
UTM: Zone-10 N4273306 E623103
Radius: 80 meters
Elevation: 10 ft

Mapping PrecisionSPECIFIC
Symbol Type:POINT

Township: 09N
Range: 04E
Section: 30 **Qtr:** XX
Meridian: M

Location: ALONG THE NORTH LEVEE OF SACRAMENTO BYPASS, NORTH OF I-80 AND JUST EAST OF YOLO BYPASS, WEST OF SACRAMENTO

Ecological: HABITAT CONSISTS OF A WELL-DEVELOPED RIPARIAN CORRIDOR, WITH OAKS, COTTONWOODS, AND WILLOWS; FAIRLY DENSE IN PLACES.

General: 2 ADULTS AND 1 JUVENILE OBSERVED AT THE NEST ON 4 JUN 1999.

Owner/Manager: UNKNOWN

Occurrence No. 942 **Map Index:** 45707 **EO Index:** 45707

Occ Rank: Excellent
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: BRADBURY, M. 1999 (OBS)

Dates Last Seen
Element: 2000-06-20
Site: 2000-06-20
Record Last Updated: 2003-04-10

Quad Summary: SACRAMENTO WEST (3812155/513D)
County Summary: YOLO

Lat/Long: 38.59642° / -121.57868°
UTM: Zone-10 N4272950 E623773
Radius: 80 meters
Elevation: 10 ft

Mapping PrecisionSPECIFIC
Symbol Type:POINT

Township: 09N
Range: 04E
Section: 30 **Qtr:** XX
Meridian: M

Location: SOUTH OF THE SACRAMENTO BYPASS AND WEST OF THE CHP ACADEMY, WEST OF SACRAMENTO

Ecological: NEST TREE IS A LARGE COTTONWOOD; SURROUNDING HABITAT CONSISTS OF A WELL-DEVELOPED WETLAND CORRIDOR, ADJACENT TO A FLOOD CONTROL FACILITY, AND FURTHER SURROUNDED BY AGRICULTURE.

General: 2 ADULTS OBSERVED NESTING ON 4 JUN 1999; NEST FAILED. 2 ADULTS AND 2 JUVENILES OBSERVED AT THE NEST SITE ON 20 JUN 2000.

Owner/Manager: UNKNOWN

Occurrence No. 943 **Map Index:** 45712 **EO Index:** 45712

Occ Rank: Good
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: BRADBURY, M. 1999 (OBS)

Dates Last Seen
Element: 2001-06-22
Site: 2001-06-22
Record Last Updated: 2003-04-10

Quad Summary: SACRAMENTO WEST (3812155/513D)
County Summary: YOLO

Lat/Long: 38.60142° / -121.57917°
UTM: Zone-10 N4273504 E623722
Radius: 80 meters
Elevation: 30 ft

Mapping PrecisionSPECIFIC
Symbol Type:POINT

Township: 09N
Range: 04E
Section: 30 **Qtr:** XX
Meridian: M

Location: ALONG THE NORTH LEVEE OF THE SACRAMENTO BYPASS, 1.25 MILES WEST OF THE SACRAMENTO RIVER, WEST OF SACRAMENTO

Ecological: NEST TREE IS AN EXTREMELY LARGE COTTONWOOD ALONG THE EDGE OF A FLOOD-CONTROL FACILITY; SURROUNDING HABITAT CONSISTS OF A WELL-DEVELOPED RIPARIAN AREA, AGRICULTURE, AND NON-NATIVE GRASSLAND.

Threat: POSSIBLE THREAT FROM HUMAN USE OF SITE FOR FISHING.

General: 2 ADULTS AND 2 JUVENILES OBSERVED AT THE NEST ON 4 JUN 1999. 2 ADULTS AND 3 JUVENILES (YOUNG BANDED) OBSERVED ON 22 JUN 2001.

Owner/Manager: UNKNOWN

Buteo swainsoni

Swainson's hawk

Element Code: ABNKC19070

Status
Federal: None
State: Threatened

NDDB Element Ranks
Global: G5
State: S2

Other Lists
CDFG Status:

Habitat Associations
General: (NESTING) BREEDS IN STANDS WITH FEW TREES IN JUNIPER-SAGE FLATS, RIPARIAN AREAS AND IN OAK SAVANNAH.
Micro: REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Occurrence No. 1080 **Map Index:** 50910 **EO Index:** 50910
Occ Rank: Excellent
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: BRADBURY, M. 1999 (OBS)

Dates Last Seen
Element: 1999-04-26
Site: 1999-04-26
Record Last Updated: 2003-04-09

Quad Summary: SACRAMENTO WEST (3812155/513D)
County Summary: SACRAMENTO

Lat/Long: 38.60359° / -121.55246°
UTM: Zone-10 N4273781 E626044
Radius: 80 meters
Elevation: 35 ft

Mapping PrecisionSPECIFIC
Symbol Type:POINT

Township: 09N
Range: 04E
Section: 28 **Qtr:** SW
Meridian: M

Location: 0.4 MILE UPSTREAM FROM THE I-80 BRIDGE OVER THE SACRAMENTO RIVER, SACRAMENTO
Ecological: HABITAT CONSISTS OF A RIPARIAN CORRIDOR ALONG THE SACRAMENTO RIVER.
Threat: THREATENED BY URBAN DEVELOPMENT.
General: 2 ADULTS OBSERVED NESTING ON 26 APR 1999.
Owner/Manager: UNKNOWN

Occurrence No. 1081 **Map Index:** 50911 **EO Index:** 50911
Occ Rank: Fair
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: BRADBURY, M. 1999 (OBS)

Dates Last Seen
Element: 1999-06-28
Site: 1999-06-28
Record Last Updated: 2003-04-10

Quad Summary: SACRAMENTO WEST (3812155/513D)
County Summary: YOLO

Lat/Long: 38.57113° / -121.56139°
UTM: Zone-10 N4270167 E625322
Radius: 80 meters
Elevation: 10 ft

Mapping PrecisionSPECIFIC
Symbol Type:POINT

Township: 08N
Range: 04E
Section: 05 **Qtr:** XX
Meridian: M

Location: 0.2 MILE SOUTH OF INDUSTRIAL BOULEVARD, ON THE WEST BANK OF THE DEEP WATER CHANNEL TURNING BASIN, WEST SACRAMENTO
Ecological: NEST TREE UNKNOWN; SURROUNDING FORAGING HABITAT CONSISTS OF A SMALL PLOT OF NON-NATIVE GRASSLAND ADJACENT TO INDUSTRIAL CENTERS.
Threat: THREATENED BY COMMERCIAL AND RESIDENTIAL DEVELOPMENT.
General: 2 ADULTS AND 1 JUVENILE OBSERVED AT THE NEST SITE ON 28 JUN 1999.
Owner/Manager: UNKNOWN

Occurrence No. 1082 **Map Index:** 50912 **EO Index:** 50912
Occ Rank: Fair
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: BRADBURY, M. 1999 (OBS)

Dates Last Seen
Element: 1999-06-28
Site: 1999-06-28
Record Last Updated: 2003-04-10

Quad Summary: SACRAMENTO WEST (3812155/513D)
County Summary: YOLO

Lat/Long: 38.55503° / -121.54061°
UTM: Zone-10 N4268409 E627161
Radius: 80 meters
Elevation: 10 ft

Mapping PrecisionSPECIFIC
Symbol Type:POINT

Township: 08N
Range: 04E
Section: 09 **Qtr:** XX
Meridian: M

Location: JUST NW OF THE INTERSECTION OF LAKE WASHINGTON WITH JEFFERSON BOULEVARD, WEST SACRAMENTO
Ecological: NEST TREE IS A LARGE OAK; SURROUNDING FORAGING HABITAT CONSISTS OF NON-NATIVE GRASSLAND.
Threat: THREATENED BY COMMERCIAL AND RESIDENTIAL DEVELOPMENT.
General: 2 ADULTS AND 2 JUVENILES OBSERVED AT THE NEST SITE ON 28 JUN 1999.
Owner/Manager: UNKNOWN

Buteo swainsoni

Swainson's hawk

Element Code: ABNKC19070

Status
Federal: None
State: Threatened

NDDB Element Ranks
Global: G5
State: S2

Other Lists
CDFG Status:

Habitat Associations
General: (NESTING) BREEDS IN STANDS WITH FEW TREES IN JUNIPER-SAGE FLATS, RIPARIAN AREAS AND IN OAK SAVANNAH.
Micro: REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Occurrence No. 1083 **Map Index:** 50913 **EO Index:** 50913
Occ Rank: Good
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: BRADBURY, M. 2001 (OBS)

Dates Last Seen
Element: 2004-06-09
Site: 2004-06-09
Record Last Updated: 2005-11-03

Quad Summary: SACRAMENTO WEST (3812155/513D)
County Summary: SACRAMENTO

Lat/Long: 38.61286° / -121.53381°
UTM: Zone-10 N4274836 E627651
Area: 7.9 ac
Elevation: 15 ft

Mapping PrecisionSPECIFIC
Symbol Type:POLYGON

Township: 09N
Range: 04E
Section: 22 **Qtr:** NW
Meridian: M

Location: SE OF THE I-80/WEST EL CAMINO CLOVERLEAF, SACRAMENTO
Location Detail: 2001 NEST TREE WAS A COTTONWOOD, LOCATED NEAR THE REMAINS OF AN OLD HOMESTEAD. 2004 NEST TREE WAS A (DEAD) VALLEY OAK.
Ecological: NEST TREE WAS A (DEAD) VALLEY OAK; SURROUNDED BY COMMERCIAL/HIGHWAY TO THE NW, AND RESIDENTIAL TO THE NE, SE, AND SW.
Threat: THREATENED BY URBAN DEVELOPMENT; SITE WILL LIKELY BE LOST TO DEVELOPMENT.
General: 2 ADULTS AND 1 JUVENILE (YOUNG BANDED) OBSERVED AT THE NEST SITE ON 23 JUN 2001. 2 PARTIALLY-FEATHERED YOUNG OBSERVED IN THE NEST ON 9 JUN 2004.
Owner/Manager: UNKNOWN

Occurrence No. 1232 **Map Index:** 51852 **EO Index:** 51852
Occ Rank: Good
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: GERSON, R. 2003 (OBS)

Dates Last Seen
Element: 2003-07-16
Site: 2003-07-16
Record Last Updated: 2003-07-28

Quad Summary: SACRAMENTO WEST (3812155/513D)
County Summary: SACRAMENTO

Lat/Long: 38.60709° / -121.52481°
UTM: Zone-10 N4274209 E628445
Radius: 80 meters
Elevation: 25 ft

Mapping PrecisionSPECIFIC
Symbol Type:POINT

Township: 09N
Range: 04E
Section: 27 **Qtr:** NE
Meridian: M

Location: WEST SIDE OF NATOMAS EAST MAIN DRAINAGE CANAL, 0.1 MILE NORTH OF THE GARDEN HIGHWAY, SACRAMENTO
Location Detail: NEST TREE IS LOCATED ~500' NORTH OF PUMP STATION 1B AT THE GARDEN HIGHWAY/NATOMAS MAIN DRAINAGE CANAL JUNCTION.
Ecological: NEST TREE IS A LARGE SYCAMORE, ADJACENT TO A TREE CLUMP; SURROUNDED BY RIPARIAN SYCAMORE AND OAKS.
General: NEST WITH 1 JUVENILE OBSERVED ON 16 JUL 2003.
Owner/Manager: RECLAMATION DISTRICT 1000

Occurrence No. 1343 **Map Index:** 56590 **EO Index:** 56606
Occ Rank: Fair
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: RESSEGUIE, L. J. 2004 (OBS)

Dates Last Seen
Element: 2004-08-03
Site: 2004-08-03
Record Last Updated: 2004-09-01

Quad Summary: SACRAMENTO WEST (3812155/513D)
County Summary: YOLO

Lat/Long: 38.52506° / -121.56269°
UTM: Zone-10 N4265053 E625289
Radius: 80 meters
Elevation: 10 ft

Mapping PrecisionSPECIFIC
Symbol Type:POINT

Township: 08N
Range: 04E
Section: 20 **Qtr:** XX
Meridian: M

Location: EAST SIDE OF JEFFERSON BOULEVARD, 0.1 MILE NORTH OF BEVAN ROAD, 2.5 MILES SOUTH OF THE PORT OF SACRAMENTO
Location Detail: 2004 NEST WAS AT THE 85% HEIGHT, ON THE NORTH SIDE OF A BLACK WALNUT IN THE MIDDLE OF THE SOUTH EDGE OF THE FORMER FARMSTEAD AT 3975 JEFFERSON BOULEVARD.
Ecological: NEST TREE IS A BLACK WALNUT; SURROUNDED BY RUDERAL AND ABANDONED ALFALFA.
Threat: THREATENED BY IMMINENT DEVELOPMENT.
General: NEST SITE MONITORED 6 JUN-3 AUG 2004; NO YOUNG FLEDGED.
Owner/Manager: PVT

Buteo swainsoni

Swainson's hawk

Element Code: ABNKC19070

Status
Federal: None
State: Threatened

NDDB Element Ranks
Global: G5
State: S2

Other Lists
CDFG Status:

Habitat Associations
General: (NESTING) BREEDS IN STANDS WITH FEW TREES IN JUNIPER-SAGE FLATS, RIPARIAN AREAS AND IN OAK SAVANNAH.
Micro: REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Occurrence No. 1541 **Map Index:** 62976 **EO Index:** 63049

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: DEPT OF FISH AND GAME 2005 (PERS)

Dates Last Seen
Element: 2004-04-28
Site: 2004-04-28

Record Last Updated: 2005-10-27

Quad Summary: SACRAMENTO WEST (3812155/513D)
County Summary: YOLO

Lat/Long: 38.54645° / -121.58597°
UTM: Zone-10 N4267396 E623223
Radius: 80 meters
Elevation: 15 ft

Mapping PrecisionSPECIFIC
Symbol Type:POINT

Township: 08N
Range: 04E
Section: 18 **Qtr:** XX
Meridian: M

Location: JUST WEST OF THE DEEP WATER SHIPPING CHANNEL, 1.8 MILES SOUTH OF I-80, WEST SACRAMENTO
Location Detail: NEST TREE WAS LOCATED ALONG THE EAST EDGE OF YOLO BASIN WILDLIFE AREA.
Ecological: NEST TREE WAS A COTTONWOOD; SURROUNDED BY FALLOW/RUDERAL TO THE NE AND SE, AND ROW CROPS TO THE NW AND SW.
General: ACTIVE NEST OBSERVED ON 28 APR 2004.
Owner/Manager: DFG-YOLO BASIN WA

Desmocerus californicus dimorphus

valley elderberry longhorn beetle

Element Code: IICOL48011

Status
Federal: Threatened
State: None

NDDB Element Ranks
Global: G3T2
State: S2

Other Lists
CDFG Status:

Habitat Associations
General: OCCURS ONLY IN THE CENTRAL VALLEY OF CALIFORNIA, IN ASSOCIATION WITH BLUE ELDERBERRY (SAMBUCUS MEXICANA).
Micro: PREFERS TO LAY EGGS IN ELDERBERRRIES 2-8 INCHES IN DIAMETER; SOME PREFERENCE SHOWN FOR "STRESSED" ELDERBERRIES.

Occurrence No. 6 **Map Index:** 11337 **EO Index:** 22744
Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Decreasing
Main Source: EYA, B. 1976 (LIT)

Dates Last Seen
Element: 1984-06-XX
Site: 1984-06-XX
Record Last Updated: 1998-09-08

Quad Summary: SACRAMENTO EAST (3812154/512C)
County Summary: SACRAMENTO

Lat/Long: 38.59819° / -121.46807°
UTM: Zone-10 N4273301 E633403
Area: 27.2 ac
Elevation: 25 ft
Mapping PrecisionSPECIFIC
Symbol Type:POLYGON
Township: 09N
Range: 05E
Section: 30 **Qtr:** SE
Meridian: M

Location: JUST SOUTH OF HIGHWAY 160 AT DEL PASO BLVD, JOHNSON INDUSTRIAL PARK.
Location Detail: SACRAMENTO ZONE - JOHNSON INDUSTRIAL PARK CRITICAL HABITAT.
Ecological: LARVAE ARE BORERS; ADULTS FEED ON FOLIAGE.
General: ADULTS OBSERVED BY ARNOLD IN 1984.
Owner/Manager: PVT

Occurrence No. 7 **Map Index:** 11410 **EO Index:** 22742
Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: ENG, L. 1983 (PERS)

Dates Last Seen
Element: 1984-06-XX
Site: 1984-06-XX
Record Last Updated: 1998-07-15

Quad Summary: SACRAMENTO EAST (3812154/512C)
County Summary: SACRAMENTO

Lat/Long: 38.58184° / -121.42968°
UTM: Zone-10 N4271543 E636777
Radius: 1/5 mile
Elevation: 25 ft
Mapping PrecisionNON-SPECIFIC
Symbol Type:POINT
Township: 08N
Range: 05E
Section: 4 **Qtr:** XX
Meridian: M

Location: SOUTH BANK AMERICAN RIVER WEST OF GLEN HALL PARK (ACROSS FROM CAL EXPO), RIVER MILE 5.
Ecological: HABITAT IS A NARROW RIPARIAN BAND.
General: OBSERVED ON A STEM OF A LARGE (1.0-1.5 CM DIAMETER) ELDERBERRY SHRUB. FEMALE SPECIMEN HELD FOR TWO DAYS; IT ATE ELDERBERRY LEAVES, LAID 10 EGGS, THEN WAS RELEASED AT CAPTURE SITE. ADULTS WERE ALSO OBSERVED BY ARNOLD IN 1984.
Owner/Manager: UNKNOWN

Occurrence No. 8 **Map Index:** 11398 **EO Index:** 22739
Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: U.S. FISH & WILDLIFE SERVICE 1984 (LIT)

Dates Last Seen
Element: XXXX-XX-XX
Site: 1984-06-XX
Record Last Updated: 1998-07-15

Quad Summary: SACRAMENTO EAST (3812154/512C)
County Summary: SACRAMENTO

Lat/Long: 38.58768° / -121.43495°
UTM: Zone-10 N4272184 E636307
Radius: 1/5 mile
Elevation: 20 ft
Mapping PrecisionNON-SPECIFIC
Symbol Type:POINT
Township: 09N
Range: 05E
Section: 33 **Qtr:** XX
Meridian: M

Location: BUSHY LAKE, NEAR CAL EXPO.
Ecological: LARVAE ARE ELDERBERRY STEM BORERS AND ADULTS FEED ON ELDERBERRY FOLIAGE.
General: COLLECTIONS KNOWN FROM THIS AREA. NO ADULTS OR FRESH EXIT HOLES OBSERVED IN 1984.
Owner/Manager: PVT

Desmocerus californicus dimorphus

valley elderberry longhorn beetle

Element Code: IICOL48011

Status
Federal: Threatened
State: None

NDDB Element Ranks
Global: G3T2
State: S2

Other Lists
CDFG Status:

Habitat Associations
General: OCCURS ONLY IN THE CENTRAL VALLEY OF CALIFORNIA, IN ASSOCIATION WITH BLUE ELDERBERRY (SAMBUCUS MEXICANA).
Micro: PREFERS TO LAY EGGS IN ELDERBERRRIES 2-8 INCHES IN DIAMETER; SOME PREFERENCE SHOWN FOR "STRESSED" ELDERBERRIES.

Occurrence No. 9 **Map Index:** 11343 **EO Index:** 22740
Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: ARNOLD, R. 1984 (LIT)

Dates Last Seen
Element: 1984-06-00
Site: 1984-06-00
Record Last Updated: 1998-07-14

Quad Summary: SACRAMENTO EAST (3812154/512C)
County Summary: SACRAMENTO

Lat/Long: 38.58961° / -121.46495°
UTM: Zone-10 N4272354 E633690
Radius: 1/5 mile
Elevation: 10 ft
Mapping PrecisionNON-SPECIFIC
Symbol Type:POINT
Township: 09N
Range: 05E
Section: 32 **Qtr:** XX
Meridian: M

Location: AMERICAN RIVER FLOODPLAIN 22 ACRE PARCEL BETWEEN RAILROAD TRACK OVERPASSES (BTWN I-80 & HWY 160).
Location Detail: ADULTS OBSERVED ON "STRESSED" ELDERBERRIES IN RIPARIAN VEGETATION ALONG THE AMERICAN RIVER.
General: NORTH SACRAMENTO LAND COMPANY PROPERTY.
Owner/Manager: PVT

Occurrence No. 10 **Map Index:** 11431 **EO Index:** 22741
Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: ARNOLD, R. 1984 (LIT)

Dates Last Seen
Element: 1984-06-00
Site: 1984-06-00
Record Last Updated: 1998-07-14

Quad Summary: SACRAMENTO EAST (3812154/512C)
County Summary: SACRAMENTO

Lat/Long: 38.58101° / -121.41885°
UTM: Zone-10 N4271467 E637721
Radius: 1/5 mile
Elevation: 10 ft
Mapping PrecisionNON-SPECIFIC
Symbol Type:POINT
Township: 09N
Range: 05E
Section: 3 **Qtr:** XX
Meridian: M

Location: BETWEEN MILEAGE MARKERS 6 & 7 ON AMERICAN RIVER PARKWAY BIKE TRAIL.
Location Detail: ADULTS OBSERVED BY ARNOLD ON "STRESSED" ELDERBERRIES IN RIPARIAN VEGETATION ALONG THE AMERICAN RIVER.
Owner/Manager: UNKNOWN

Occurrence No. 11 **Map Index:** 11316 **EO Index:** 12887
Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: ARNOLD, R. 1984 (LIT)

Dates Last Seen
Element: 1984-06-00
Site: 1984-06-00
Record Last Updated: 1998-07-14

Quad Summary: SACRAMENTO EAST (3812154/512C)
County Summary: SACRAMENTO

Lat/Long: 38.60461° / -121.47634°
UTM: Zone-10 N4274002 E632670
Radius: 1/5 mile
Elevation: 10 ft
Mapping PrecisionNON-SPECIFIC
Symbol Type:POINT
Township: 09N
Range: 05E
Section: 30 **Qtr:** XX
Meridian: M

Location: JUNCTION OF GARDEN HIGHWAY AND NORTHGATE BLVD.
Location Detail: 10 ACRE PARCEL, REFERRED TO AS THE NORTHGATE TRIANGLE.
Ecological: MOST BEETLES FOUND ON "STRESSED" ELDERBERRIES.
General: ADULTS OBSERVED BY ARNOLD.
Owner/Manager: UNKNOWN

Desmocerus californicus dimorphus

valley elderberry longhorn beetle

Element Code: IICOL48011

Status
Federal: Threatened
State: None

NDDB Element Ranks
Global: G3T2
State: S2

Other Lists
CDFG Status:

Habitat Associations
General: OCCURS ONLY IN THE CENTRAL VALLEY OF CALIFORNIA, IN ASSOCIATION WITH BLUE ELDERBERRY (SAMBUCUS MEXICANA).
Micro: PREFERS TO LAY EGGS IN ELDERBERRRIES 2-8 INCHES IN DIAMETER; SOME PREFERENCE SHOWN FOR "STRESSED" ELDERBERRIES.

Occurrence No. 18 **Map Index:** 11171 **EO Index:** 22733

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: JONES & STOKES ASSOC. 1985 (LIT)

Dates Last Seen
Element: XXXX-XX-XX
Site: 1985-04-24
Record Last Updated: 1989-08-11

Quad Summary: SACRAMENTO WEST (3812155/513D)
County Summary: SACRAMENTO, YOLO

Lat/Long: 38.59601° / -121.54801°
UTM: Zone-10 N4272946 E626445
Radius: 1/5 mile
Elevation: 20 ft

Mapping PrecisionNON-SPECIFIC
Symbol Type:POINT

Township: 09N
Range: 04E
Section: 28 **Qtr:** XX
Meridian: M

Location: SACRAMENTO RIV MI 62.5 W AT I-80.
Ecological: HABITAT IS A NEARLY-PURE ELDERBERRY STAND LOCATED ALONG THE RAILROAD TRACKS, WITH A HIGH DENSITY (50%) OF EXIT HOLES.
General: NO BEETLES OBSERVED; SITE VISITED TOO LATE IN THE DAY.
Owner/Manager: UNKNOWN

Occurrence No. 28 **Map Index:** 11252 **EO Index:** 22723

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: SCHONHOLTZ, R. 1986 (OBS)

Dates Last Seen
Element: 1985-09-04
Site: 1985-09-04
Record Last Updated: 1989-08-11

Quad Summary: SACRAMENTO WEST (3812155/513D)
County Summary: SACRAMENTO, YOLO

Lat/Long: 38.59740° / -121.51079°
UTM: Zone-10 N4273153 E629684
Radius: 1/5 mile
Elevation: 30 ft

Mapping PrecisionNON-SPECIFIC
Symbol Type:POINT

Township: 09N
Range: 04E
Section: 26 **Qtr:** XX
Meridian: M

Location: SACRAMENTO RIVER, OPPOSITE MOUTH OF AMERICAN RIVER, AT RIVER MI 60.3, W BANK.
Ecological: HABITAT CONSISTS OF ELDERBERRY SAVANNAH AND ELDERBERRY TREES IN A COTTONWOOD RIPARIAN WOODLAND.
Threat: THREAT OF DEVELOPMENT INTO LIGHTHOUSE MARINA PROJECT.
General: EXIT HOLES FOUND.
Owner/Manager: PVT

Occurrence No. 29 **Map Index:** 11259 **EO Index:** 22724

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: SCHONHOLTZ, R. 1986 (OBS)

Dates Last Seen
Element: 1985-09-04
Site: 1985-09-04
Record Last Updated: 1989-08-11

Quad Summary: SACRAMENTO WEST (3812155/513D)
County Summary: SACRAMENTO, YOLO

Lat/Long: 38.59156° / -121.50913°
UTM: Zone-10 N4272507 E629839
Radius: 1/5 mile
Elevation:

Mapping PrecisionNON-SPECIFIC
Symbol Type:POINT

Township: 09N
Range: 04E
Section: 35 **Qtr:** XX
Meridian: M

Location: SACRAMENTO RIVER, OPPOSITE MOUTH OF AMERICAN RIVER, RIVER MI 59.8, W BANK.
Ecological: HABITAT CONSISTS OF ELDERBERRY SAVANNAH AND ELDERBERRY TREES IN A COTTONWOOD RIPARIAN WOODLAND.
Threat: THREAT OF DEVELOPMENT INTO THE LIGHTHOUSE MARINA PROJECT.
General: EXIT HOLES FOUND.
Owner/Manager: PVT

Desmocerus californicus dimorphus

valley elderberry longhorn beetle

Element Code: IICOL48011

Status
Federal: Threatened
State: None

NDDB Element Ranks
Global: G3T2
State: S2

Other Lists
CDFG Status:

Habitat Associations
General: OCCURS ONLY IN THE CENTRAL VALLEY OF CALIFORNIA, IN ASSOCIATION WITH BLUE ELDERBERRY (SAMBUCUS MEXICANA).
Micro: PREFERS TO LAY EGGS IN ELDERBERRRIES 2-8 INCHES IN DIAMETER; SOME PREFERENCE SHOWN FOR "STRESSED" ELDERBERRIES.

Occurrence No. 56 **Map Index:** 11236 **EO Index:** 22712
Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: SCHONHOLTZ, R. 1985 (OBS)

Dates Last Seen
Element: 1985-09-04
Site: 1985-09-04
Record Last Updated: 1989-08-11

Quad Summary: SACRAMENTO WEST (3812155/513D)
County Summary: SACRAMENTO, YOLO

Lat/Long: 38.60295° / -121.52189°
UTM: Zone-10 N4273753 E628707
Radius: 1/5 mile
Elevation: 25 ft

Mapping PrecisionNON-SPECIFIC
Symbol Type:POINT

Township: 09N
Range: 04E
Section: 27 **Qtr:** XX
Meridian: M

Location: SACRAMENTO RIVER, OPPOSITE JCT WITH NATOMAS, MAIN DRAINAGE CANAL, RIVER MILE 61.
Ecological: HABITAT CONSISTS OF ELDERBERRY AND SAVANNAH/ELDERBERRY TREES IN A COTTONWOOD RIPARIAN WOODLAND.
Threat: THREAT OF DEVELOPMENT.
General: YELLOW WARBLER AND SWAINSON'S HAWK ALSO OBSERVED AT THE SITE.
Owner/Manager: PVT

Occurrence No. 208 **Map Index:** 61585 **EO Index:** 61621
Occ Rank: Fair
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: ASBELL, A. 2005 (OBS)

Dates Last Seen
Element: 2005-05-13
Site: 2005-05-13
Record Last Updated: 2005-06-14

Quad Summary: SACRAMENTO WEST (3812155/513D)
County Summary: YOLO

Lat/Long: 38.51362° / -121.55801°
UTM: Zone-10 N4263790 E625717
Radius: 80 meters
Elevation: 16 ft

Mapping PrecisionSPECIFIC
Symbol Type:POINT

Township: 08N
Range: 04E
Section: 29 **Qtr:** XX
Meridian: M

Location: 0.3 MILE NORTH OF THE INTERSECTION OF SOUTH RIVER ROAD AND BURROWS AVENUE, ON THE WEST SIDE OF THE SACRAMENTO RIVER
Location Detail: SITE IS ADJACENT TO RIVER-MILE 52 ON THE RIVER.
Ecological: RIPARIAN GROWING ALONG STEEP BANKS OF AGRICULTURAL CANAL; DOMINATED BY BLUE ELDERBERRY, HIMILAYAN BLACKBERRY, BULL THISTLE, HORSETAIL, MUSTARD, POISON OAK, WILLOWS & OAK TREES. NEW STEMS IN TEMPORARY CONSTRUCTION EASEMENT SLATED FOR REMOVAL
Threat: THREATENED BY AGRICULTURE-RELATED PESTICIDE DRIFT, HERBICIDE USE NEAR ELDERBERRIES & SEWER CONSTRUCTION.
General: 1 ADULT MALE VELB OBSERVED ON A NEWLY-SPROUTED ELDERBERRY STEM, THEN TAKING FLIGHT, ON 13 MAY 2005.
Owner/Manager: UNKNOWN

Elderberry Savanna

Element Code: CTT63440CA

Status
Federal: None
State: None

NDDB Element Ranks
Global: G2
State: S2.1

Other Lists

Habitat Associations
General:
Micro:

Occurrence No. 2 **Map Index:** 11371 **EO Index:** 15253

Dates Last Seen
Element: 1987-XX-XX
Site: 1987-XX-XX
Record Last Updated: 1998-07-23

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: SAC. CO. PARKS & REC. DEPT. 1987 (LIT)

Quad Summary: SACRAMENTO EAST (3812154/512C)
County Summary: SACRAMENTO

Lat/Long: 38.59206° / -121.44612°
UTM: Zone-10 N4272653 E635326
Area: 51.3 ac
Elevation: 25 ft
Mapping Precision: SPECIFIC
Symbol Type: POLYGON
Township: 09N
Range: 05E
Section: 32
Qtr: XX
Meridian: M

Location: CAL EXPO, ON AMERICAN RIVER FLOODPLAIN FROM S.P. RR TRACKS EAST TO JUST BEYOND HWY 80.

Location Detail: BOUNDARY GENERALIZED FROM MANAGEMENT PLAN TO INCLUDE MOST ELDERBERRY BUSHES IN THIS PORTION OF CAL EXPO.

Ecological: SAMBUCUS MEXICANA, CENTAUREA SOLSTITIALIS, ELYMUS TRITICHOIDES, BROMUS DIANDRUS, FOENICULUM VULGARE.

General: LEASED BY SACRAMENTO COUNTY PARKS & RECREATION DEPT MANAGEMENT PLAN EMPHASIZES PRESERVATION & RESTORATION. THIS WAS OCC #002 OF CTT63440CCA.

Owner/Manager: STATE (SAC COUNTY LEASE)

Occurrence No. 3 **Map Index:** 11402 **EO Index:** 15252

Dates Last Seen
Element: 1987-XX-XX
Site: 1987-XX-XX
Record Last Updated: 1998-07-23

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: SAC. CO. PARKS & REC. DEPT. 1987 (LIT)

Quad Summary: SACRAMENTO EAST (3812154/512C)
County Summary: SACRAMENTO

Lat/Long: 38.58433° / -121.43294°
UTM: Zone-10 N4271815 E636488
Area: 79.9 ac
Elevation: 35 ft
Mapping Precision: SPECIFIC
Symbol Type: POLYGON
Township: 09N
Range: 05E
Section: 33
Qtr: S
Meridian: M

Location: CAL EXPO, ON AMERICAN RIVER FLOODPLAIN, SOUTH & SOUTHEAST OF BUSHY LAKE.

Location Detail: BOUNDARY GENERALIZED FROM MANAGEMENT PLAN TO INCL MOST ELDERBERRY BUSHES IN THIS PORTION OF CAL EXPO.

Ecological: SAMBUCUS MEXICANA, CENTAUREA SOLSTITIALIS, ELYMUS TRITICOIDES, BROMUS DIANDRUS, FOENICULUM VULGARE.

General: LEASED FROM STATE BY SAC COUNTY PARKS & REC DEPT. MGMT PLAN EMPHASIZES PRESERVATION & RESTORATION. THIS WAS OCC #003 OF CTT63440CA.

Owner/Manager: STATE (SAC COUNTY LEASE)

Occurrence No. 4 **Map Index:** 21067 **EO Index:** 9156

Dates Last Seen
Element: 1985-09-04
Site: 1985-09-04
Record Last Updated: 1998-07-23

Occ Rank: Fair
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: SCHONHOLTZ, R. 1985 (OBS)

Quad Summary: SACRAMENTO WEST (3812155/513D)
County Summary: YOLO

Lat/Long: 38.59758° / -121.51081°
UTM: Zone-10 N4273172 E629682
Radius: 80 meters
Elevation: 30 ft
Mapping Precision: SPECIFIC
Symbol Type: POINT
Township: 09N
Range: 04E
Section: 26
Qtr: XX
Meridian: M

Location: WEST BANK OF SACRAMENTO RIVER, OPPOSITE MOUTH OF AMERICAN RIVER. NEXT TO MARINAS, BOATYARDS, LEVEE RD, RIPARIAN FOREST.

Location Detail: SCATTERED ELDERBERRY AND VALLEY OAKS WITHIN THE FLOODPLAIN.

Ecological: DOMINANTS ARE SAMBUCUS SP., AND QUERCUS LOBATA. NEIGHBORING COMMUNITIES ARE GREAT VALLEY COTTONWOOD RIPARIAN FOREST, ANNUAL GRASSLAND/RUDERAL FORBS.

Threat: UNKNOWN.

General: VALLEY ELDERBERRY LONGHORN BEETLE FOUND HERE. THIS WAS OCC #004 OF CTT63440CA.

Owner/Manager: PVT

Elderberry Savanna

Element Code: CTT63440CA

Status

Federal: None
State: None

NDDB Element Ranks

Global: G2
State: S2.1

Other Lists

Habitat Associations

General:
Micro:

Great Valley Cottonwood Riparian Forest

Element Code: CTT61410CA

Status
Federal: None
State: None

NDDB Element Ranks
Global: G2
State: S2.1

Other Lists

Habitat Associations
General:
Micro:

Occurrence No. 37 **Map Index:** 11231 **EO Index:** 15664

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: SCHONHOLTZ, R. 1985 (OBS)

Dates Last Seen
Element: 1985-09-29
Site: 1985-09-29
Record Last Updated: 1998-09-02

Quad Summary: SACRAMENTO WEST (3812155/513D)
County Summary: YOLO

Lat/Long: 38.59715° / -121.51001°
UTM: Zone-10 N4273126 E629752
Area: 64.7 ac
Elevation: 15 ft

Mapping PrecisionSPECIFIC
Symbol Type:POLYGON

Township: 09N
Range: 04E
Section: 26 **Qtr:** XX
Meridian: M

Location: YOLO SIDE OF SACRAMENTO RIVER AT BRODERICK FROM RM 59.8 TO RM 62.

Ecological: MOSTLY MATURE FOREST OF POPULUS FREMONTII, FRAXINUS LATIFOLIA, SALIX SPP & QUERCUS LOBATA IN STRIP RANGING FROM <100 FT TO >200 FT WIDE. PARTS HIGHLY DISTURBED, OTHERS FAIRLY INTACT.

Threat: THREATENED BY MARINA/DEVEL.

General: RARE VALLEY ELDERBERRY LONGHORN BEETLE & SWAINSONS HAWK PRESENT. THIS WAS OCC #037 OF CTT61410CA.

Owner/Manager: UNKNOWN, PVT

Hibiscus lasiocarpus

rose-mallow

Element Code: PDMAL0H0Q0

Status
Federal: None
State: None

NDDB Element Ranks
Global: G4
State: S2.2

Other Lists
CNPS List: 2
R-E-D Code: 2-2-1

Habitat Associations
General: MARSHES AND SWAMPS (FRESHWATER).
Micro: MOIST, FRESHWATER-SOAKED RIVER BANKS & LOW PEAT ISLANDS IN SLOUGHS; IN CALIF., KNOWN FROM THE DELTA WATERSHED. 0-150M.

Occurrence No. 110 **Map Index:** 24959 **EO Index:** 6338

Occ Rank: Poor
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: MARTZ, C. 1988 (OBS)

Dates Last Seen
Element: 1988-08-04
Site: 1988-08-04
Record Last Updated: 1994-01-13

Quad Summary: SACRAMENTO WEST (3812155/513D)
County Summary: SACRAMENTO

Lat/Long: 38.61547° / -121.53364°
UTM: Zone-10 N4275126 E627662
Radius: 80 meters
Elevation: 10 ft

Mapping PrecisionSPECIFIC
Symbol Type:POINT

Township: 09N
Range: 04E
Section: 22 **Qtr:** SW
Meridian: M

Location: ON-RAMP TO EASTBOUND I-80 FROM WEST EL CAMINO AVE., NORTH OF SACRAMENTO.

Location Detail: 1/2 MILE NORTH OF SWALLOWS NEST GOLF COURSE IN DRAINAGE DITCH NEXT TO THE ON-RAMP.

Ecological: DRY DRAINAGE DITCH WITH MANY WEEDY TAXA. ECHINOCHLOA CRUSGALLII, SORGHUM HALAPENSE, PICRIS ECHIOIDES, CONVOLVULUS ARVENSIS, AND RUMEX CRISPUS. HELIOTROPUM CURASSAVICUM AND SILYBUM MARIANUM NEARBY.

Threat: DITCH MAINTENANCE AND ROW MOWING ARE THREATS. CALTRANS MAINTENANCE UNITS ADVISED OF THIS SITE.

General: 2 PLANTS OBSERVED BY MARTZ IN 1988. VERY DISTURBED SITE LACKING FRESHWATER SLOUGH/MARSH HABITAT AND ASSOCIATED SPECIES. INTACT SLOUGH HABITAT ON NORTH SIDE OF I-80 IN THIS AREA SHOULD BE SURVEYED.

Owner/Manager: CALTRANS

Lepidurus packardi

vernal pool tadpole shrimp

Element Code: ICBRA10010

Status
Federal: Endangered
State: None

NDDB Element Ranks
Global: G3
State: S2S3

Other Lists
CDFG Status:

Habitat Associations
General: INHABITS VERNAL POOLS AND SWALES IN THE SACRAMENTO VALLEY CONTAINING CLEAR TO HIGHLY TURBID WATER.
Micro: POOLS COMMONLY FOUND IN GRASS BOTTOMED SWALES OF UNPLOWED GRASSLANDS. SOME POOLS ARE MUD-BOTTOMED & HIGHLY TURBID.

Occurrence No. 14 **Map Index:** 32443 **EO Index:** 638
Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: SUGNET & ASSOC. 1995 (LIT)

Dates Last Seen
Element: 1995-03-31
Site: 1995-03-31
Record Last Updated: 1996-03-06

Quad Summary: CARMICHAEL (3812153/512D), SACRAMENTO EAST (3812154/512C)
County Summary: SACRAMENTO

Lat/Long: 38.50564° / -121.37821°
UTM: Zone-10 N4263165 E641409
Area: 15.7 ac
Elevation: 40 ft
Mapping PrecisionNON-SPECIFIC
Symbol Type:POLYGON
Township: 08N
Range: 05E
Section: 36
Meridian: M
Qtr: NE

Location: 1.2 KM ESE OF ELDER CREEK ROAD X FLORIN PERKINS ROAD; SE OF THE FORMER SACRAMENTO ARMY DEPOT.
Location Detail: ELDER CREEK PROPERTY. LEPIDURUS PACKARDI WERE FOUND IN 10 OF 90 SAMPLED WETLANDS.
Ecological: HARDPAN VERNAL POOLS IN ANNUAL GRASSLAND.
Threat: RURAL AGRICULTURE; URBAN DEVELOPMENT OCCURING IN VICINITY.
General: POOL #86: 2/21/1995: <50 ADULTS OBSERVED, 3/31/1995: <50 ADULTS OBSERVED; POOLS #21,43,46: <50 ADULTS OBSERVED; POOLS #38,41,44,45,50,53: >50 ADULTS OBSERVED; 4 ADULTS DEPOSITED IN CAS.
Owner/Manager: PVT-PIPE TRADES TRUST FUND

Occurrence No. 66 **Map Index:** 34791 **EO Index:** 13036
Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: KOFORD, E. 1992 (PERS)

Dates Last Seen
Element: 1992-04-03
Site: 1992-04-03
Record Last Updated: 1996-08-05

Quad Summary: SACRAMENTO EAST (3812154/512C)
County Summary: SACRAMENTO

Lat/Long: 38.51058° / -121.40219°
UTM: Zone-10 N4263677 E639309
Radius: 80 meters
Elevation: 40 ft
Mapping PrecisionSPECIFIC
Symbol Type:POINT
Township: 08N
Range: 05E
Section: 26
Meridian: M
Qtr: SW

Location: RAILROAD DITCH AT 47TH AVENUE (ELDER CREEK RD) & SPTRR, NEAR POWER INN ROAD; NEAR SW CORNER OF SACRAMENTO ARMY
Location Detail: SPTRR IS SOUTHERN PACIFIC TRACTION RR, WHICH RUNS SE FROM CORNER OF 65TH ST AND HWY 50.
Ecological: RAILROAD DITCH.
General: KOFORD OBSERVED TADPOLE SHRIMP DURING SURVEY IN SPRING OF 1992; BRANCHINECTA LYNCHI AND LINDERIELLA OCCIDENTALIS ALSO OBSERVED.
Owner/Manager: PVT-SPRR

Occurrence No. 67 **Map Index:** 34792 **EO Index:** 13094
Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: KOFORD, E. 1992 (PERS)

Dates Last Seen
Element: 1992-04-02
Site: 1992-04-02
Record Last Updated: 1996-08-05

Quad Summary: SACRAMENTO EAST (3812154/512C)
County Summary: SACRAMENTO

Lat/Long: 38.52498° / -121.40725°
UTM: Zone-10 N4265267 E638840
Radius: 80 meters
Elevation: 40 ft
Mapping PrecisionSPECIFIC
Symbol Type:POINT
Township: 08N
Range: 05E
Section: 26
Meridian: M
Qtr: NW

Location: FRUITRIDGE ROAD X SPTRR, NEAR POWER INN ROAD; NEAR NORTHWEST CORNER OF SACRAMENTO ARMY DEPOT.
Location Detail: SPTRR IS SOUTHERN PACIFIC TRACTION RR, WHICH RUNS SE FROM CORNER OF 65TH ST & HWY 50.
Ecological: TURBID POOL.
General: TADPOLE SHRIMP OBSERVED BY E.J. KOFORD DURING SURVEY IN SPRING OF 1992; LINDERIELLA OCCIDENTALIS ALSO PRESENT.
Owner/Manager: PVT-SPRR

Lepidurus packardi

vernal pool tadpole shrimp

Element Code: ICBRA10010

Status
Federal: Endangered
State: None

NDDB Element Ranks
Global: G3
State: S2S3

Other Lists
CDFG Status:

Habitat Associations
General: INHABITS VERNAL POOLS AND SWALES IN THE SACRAMENTO VALLEY CONTAINING CLEAR TO HIGHLY TURBID WATER.
Micro: POOLS COMMONLY FOUND IN GRASS BOTTOMED SWALES OF UNPLOWED GRASSLANDS. SOME POOLS ARE MUD-BOTTOMED & HIGHLY TURBID.

Occurrence No. 92 **Map Index:** 33691 **EO Index:** 30608

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: SUGNET & ASSOC. 1993 (PERS)

Dates Last Seen
Element: 1992-04-02
Site: 1992-04-02
Record Last Updated: 1997-03-07

Quad Summary: FLORIN (3812144/496B), SACRAMENTO EAST (3812154/512C)
County Summary: SACRAMENTO

Lat/Long: 38.50290° / -121.47384°
UTM: Zone-10 N4262718 E633076
Radius: 3/5 mile
Elevation: 15 ft

Mapping PrecisionNON-SPECIFIC
Symbol Type:POINT

Township: 08N
Range: 05E
Section: 31
Meridian: M
Qtr: XX

Location: SOUTH OF 47TH AVE, NORTH OF FLORIN RD, EAST OF WOODBINE AVE. ON SOUTHERN END OF SACRAMENTO.
Location Detail: ROADSIDE DITCHES SOMEWHERE IN SECTION 31.
Ecological: MOST OF THIS SECTION IS URBANIZED.
General: LEPIDURUS PACKARDI WAS OBSERVED IN A ROADSIDE DITCH ON 4/2/92. SUGNET RECORD #144.
Owner/Manager: UNKNOWN

Occurrence No. 93 **Map Index:** 33692 **EO Index:** 30610

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: SUGNET & ASSOC. 1993 (PERS)

Dates Last Seen
Element: 1992-04-03
Site: 1992-04-03
Record Last Updated: 1998-08-10

Quad Summary: FLORIN (3812144/496B), SACRAMENTO EAST (3812154/512C)
County Summary: SACRAMENTO

Lat/Long: 38.51048° / -121.39984°
UTM: Zone-10 N4263669 E639514
Area: 1,513.2 ac
Elevation: 35 ft

Mapping PrecisionSPECIFIC
Symbol Type:POLYGON

Township: 08N
Range: 05E
Section: 35
Meridian: M
Qtr: XX

Location: SOUTH OF FRUITRIDGE RD, NORTH OF FLORIN RD, EAST OF POWER INN RD, AND WEST OF FLORIN PERKINS RD.
Location Detail: MANMADE ROADSIDE DITCHES LOCATED SOMEWHERE IN SECTIONS 26 AND 35.
Ecological: MOST OF SECTION 26 IS URBANIZED.
General: LEPIDURUS PACKARDI OBSERVED IN A ROADSIDE DITCH IN SECTION 26 AND A ROADSIDE DITCH IN SECTION 35. SUGNET RECORD #'S 143 & 145.
Owner/Manager: UNKNOWN

Linderiella occidentalis

California linderiella

Element Code: ICBRA06010

Status
Federal: None
State: None

NDDB Element Ranks
Global: G3
State: S2S3

Other Lists
CDFG Status:

Habitat Associations
General: SEASONAL POOLS IN UNPLOWED GRASSLANDS WITH OLD ALLUVIAL SOILS UNDERLAIN BY HARDPAN OR IN SANDSTONE DEPRESSIONS.
Micro: WATER IN THE POOLS HAS VERY LOW ALKALINITY, CONDUCTIVITY, AND TDS.

Occurrence No. 49 **Map Index:** 31558 **EO Index:** 22317
Occ Rank: Fair
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: FOSTER WHEELER ENVIRON. CORP. 1995 (LIT)

Dates Last Seen
Element: 1995-02-14
Site: 1995-04-21
Record Last Updated: 1995-10-02

Quad Summary: SACRAMENTO EAST (3812154/512C)
County Summary: SACRAMENTO

Lat/Long: 38.51137° / -121.39697°
UTM: Zone-10 N4263773 E639762
Area: 5.3 ac
Elevation: 40 ft
Mapping PrecisionNON-SPECIFIC
Symbol Type:POLYGON
Township: 08N
Range: 05E
Section: 26 **Qtr:** SE
Meridian: M

Location: FORMER SACRAMENTO ARMY DEPOT. B.T. COLLINS ARMY RESERVE TRAINING CENTER
Location Detail: FOUND ONLY IN SEASONAL WETLAND INSIDE THE OVAL OF AND ADJACENT TO THE RUNNING TRACK
Ecological: 53 PONDED WATER AREAS SAMPLED EVERY 2 WEEKS BETWEEN 12/19/94 & 4/21/95. ARES SURVEYED INCLUDED SEASONAL WETLANDS, SHALLOW SWALES, TIRE TRACKS, PONDED AREAS IN RUNNING TRACK & BASEBALL DIAMOND, AND FIELD & ROADSIDE DRAINAGE DITCHES.
General: LINDERIELLA OCCIDENTALIS WAS FOUND IN 6 OF THE 53 SITES FROM 1/31/95 TO 2/14/95; 31 ADULTS COLLECTED AND DEPOSITED IN CAS;. 3 OF THE 6 POOLS ALSO HAD BRACHINECTA LYNCHI; MORE POOL INFO IN REPORT.
Owner/Manager: DOD-BT COLLINS RESERVE TR CNTR

Occurrence No. 118 **Map Index:** 32443 **EO Index:** 636
Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: SUGNET & ASSOC. 1995 (LIT)

Dates Last Seen
Element: 1995-03-31
Site: 1995-03-31
Record Last Updated: 1996-03-06

Quad Summary: CARMICHAEL (3812153/512D), SACRAMENTO EAST (3812154/512C)
County Summary: SACRAMENTO

Lat/Long: 38.50564° / -121.37821°
UTM: Zone-10 N4263165 E641409
Area: 15.7 ac
Elevation: 40 ft
Mapping PrecisionNON-SPECIFIC
Symbol Type:POLYGON
Township: 08N
Range: 05E
Section: 36 **Qtr:** NE
Meridian: M

Location: 1.2 KM ESE OF ELDER CREEK ROAD X FLORIN PERKINS ROAD; SE OF THE FORMER SACRAMENTO ARMY DEPOT.
Location Detail: ELDER CREEK PROPERTY. LINDERIELLA OCCIDENTALIS WERE FOUND IN 2 OF 90 SAMPLED WETLANDS.
Ecological: HARDPAN VERNAL POOLS IN ANNUAL GRASSLAND.
Threat: RURAL AGRICULTURE; URBAN DEVELOPMENT OCCURING IN VICINITY.
General: POOLS #46 & 50: 2/21/95: >50 ADULTS OBSERVED. POOL #50: 3/31/95: <50 ADULTS OBSERVED.
Owner/Manager: PVT-PIPE TRADES TRUST FUND

Occurrence No. 124 **Map Index:** 34791 **EO Index:** 12939
Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: KOFORD, E. 1992 (PERS)

Dates Last Seen
Element: 1992-04-03
Site: 1992-04-03
Record Last Updated: 1996-08-05

Quad Summary: SACRAMENTO EAST (3812154/512C)
County Summary: SACRAMENTO

Lat/Long: 38.51058° / -121.40219°
UTM: Zone-10 N4263677 E639309
Radius: 80 meters
Elevation: 40 ft
Mapping PrecisionSPECIFIC
Symbol Type:POINT
Township: 08N
Range: 05E
Section: 26 **Qtr:** SW
Meridian: M

Location: RAILROAD DITCH AT 47TH AVENUE (ELDER CREEK RD) & SPTRR, NEAR POWER INN ROAD; NEAR SW CORNER OF SACRAMENTO ARMY
Location Detail: SPTRR IS SOUTHERN PACIFIC TRACTION RR, WHICH RUNS SE FROM THE CORNER OF 65TH ST & HWY 50.
Ecological: RAILROAD DITCH.
General: KOFORD OBSERVED LINDERIELLA DURING SURVEY IN SPRING OF 1992; BRANCHINECTA LYNCHI AND LEPIDURUS PACKARDI ALSO OBSERVED.
Owner/Manager: PVT-SPRR

Linderiella occidentalis

California linderiella

Element Code: ICBRA06010

Status
Federal: None
State: None

NDDB Element Ranks
Global: G3
State: S2S3

Other Lists
CDFG Status:

Habitat Associations
General: SEASONAL POOLS IN UNPLOWED GRASSLANDS WITH OLD ALLUVIAL SOILS UNDERLAIN BY HARDPAN OR IN SANDSTONE DEPRESSIONS.
Micro: WATER IN THE POOLS HAS VERY LOW ALKALINITY, CONDUCTIVITY, AND TDS.

Occurrence No. 125 **Map Index:** 34792 **EO Index:** 13153
Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: KOFORD, E. 1992 (PERS)

Dates Last Seen
Element: 1992-04-02
Site: 1992-04-02
Record Last Updated: 1996-08-05

Quad Summary: SACRAMENTO EAST (3812154/512C)
County Summary: SACRAMENTO

Lat/Long: 38.52498° / -121.40725°
UTM: Zone-10 N4265267 E638840
Radius: 80 meters
Elevation: 40 ft
Mapping PrecisionSPECIFIC
Symbol Type:POINT
Township: 08N
Range: 05E
Section: 26 **Qtr:** NW
Meridian: M

Location: FRUITRIDGE ROAD X SPTRR, NEAR POWER INN ROAD; NEAR NORTHWEST CORNER OF SACRAMENTO ARMY DEPOT.
Location Detail: SPTRR IS SOUTHERN PACIFIC TRACTION RR, WHICH RUNS SE FROM CORNER OF 65TH STREET AND HWY 50.
Ecological: TURBID POOL.
General: LINDERIELLA OBSERVED BY E.J. KOFORD DURING SURVEY IN SPRING OF 1992; LEPIDURUS PACKARDI ALSO PRESENT.
Owner/Manager: PVT-SPRR

Occurrence No. 126 **Map Index:** 34793 **EO Index:** 12914
Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: KOFORD, E. 1992 (PERS)

Dates Last Seen
Element: 1992-04-02
Site: 1992-04-02
Record Last Updated: 1996-08-05

Quad Summary: SACRAMENTO EAST (3812154/512C)
County Summary: SACRAMENTO

Lat/Long: 38.52515° / -121.38497°
UTM: Zone-10 N4265320 E640782
Radius: 80 meters
Elevation: 40 ft
Mapping PrecisionSPECIFIC
Symbol Type:POINT
Township: 08N
Range: 05E
Section: 25 **Qtr:** NW
Meridian: M

Location: FRUITRIDGE ROAD X CENTRAL CALIFORNIA TRACTION (RR), NEAR FLORIN-PERKINS ROAD; NEAR NE CORNER OF SACRAMENTO ARMY
Ecological: CLEAR POOL WITH DETRITUS.
General: LINDERIELLA OBSERVED BY KOFORD DURING SURVEY IN SPRING OF 1992.
Owner/Manager: PVT-CENTRAL CALIFORNIA TRR

Occurrence No. 149 **Map Index:** 28182 **EO Index:** 29286
Occ Rank: Poor
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: MARTIN, D. 1996 (OBS)

Dates Last Seen
Element: 1996-03-10
Site: 1996-03-10
Record Last Updated: 1996-08-05

Quad Summary: SACRAMENTO EAST (3812154/512C)
County Summary: SACRAMENTO

Lat/Long: 38.53154° / -121.39537°
UTM: Zone-10 N4266013 E639863
Area: 38.7 ac
Elevation: 40 ft
Mapping PrecisionSPECIFIC
Symbol Type:POLYGON
Township: 08N
Range: 05E
Section: 23 **Qtr:** XX
Meridian: M

Location: ALONG THE CENTRAL CALIFORNIA TRACTION COMPANY (RR) RIGHT-OF-WAY, FROM THE NORTH END OF 83RD ST TO FLORIN PERKINS RD.
Location Detail: LOCATED IN A SERIES OF PONDED DEPRESSIONS ALONG THE RAILROAD RIGHT-OF-WAY. LINDERIELLA FOUND IN 12 OF 27 SAMPLED DEPRESSIONS.
Ecological: HABITAT CONSISTS OF PONDED DEPRESSIONS. BRANCHINECTA MESOVALLENSIS (UNDESCRIBED) AND B. LYNCHI ALSO FOUND IN THIS AREA.
Threat: CONSTANT DISTURBANCE FROM RAILROAD TRUCKS AND OTHERS DRIVING THROUGH POOLED AREAS. ALSO TIRES & DEBRIS IN POOLED AREAS.
General: SURVEYS CONDUCTED FROM 6 FEBRUARY TO 10 MARCH 1996.
Owner/Manager: PVT

Pogonichthys macrolepidotus

Sacramento splittail

Element Code: AFCJB34020

Status
Federal: None
State: None

NDDB Element Ranks
Global: G2
State: S2

Other Lists
CDFG Status: SC

Habitat Associations
General: ENDEMIC TO THE LAKES AND RIVERS OF THE CENTRAL VALLEY, BUT NOW CONFINED TO THE DELTA, SUISUN BAY & ASSOCIATED MARSHES.
Micro: SLOW MOVING RIVER SECTIONS, DEAD END SLOUGHS. REQUIRE FLOODED VEGETATION FOR SPAWNING & FORAGING FOR YOUNG.

Occurrence No. 1 **Map Index:** 24986 **EO Index:** 881

Occ Rank: Good
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: WIXOM, L. ET AL 1995 (LIT)

Dates Last Seen
Element: 1995-02-26
Site: 1995-02-26
Record Last Updated: 1996-01-02

Quad Summary: COURTLAND (3812135/497D), FLORIN (3812144/496B), CLARKSBURG (3812145/497A), SACRAMENTO WEST (3812155/513D), TAYLOR MONUMENT (3812165/513A), GRAYS BEND (3812166/513B), VERONA (3812175/529D), KNIGHTS LANDING (3812176/529C), ELDORADO BEND (3812177/530D), NICOLAUS (3812185/529A)

County Summary: SACRAMENTO, SUTTER, YOLO

Lat/Long: 38.61362° / -121.56075°
UTM: Zone-10 N4274883 E625304
Area: 5,037.5 ac
Elevation: 20 ft

Mapping PrecisionSPECIFIC
Symbol Type:POLYGON

Township: 10N
Range: 03E
Section: 20 **Qtr:** XX
Meridian: M

Location: SACRAMENTO RIVER FROM MISSOURI BEND N OF KNIGHTS LANDING TO S OF COURTLAND. ALSO, LOWER 10 MILES OF THE FEATHER RIVER.

Location Detail: IN THE SACRAMENTO RIVER FROM RIVER MILE 33 SOUTH OF COURTLAND TO RIVER MILE 97 NORTH OF KNIGHTS LANDING, AND THE LOWER 10 MILES OF THE FEATHER RIVER.

Ecological: MODERATE CURRENT & SANDY BOTTOM. RIVERBANKS VARIABLE, WATER TEMP AVERAGES LOW 60'S F. MOST FISH TAKEN FROM THE END OF DECEMBER TO THE END OF MAY.

General: INFORMATION TAKEN FROM A SACRAMENTO RIVER ANGLER SURVEY CONDUCTED BETWEEN 1991 & 1995. FISH WERE TAKEN BY HOOK & LINE MOSTLY FROM SHORE. MOST OF THE SPLITTAIL CAUGHT WERE TAKEN INCIDENTALLY & WERE NOT THE SPECIES TARGETED BY THE ANGLER.

Owner/Manager: PVT, STATE

Progne subis

purple martin

Element Code: ABPAU01010

Status	NDDB Element Ranks	Other Lists
Federal: None	**Global:** G5	**CDFG Status:** SC
State: None	**State:** S3	

Habitat Associations

General: (NESTING) INHABITS WOODLANDS, LOW ELEVATION CONIFEROUS FOREST OF DOUGLAS FIR, PONDEROSA PINE, & MONTEREY PINE.

Micro: NESTS IN OLD WOODPECKER CAVITIES MOSTLY, ALSO IN HUMAN-MADE STRUCTURES. NEST OFTEN LOCATED IN TALL, ISOLATED TREE/SNAG.

Occurrence No. 17 **Map Index:** 54694 **EO Index:** 54694

Dates Last Seen
Element: 2003-XX-XX
Site: 2003-XX-XX

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: LEEMAN, T, D. AIROLA, D. KOPP 2003 (LIT)

Record Last Updated: 2004-03-12

Quad Summary: SACRAMENTO EAST (3812154/512C)
County Summary: SACRAMENTO

Lat/Long: 38.62273° / -121.42273°
UTM: Zone-10 N4276092 E637304
Radius: 80 meters
Elevation: 50 ft

Mapping PrecisionSPECIFIC
Symbol Type:POINT

Township: 09N
Range: 05E
Section: 22 **Qtr:** NW
Meridian: M

Location: MARCONI AVENUE OVERPASS OF AUBURN ROAD AND UNION PACIFIC & LIGHT RAIL TRACKS, SACRAMENTO

Location Detail: BIRDS ARE NESTING IN WEEP HOLES IN FREEWAY AND STREET OVERPASSES. WEEP HOLES ARE VERTICAL HOLES CONSTRUCTED INTO THE UNDERSIDE OF SOME HOLLOW BOX GIRDER ELEVATED FREEWAYS, OVERPASSES & BRIDGES TO RELIEVE AIR PRESSURE & DRAIN CONDENSATION.

General: SITES MONITORED EVERY 4-8 DAYS FROM MID-MAY TO EARLY AUGUST 2003. 1 PAIR OBSERVED NESTING. NEW BREEDING LOCATION IN 2003. HIGH NUMBER OF SECOND YEAR MALES OBSERVED, WHICH IS CONSISTENT WITH TYPICAL PIONEERING BEHAVIOR OF SECOND YEAR BIRDS.

Owner/Manager: UNKNOWN

Occurrence No. 18 **Map Index:** 54696 **EO Index:** 54696

Dates Last Seen
Element: 2003-XX-XX
Site: 2003-XX-XX

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: LEEMAN, T, D. AIROLA, D. KOPP 2003 (LIT)

Record Last Updated: 2004-03-12

Quad Summary: SACRAMENTO EAST (3812154/512C)
County Summary: SACRAMENTO

Lat/Long: 38.61095° / -121.43559°
UTM: Zone-10 N4274765 E636207
Radius: 80 meters
Elevation: 45 ft

Mapping PrecisionSPECIFIC
Symbol Type:POINT

Township: 09N
Range: 05E
Section: 28 **Qtr:** NE
Meridian: M

Location: EL CAMINO OVERPASS OF UNION PACIFIC AND LIGHT RAIL TRACKS, SACRAMENTO

Location Detail: SITE FIRST DOCUMENTED IN 2003 BUT ASSUMED TO HAVE BEEN OCCUPIED IN PRIOR YEARS BASED ON THE PRESENCE OF OVER 90% OF PAIRS WITH ASY MALES.

Ecological: BIRDS ARE NESTING IN WEEP HOLES IN FREEWAY AND STREET OVERPASSES. WEEP HOLES ARE VERTICAL HOLES CONSTRUCTED INTO THE UNDERSIDE OF SOME HOLLOW BOX GIRDER ELEVATED FREEWAYS, OVERPASSES & BRIDGES TO RELIEVE AIR PRESSURE & DRAIN CONDENSATION.

General: SITES MONITORED EVERY 4-8 DAYS FROM MID-MAY TO EARLY AUGUST 2003. 15 PAIRS OBSERVED NESTING.

Owner/Manager: UNKNOWN

Progne subis

purple martin

Element Code: ABPAU01010

Status
Federal: None
State: None

NDDB Element Ranks
Global: G5
State: S3

Other Lists
CDFG Status: SC

Habitat Associations
General: (NESTING) INHABITS WOODLANDS, LOW ELEVATION CONIFEROUS FOREST OF DOUGLAS FIR, PONDEROSA PINE, & MONTEREY PINE.
Micro: NESTS IN OLD WOODPECKER CAVITIES MOSTLY, ALSO IN HUMAN-MADE STRUCTURES. NEST OFTEN LOCATED IN TALL, ISOLATED TREE/SNAG.

Occurrence No. 19 **Map Index:** 54697 **EO Index:** 54697
Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: LEEMAN, T, D. AIROLA, D. KOPP 2003 (LIT)

Dates Last Seen
Element: 2003-XX-XX
Site: 2003-XX-XX
Record Last Updated: 2004-03-12

Quad Summary: SACRAMENTO EAST (3812154/512C)
County Summary: SACRAMENTO

Lat/Long: 38.55083° / -121.42235°
UTM: Zone-10 N4268114 E637474
Area: 10.5 ac
Elevation: 40 ft
Mapping PrecisionSPECIFIC
Symbol Type:POLYGON
Township: 08N
Range: 05E
Section: 15 **Qtr:** NW
Meridian: M

Location: HWY 50 AT REDDING ROAD AND UNION PACIFIC AND LIGHT RAIL TRACKS. BETWEEN 65TH ST AND HOWE AVE
Location Detail: NEW SITE IN 2003.
Ecological: BIRDS ARE NESTING IN WEEP HOLES IN FREEWAY AND STREET OVERPASSES. WEEP HOLES ARE VERTICAL HOLES CONSTRUCTED INTO THE UNDERSIDE OF SOME HOLLOW BOX GIRDER ELEVATED FREEWAYS, OVERPASSES & BRIDGES TO RELIEVE AIR PRESSURE & DRAIN CONDENSATION.
General: SITES MONITORED EVERY 4-8 DAYS FROM MID-MAY TO EARLY AUGUST 2003. 3 PAIRS OBSERVED NESTING. HIGH NUMBER OF SECOND YEAR MALES OBSERVED, WHICH IS CONSISTENT WITH TYPICAL PIONEERING BEHAVIOR OF SECOND YEAR BIRDS.
Owner/Manager: CALTRANS

Occurrence No. 20 **Map Index:** 54698 **EO Index:** 54698
Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: LEEMAN, T, D. AIROLA, D. KOPP 2003 (LIT)

Dates Last Seen
Element: 2003-XX-XX
Site: 2003-XX-XX
Record Last Updated: 2004-03-12

Quad Summary: SACRAMENTO EAST (3812154/512C)
County Summary: SACRAMENTO

Lat/Long: 38.56037° / -121.46510°
UTM: Zone-10 N4269109 E633731
Area: 17.1 ac
Elevation: 25 ft
Mapping PrecisionSPECIFIC
Symbol Type:POLYGON
Township: 08N
Range: 05E
Section: 07 **Qtr:** E
Meridian: M

Location: HWY 50 FROM 34TH STREET TO STOCKTON BLVD, SACRAMENTO
Ecological: BIRDS ARE NESTING IN WEEP HOLES IN FREEWAY AND STREET OVERPASSES. WEEP HOLES ARE VERTICAL HOLES CONSTRUCTED INTO THE UNDERSIDE OF SOME HOLLOW BOX GIRDER ELEVATED FREEWAYS, OVERPASSES & BRIDGES TO RELIEVE AIR PRESSURE & DRAIN CONDENSATION.
General: SITES MONITORED EVERY 4-8 DAYS FROM MID-MAY TO EARLY AUGUST 2003. 19 PAIRS OBSERVED NESTING.
Owner/Manager: CALTRANS

Occurrence No. 21 **Map Index:** 54699 **EO Index:** 54699
Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: LEEMAN, T, D. AIROLA, D. KOPP 2003 (LIT)

Dates Last Seen
Element: 2003-XX-XX
Site: 2003-XX-XX
Record Last Updated: 2004-03-12

Quad Summary: SACRAMENTO EAST (3812154/512C)
County Summary: SACRAMENTO

Lat/Long: 38.56385° / -121.47122°
UTM: Zone-10 N4269487 E633191
Radius: 80 meters
Elevation: 26 ft
Mapping PrecisionSPECIFIC
Symbol Type:POINT
Township: 08N
Range: 05E
Section: 07 **Qtr:** N
Meridian: M

Location: CAPITAL CITY FWY (BUSINESS I-80) BETWEEN "R" AND "S" STREETS, SACRAMENTO
Ecological: BIRDS ARE NESTING IN WEEP HOLES IN FREEWAY AND STREET OVERPASSES. WEEP HOLES ARE VERTICAL HOLES CONSTRUCTED INTO THE UNDERSIDE OF SOME HOLLOW BOX GIRDER ELEVATED FREEWAYS, OVERPASSES & BRIDGES TO RELIEVE AIR PRESSURE & DRAIN CONDENSATION.
General: SITES MONITORED EVERY 4-8 DAYS FROM MID-MAY TO EARLY AUGUST 2003. 14 PAIRS OBSERVED NESTING.
Owner/Manager: CALTRANS

Progne subis

purple martin

Element Code: ABPAU01010

Status
Federal: None
State: None

NDDB Element Ranks
Global: G5
State: S3

Other Lists
CDFG Status: SC

Habitat Associations
General: (NESTING) INHABITS WOODLANDS, LOW ELEVATION CONIFEROUS FOREST OF DOUGLAS FIR, PONDEROSA PINE, & MONTEREY PINE.
Micro: NESTS IN OLD WOODPECKER CAVITIES MOSTLY, ALSO IN HUMAN-MADE STRUCTURES. NEST OFTEN LOCATED IN TALL, ISOLATED TREE/SNAG.

Occurrence No. 22 **Map Index:** 54700 **EO Index:** 54700
Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: LEEMAN, T, D. AIROLA, D. KOPP 2003 (LIT)

Dates Last Seen
Element: 2003-XX-XX
Site: 2003-XX-XX
Record Last Updated: 2004-03-12

Quad Summary: SACRAMENTO EAST (3812154/512C)
County Summary: SACRAMENTO

Lat/Long: 38.55769° / -121.47405°
UTM: Zone-10 N4268799 E632956
Radius: 1/10 mile
Elevation: 27 ft
Mapping PrecisionNON-SPECIFIC
Symbol Type:POINT
Township: 08N
Range: 05E
Section: 07 **Qtr:** S
Meridian: M

Location: EASTBOUND HWY 50 OFFRAMP TO SOUTHBOUND HWY 99 AND NORTHBOUND HWY 99 OFFRAMP TO EASTBOUND HWY 50, SACRAMENTO

Ecological: BIRDS ARE NESTING IN WEEP HOLES IN FREEWAY AND STREET OVERPASSES. WEEP HOLES ARE VERTICAL HOLES CONSTRUCTED INTO THE UNDERSIDE OF SOME HOLLOW BOX GIRDER ELEVATED FREEWAYS, OVERPASSES & BRIDGES TO RELIEVE AIR PRESSURE & DRAIN CONDENSATION.

General: SITES MONITORED EVERY 4-8 DAYS FROM MID-MAY TO EARLY AUGUST 2003. 7 PAIRS OBSERVED NESTING.

Owner/Manager: CALTRANS

Occurrence No. 23 **Map Index:** 54701 **EO Index:** 54701
Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: LEEMAN, T, D. AIROLA, D. KOPP 2003 (LIT)

Dates Last Seen
Element: 2003-XX-XX
Site: 2003-XX-XX
Record Last Updated: 2004-03-12

Quad Summary: SACRAMENTO EAST (3812154/512C)
County Summary: SACRAMENTO

Lat/Long: 38.53948° / -121.48432°
UTM: Zone-10 N4266763 E632094
Radius: 80 meters
Elevation: 27 ft
Mapping PrecisionSPECIFIC
Symbol Type:POINT
Township: 08N
Range: 04E
Section: 13 **Qtr:** SE
Meridian: M

Location: SUTTERVILLE ROAD OVER THE UNION PACIFIC RAIL YARD, WEST OF HWY 99, SACRAMENTO

Ecological: BIRDS ARE NESTING IN WEEP HOLES IN FREEWAY AND STREET OVERPASSES. WEEP HOLES ARE VERTICAL HOLES CONSTRUCTED INTO THE UNDERSIDE OF SOME HOLLOW BOX GIRDER ELEVATED FREEWAYS, OVERPASSES & BRIDGES TO RELIEVE AIR PRESSURE & DRAIN CONDENSATION.

General: SITES MONITORED EVERY 4-8 DAYS FROM MID-MAY TO EARLY AUGUST 2003. 6 PAIRS OBSERVED NESTING.

Owner/Manager: UNKNOWN

Occurrence No. 24 **Map Index:** 54702 **EO Index:** 54702
Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: LEEMAN, T, D. AIROLA, D. KOPP 2003 (LIT)

Dates Last Seen
Element: 2003-XX-XX
Site: 2003-XX-XX
Record Last Updated: 2004-03-12

Quad Summary: SACRAMENTO EAST (3812154/512C)
County Summary: SACRAMENTO

Lat/Long: 38.56215° / -121.48743°
UTM: Zone-10 N4269274 E631782
Area: 14.5 ac
Elevation: 23 ft
Mapping PrecisionSPECIFIC
Symbol Type:POLYGON
Township: 08N
Range: 04E
Section: 12 **Qtr:** NE
Meridian: M

Location: HWY 50 BETWEEN 18TH AND 20TH STREETS, SACRAMENTO

Ecological: BIRDS ARE NESTING IN WEEP HOLES IN FREEWAY AND STREET OVERPASSES. WEEP HOLES ARE VERTICAL HOLES CONSTRUCTED INTO THE UNDERSIDE OF SOME HOLLOW BOX GIRDER ELEVATED FREEWAYS, OVERPASSES & BRIDGES TO RELIEVE AIR PRESSURE & DRAIN CONDENSATION.

General: SITES MONITORED EVERY 4-8 DAYS FROM MID-MAY TO EARLY AUGUST 2003. 21 PAIRS OBSERVED NESTING.

Owner/Manager: CALTRANS

Progne subis

purple martin

Element Code: ABPAU01010

Status
Federal: None
State: None

NDDB Element Ranks
Global: G5
State: S3

Other Lists
CDFG Status: SC

Habitat Associations
General: (NESTING) INHABITS WOODLANDS, LOW ELEVATION CONIFEROUS FOREST OF DOUGLAS FIR, PONDEROSA PINE, & MONTEREY PINE.
Micro: NESTS IN OLD WOODPECKER CAVITIES MOSTLY, ALSO IN HUMAN-MADE STRUCTURES. NEST OFTEN LOCATED IN TALL, ISOLATED TREE/SNAG.

Occurrence No. 25 **Map Index:** 54703 **EO Index:** 54703
Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: LEEMAN, T, D. AIROLA, D. KOPP 2003 (LIT)

Dates Last Seen
Element: 2003-XX-XX
Site: 2003-XX-XX
Record Last Updated: 2004-03-12

Quad Summary: SACRAMENTO WEST (3812155/513D)
County Summary: SACRAMENTO

Lat/Long: 38.58491° / -121.50344°
UTM: Zone-10 N4271777 E630346
Area: 14.3 ac
Elevation: 24 ft

Mapping PrecisionSPECIFIC
Symbol Type:POLYGON

Township: 09N
Range: 04E
Section: 35 **Qtr:** SE
Meridian: M

Location: I-5 AT I STREET AND I STREET BRIDGE RAMP ABOVE THE CALIFORNIA STATE RAILROAD MUSEUM PARKING LOT, SACRAMENTO
Location Detail: BIRDS ARE NESTING IN WEEP HOLES IN FREEWAY AND STREET OVERPASSES. WEEP HOLES ARE VERTICAL HOLES CONSTRUCTED INTO THE UNDERSIDE OF SOME HOLLOW BOX GIRDER ELEVATED FREEWAYS, OVERPASSES & BRIDGES TO RELIEVE AIR PRESSURE & DRAIN CONDENSATION.

General: SITES MONITORED EVERY 4-8 DAYS FROM MID-MAY TO EARLY AUGUST 2003. 29 PAIRS OBSERVED NESTING.
Owner/Manager: CALTRANS

Riparia riparia

bank swallow

Element Code: ABPAU08010

Status
Federal: None
State: Threatened

NDDB Element Ranks
Global: G5
State: S2S3

Other Lists
CDFG Status:

Habitat Associations
General: (NESTING) COLONIAL NESTER; NESTS PRIMARILY IN RIPARIAN AND OTHER LOWLAND HABITATS WEST OF THE DESERT.
Micro: REQUIRES VERTICAL BANKS/CLIFFS WITH FINE-TEXTURED/SANDY SOILS NEAR STREAMS, RIVERS, LAKES, OCEAN TO DIG NESTING HOLE.

Occurrence No. 94 **Map Index:** 11372 **EO Index:** 12978

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: HUMPHREY, J. 1986 (PERS)

Dates Last Seen
Element: 1986-XX-XX
Site: 1986-XX-XX

Record Last Updated: 1998-10-28

Quad Summary: SACRAMENTO EAST (3812154/512C)
County Summary: SACRAMENTO

Lat/Long: 38.58441° / -121.44342°
UTM: Zone-10 N4271808 E635575
Area: 29.8 ac
Elevation: 30 ft

Mapping Precision NON-SPECIFIC
Symbol Type: POLYGON

Township: 09N
Range: 05E
Section: 33 **Qtr:** SE
Meridian: M

Location: SOUTH SIDE OF AMERICAN RIVER UPSTREAM FROM CAL EXPO, NEAR BUSINESS 80 BRIDGE.

General: 42 BURROWS WITH 30 BIRDS ESTIMATED BY RON SCHLORFF; VISIBLE FROM THE BUSINESS 80 BRIDGE.

Owner/Manager: SAC COUNTY

Sagittaria sanfordii

Sanford's arrowhead

Element Code: PMALI040Q0

Status
Federal: None
State: None

NDDB Element Ranks
Global: G3
State: S3.2

Other Lists
CNPS List: 1B
R-E-D Code: 2-2-3

Habitat Associations
General: MARSHES AND SWAMPS.
Micro: IN STANDING OR SLOW-MOVING FRESHWATER PONDS, MARSHES, AND DITCHES. 0-610M.

Occurrence No. 26 **Map Index:** 24524 **EO Index:** 12899

Occ Rank: Excellent
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: NOSAL, T. 1993 (OBS)

Dates Last Seen
Element: 1993-07-22
Site: 1993-07-22
Record Last Updated: 1995-11-14

Quad Summary: SACRAMENTO EAST (3812154/512C)
County Summary: SACRAMENTO

Lat/Long: 38.59505° / -121.45680°
UTM: Zone-10 N4272969 E634390
Area: 47.0 ac
Elevation: 20 ft

Mapping PrecisionSPECIFIC
Symbol Type:POLYGON

Township: 09N
Range: 05E
Section: 68 **Qtr:** N
Meridian: M

Location: SLOUGH ALONG NORTH SIDE OF THE AMERICAN RIVER, BETWEEN SOUTHERN PACIFIC RR TRACKS AND THE PUMPING STATION, SACRAMENTO.

Location Detail: NEXT TO AMERICAN RIVER BIKE TRAIL, FROM SPRR TRACKS WEST APPROX. 1 KM (0.7 MI).

Ecological: SLOUGHS WITH MUDDY SHORES. ASSOCIATES INCLUDE PASPALUM, SETARIA, SALIX, AND TYPHA. MOSTLY GROWING OFFSHORE IN APPROX. 6" OF WATER WITH NO SURROUNDING VEGETATION.

General: 50+ COLONIES OBSERVED IN SEVERAL DISCONTINUOUS SLOUGHS. SITE IS WITHIN THE AMERICAN RIVER PARKWAY COUNTY PARK, COUNTY SHOULD BE MADE AWARE OF THE PLANTS PRESENCE.

Owner/Manager: SAC COUNTY-PARKS & REC

Occurrence No. 27 **Map Index:** 24521 **EO Index:** 12983

Occ Rank: Fair
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: NOSAL, T. 1993 (OBS)

Dates Last Seen
Element: 2005-07-02
Site: 2005-07-02
Record Last Updated: 2005-10-03

Quad Summary: SACRAMENTO EAST (3812154/512C)
County Summary: SACRAMENTO

Lat/Long: 38.55401° / -121.42282°
UTM: Zone-10 N4268465 E637427
Radius: 80 meters
Elevation: 35 ft

Mapping PrecisionSPECIFIC
Symbol Type:POINT

Township: 08N
Range: 05E
Section: 15 **Qtr:** NW
Meridian: M

Location: SMALL CHANNEL JUST SOUTH OF CSU, SACRAMENTO FOOTBALL FIELD.

Location Detail: SOUTH OF STADIUM, BETWEEN ROAD AND PARKING LOT APPROX. 100' EAST OF CULVERT.

Ecological: GRASSY DRAINAGE CHANNEL DOMINATED BY ECHINOCHLOA CRUSGALI WITH CYPERUS AND POLYGONUM.

Threat: SITE IS SUBJECTED TO OCCASIONAL MOWING AND POSSIBLE HERBICIDE APPLICATION.

General: SMALL APPROX. 1 SQ FT COLONY. COMPETITION WITH GRASSES ETC. MAY BE IMPACTING POPULATION. MORE THAN 100 PLANTS SEEN IN 2005; POPULATION APPEARS TO HAVE EXPANDED IN THIS AREA.

Owner/Manager: CSU-SACRAMENTO

Sagittaria sanfordii

Sanford's arrowhead

Element Code: PMALI040Q0

Status
Federal: None
State: None

NDDB Element Ranks
Global: G3
State: S3.2

Other Lists
CNPS List: 1B
R-E-D Code: 2-2-3

Habitat Associations
General: MARSHES AND SWAMPS.
Micro: IN STANDING OR SLOW-MOVING FRESHWATER PONDS, MARSHES, AND DITCHES. 0-610M.

Occurrence No. 28 **Map Index:** 24522 **EO Index:** 12962

Occ Rank: Poor
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: NOSAL, T. 1992 (OBS)

Dates Last Seen
Element: 1993-10-23
Site: 2005-06-04
Record Last Updated: 2005-10-03

Quad Summary: SACRAMENTO EAST (3812154/512C)
County Summary: SACRAMENTO

Lat/Long: 38.55834° / -121.41403°
UTM: Zone-10 N4268959 E638185
Radius: 80 meters
Elevation: 20 ft

Mapping PrecisionSPECIFIC
Symbol Type:POINT

Township: 08N
Range: 05E
Section: 10 **Qtr:** XX
Meridian: M

Location: DEPRESSION ALONG THE SOUTH SIDE OF THE AMERICAN RIVER, APPROX. 400M WEST OF HOWE AVE, SACRAMENTO.

Location Detail: BETWEEN THE RIVER AND LEVEE, BEHIND AN APARTMENT COMPLEX AND NEAR THE WATER TREATMENT PLANT.

Ecological: GROWING IN A LOW, PERENNIAL WET, DEPRESSION. LUDWIGIA PEPLOIDES IS MAJOR ASSOCIATE.

Threat: SITE IS ADJACENT TO AMERICAN RIVER BIKE TRAIL AND MAY BE SUBJECT TO TRAMPLING.

General: 1 COLONY OBSERVED IN 1992. SITE IS WITHIN THE AMERICAN RIVER PARKWAY. HUDDLESTON DID NOT OBSERVE PLANTS IN 2005. DENSE SHRUB GROWTH PRESENT THROUGHOUT THE AREA. MAY BE EXTIRPATED.

Owner/Manager: SAC COUNTY-PARKS & REC

Occurrence No. 29 **Map Index:** 24523 **EO Index:** 12937

Occ Rank: Fair
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: NOSAL, T. 1992 (OBS)

Dates Last Seen
Element: 1992-10-23
Site: 1992-10-23
Record Last Updated: 1995-11-14

Quad Summary: SACRAMENTO EAST (3812154/512C)
County Summary: SACRAMENTO

Lat/Long: 38.56284° / -121.39303°
UTM: Zone-10 N4269490 E640006
Radius: 80 meters
Elevation: 20 ft

Mapping PrecisionSPECIFIC
Symbol Type:POINT

Township: 08N
Range: 06E
Section: 11 **Qtr:** E
Meridian: M

Location: DRAINAGE INTO THE AMERICAN RIVER, BETWEEN LEVEE AND RIVER JUST WEST OF POWER LINES (WEST OF WATT), SACRAMENTO.

Ecological: ALONG SILTY-CLAYEY BANK OF PERENIALLY WET DRAINAGE CHANNEL. ASSOCIATES INCLUDE LUDWEGIA PEPLOIDES, POLYGONUM PERSICARIA, CYPERUS. SAGITTARIA APPEARS TO BE GROWING WITHOUT MUCH COMPETITION FROM IT'S ASSOCIATES.

Threat: PROXIMITY TO BIKE TRAIL MAY RESULT IN OCCASIONAL TRAMPLING.

General: 1 COLONY OBSERVED IN 1992. SITE IS WITHIN THE AMERICAN RIVER PARKWAY.

Owner/Manager: SAC COUNTY-PARKS & REC

Occurrence No. 44 **Map Index:** 30075 **EO Index:** 20718

Occ Rank: None
Origin: Natural/Native occurrence
Presence: Possibly Extirpated
Trend: Unknown
Main Source: NORTON, K. 1993 (MAP)

Dates Last Seen
Element: 1993-XX-XX
Site: 2005-06-04
Record Last Updated: 2005-10-03

Quad Summary: SACRAMENTO EAST (3812154/512C)
County Summary: SACRAMENTO

Lat/Long: 38.56188° / -121.42061°
UTM: Zone-10 N4269342 E637605
Radius: 80 meters
Elevation: 20 ft

Mapping PrecisionSPECIFIC
Symbol Type:POINT

Township: 08N
Range: 05E
Section: 10 **Qtr:** XX
Meridian: M

Location: AMERICAN RIVER AT THE GUY WEST BRIDGE, CSUS SIDE OF THE RIVER, SACRAMENTO.

Threat: LEVEE MAINTENANCE.

General: ONLY SOURCE OF INFORMATION FOR THIS SITE IS MAP DETAIL; ECOLOGICAL AND THREAT INFO NEEDED. SITE IS WITHIN THE LOWER AMERICAN RIVER PARKWAY COUNTY PARK. HUDDLESTON VISITED SITE IN 2005 AND DID NOT OBSERVE PLANTS.

Owner/Manager: SAC COUNTY-PARKS & REC

Sagittaria sanfordii

Sanford's arrowhead

Element Code: PMALI040Q0

Status
Federal: None
State: None

NDDB Element Ranks
Global: G3
State: S3.2

Other Lists
CNPS List: 1B
R-E-D Code: 2-2-3

Habitat Associations
General: MARSHES AND SWAMPS.
Micro: IN STANDING OR SLOW-MOVING FRESHWATER PONDS, MARSHES, AND DITCHES. 0-610M.

Occurrence No. 45 **Map Index:** 30076 **EO Index:** 14446

Occ Rank: Fair
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: NOSAL, T. 1994 (OBS)

Dates Last Seen
Element: 1994-05-29
Site: 1994-05-29
Record Last Updated: 1995-11-14

Quad Summary: CARMICHAEL (3812153/512D), SACRAMENTO EAST (3812154/512C)
County Summary: SACRAMENTO

Lat/Long: 38.56822° / -121.37668°
UTM: Zone-10 N4270112 E641420
Radius: 80 meters
Elevation: 15 ft

Mapping PrecisionSPECIFIC
Symbol Type:POINT

Township: 08N
Range: 05E
Section: 1 **Qtr:** XX
Meridian: M

Location: AMERICAN RIVER UPSTREAM FROM WATT AVE, NORTH SIDE OF THE RIVER, SACRAMENTO.

Location Detail: LOCATED ABOUT 0.3 MILE EAST OF WATT AVE, AT RIVER MILE 9.7. SITE IS DOWNSTREAM FROM WHERE STORM BASIN DRAINS INTO RIVER (BASIN IS JUST EAST OF THE TEICHERT COMPLEX).

Ecological: BARE, SANDY SHORE OF RIVER IN LESS THAN 6" OF WATER. NO OTHER VEGETATION NEARBY. BANK VEGETATION CONSISTS OF SALIX, RUBUS, ET AL.

Threat: PLANTS APPEAR TO HAVE BEEN GRAZED/BROWSED (MUSKRAT/BEAVER/DEER/???), MAY BE TRAMPLED BY RECREATIONAL USERS.

General: 10 PLANTS OBSERVED IN 1994. SITE IS WITHIN THE LOWER AMERICAN RIVER PARKWAY COUNTY PARK.

Owner/Manager: SAC COUNTY-PARKS & REC

Taxidea taxus

American badger

Element Code: AMAJF04010

Status
Federal: None
State: None

NDDB Element Ranks
Global: G5
State: S4

Other Lists
CDFG Status: SC

Habitat Associations
General: MOST ABUNDANT IN DRIER OPEN STAGES OF MOST SHRUB, FOREST, AND HERBACEOUS HABITATS, WITH FRIABLE SOILS.
Micro: NEED SUFFICIENT FOOD, FRIABLE SOILS & OPEN, UNCULTIVATED GROUND. PREY ON BURROWING RODENTS. DIG BURROWS.

Occurrence No. 304 **Map Index:** 57545 **EO Index:** 57561

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Main Source: CDFG 1986 (LIT)

Dates Last Seen
Element: XXXX-XX-XX
Site: XXXX-XX-XX

Record Last Updated: 2004-10-21

Quad Summary: SACRAMENTO EAST (3812154/512C)
County Summary: SACRAMENTO

Lat/Long: 38.53222° / -121.40871°
UTM: Zone-10 N4266069 E638699
Radius: 1 mile
Elevation: 40 ft

Mapping PrecisionNON-SPECIFIC
Symbol Type:POINT

Township: 08N
Range: 05E
Section: 23 **Qtr:** XX
Meridian: M

Location: POLK.

General: 1 COLLECTED, USNM.

Owner/Manager: UNKNOWN

Appendix B

NOTICE OF PREPARATION (NOP) AND NOP RESPONSES

NOP
November 10, 2005

DEVELOPMENT SERVICES
DEPARTMENT

CITY OF SACRAMENTO
CALIFORNIA

915 I STREET, 3rd FLOOR
SACRAMENTO, CA 95814-2998

DATE: November 10, 2005

TO: Interested Persons

FROM: Erik de Kok, Associate Planner

SUBJECT: **NOTICE OF PREPARATION FOR AN ENVIRONMENTAL IMPACT REPORT (EIR) FOR THE *500 CAPITOL MALL* PROJECT (P05-108)**

PUBLIC REVIEW PERIOD: November 10, 2005 through December 9, 2005

The City of Sacramento, Development Services Department, will be the *Lead Agency* for the preparation of an Environmental Impact Report (EIR) for the 500 Capitol Mall project (P05-108), the "proposed project." The California Environmental Quality Act (CEQA), Section 15082, states that once a decision is made to prepare an EIR, the lead agency must prepare a Notice of Preparation (NOP) to inform all responsible agencies of that decision. The purpose of the NOP is to provide responsible agencies and interested persons with sufficient information describing the proposed project and its potential environmental effects to enable them to make a meaningful response as to the scope and content of the information to be included in the EIR. The responses to this NOP will help the City of Sacramento determine the scope of the EIR and ensure an appropriate level of environmental review.

The EIR will evaluate the potential environmental impacts of the proposed project and recommend mitigation measures, as required. The EIR will provide a project-specific evaluation of the environmental effects of the proposed project, pursuant to Section 15161 of the State CEQA Guidelines.

Project Location

The proposed project is located on a 1.13-acre site on the western portion of the block between 5th and 6th streets and Capitol Mall and N streets in the Central Business District of downtown Sacramento (see Figure 1). The project site is within the Central Business District Special Planning District and is zoned for general commercial use (C-3-SPD). The proposed project site is also within the Capitol View Protection Corridor. There is an existing five-story bank building on the site that would be demolished to accommodate the proposed project. Commercial and office uses surround the site to the north, east, and west. Residential uses are located to the south.

Project Description

The 500 Capitol Mall project includes the development of a 538,400-square-foot, 30-story building (plus basement) that includes approximately 503,000 square feet of office and 35,400 square feet of retail uses, a restaurant, and a 798-space parking garage. Vehicular access to the parking garage would be included on the N street frontage. The total building height would be approximately 455 feet. An artist rendering of the proposed project is provided on Figure 2.

Permits and Approvals

The proposed project could require the following actions: Special Permit: Project over 75,000 square feet; Design Review: Compliance with Capitol View Protection Guidelines; and Certification of the EIR.

Environmental Effects

The technical sections of the Draft EIR will describe the existing conditions in the proposed project area and surrounding lands. Relevant federal, State, and local laws and regulations, including City of Sacramento General Plan policies, will be summarized. The methods and standards of significance used for impacts of the project will be described in each of the technical sections of the EIR, including any assumptions that are important to understand the conclusions of the analysis. The standards for determining impact significance will be based on existing State and federal rules, regulations and laws, City ordinances and policies, and past practices. The standards will be used both to determine whether an impact is significant and the effectiveness of recommended mitigation. Any feasible mitigation measures will be identified for each significant impact. The description of each mitigation measure will identify the specific actions to be taken, the timing of the action, and the parties responsible for implementation of the measure.

The project would also include the preparation of a Water Supply Assessment. At this time, it is anticipated that the following issue areas will be addressed in the EIR:

- Aesthetics / Visual Impacts
- Air Quality
- Cultural Resources
- Land Use Consistency and Compatibility
- Noise / Vibration
- Traffic and Circulation
- Utilities and Service Systems
- Mandatory Findings of Significance

During the scoping process, it may be determined that the proposed project would have a less-than-significant impact in one or more of the technical issue areas. Those technical discussions will be included in an Initial Study, which is attached as an appendix to the Draft EIR. At this time, it is anticipated that the Initial Study will address the following issue areas: Agricultural Resources, Mineral Resources, Biological Resources, Population and Housing, Geology and Soils, Public Services, Hazards and Hazardous Materials, Recreation, and Hydrology and Water Quality

Alternatives

The EIR will examine a range of feasible alternatives to the proposed project. A discussion of alternatives that were considered but rejected without full analysis will also be included. At this time, it is anticipated that the alternatives would include: No Project Alternative, Reduced Intensity Development Alternative, and Off-Site Alternative.

Submitting Comments

To ensure that the full range of project issues of interest to responsible government agencies and the public are addressed, comments and suggestions are invited from all interested parties. Written comments or questions concerning the scope of the EIR for the proposed project should be directed to the following address by **5:00 PM on December 9, 2005:**

City of Sacramento, Development Services Department
Attn: Erik de Kok
915 I Street, 3rd Floor
Sacramento, CA 95814
(916) 808-2022
(916) 264-7185 (fax)
edekok@cityofsacramento.org

All comments must include full name and address in order for staff to respond appropriately.

A public scoping meeting will be held on November 22, 2005, from 6:00 pm until 8:00 pm in the Historic City Hall, 915 I Street, 2nd floor hearing room. Please use the rear entrance to the Historic City Hall. Responsible agencies and members of the public are invited to attend and provide input on the scope of the EIR. All interested parties are welcome to attend the scoping meeting; however, attendance is not mandatory for those who submit written comments by or before the deadline identified above.

FIGURE 1
Proposed Project Location
Source: GEOCON Consultants, Inc. 2005

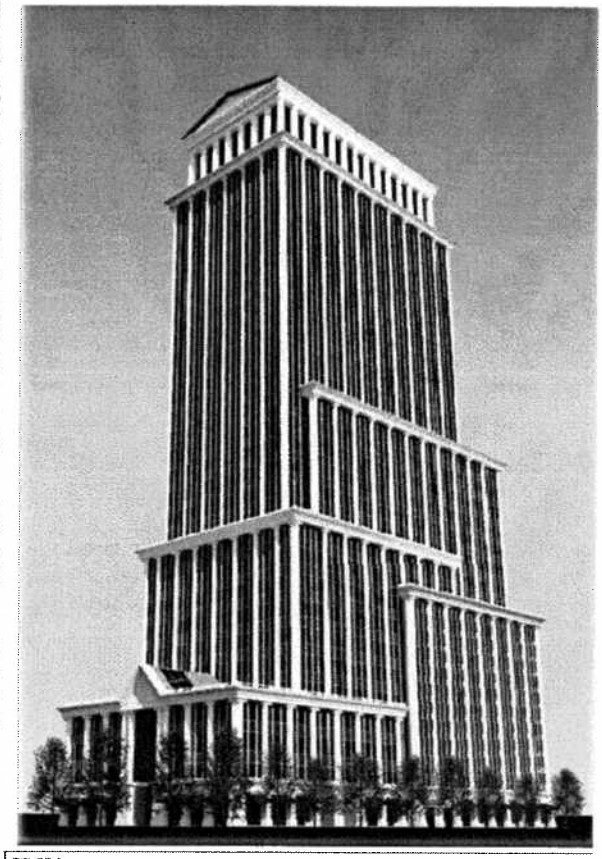

FIGURE 2
Artist Rendering of Proposed Project
Source: Edwin Kado Jr. 2005

Development Services
We Help Build A Great City

Environmental Planning Services
City of Sacramento
North Permit Center
2101 Arena Boulevard, Second Floor
Sacramento, CA 95814

Erik deKok

PUBLIC NOTICE: P05-077

NOP
November 10, 2005
Comments

DEPARTMENT OF TRANSPORTATION
DISTRICT 3 – SACRAMENTO AREA OFFICE
VENTURE OAKS – MS 15
P.O. BOX 942874
SACRAMENTO, CA 94274-0001
PHONE (916) 274-0614
FAX (916) 274-0648
TTY (530) 741-4509

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December 9, 2005

05SAC0180
03-SAC-5 PM 23.893
500 Capitol Mall
Notice of Preparation (NOP) for Draft Environmental Impact Report (DEIR)
SCH #2005112038

Mr. Erik de Kok
City of Sacramento
Development Services Department
915 I Street, 3rd Floor
Sacramento, CA 95814

Dear Mr. de Kok:

Thank you for the opportunity to review the Notice of Preparation (NOP) for the Draft Environmental Impact Report (DEIR) for the 500 Capitol Mall project. Our comment is as follows:

- Per prior discussions and meetings with City of Sacramento staff, the project's traffic analysis will be part of the "Downtown Traffic Study". The Study will provide a cumulative analysis of multiple development projects in downtown Sacramento. The projects' impacts to the State Highway System will be identified and require fair-share mitigation funding for future improvements, such as ramp widening, ramp intersection improvements, signalization modification, or mainline HOV projects.

City staff has indicated the project's individual traffic analysis will be in the DEIR and we look forward to reviewing it. If you have any questions about these comments, please contact Alyssa Begley at (916) 274-0635.

Sincerely,

Alyssa Begley

for KATHERINE EASTHAM, Chief
Office of Transportation Planning—Southwest and East

c: Alyssa Begley

DEPARTMENT OF TRANSPORTATION
DIVISION OF AERONAUTICS – M.S.#40
1120 N STREET
P. O. BOX 942873
SACRAMENTO, CA 94273-0001
PHONE (916) 654-4959
FAX (916) 653-9531
TTY (916) 651-6827

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DEC 14 2005
PLANNING DEPARTMENT

November 29, 2005

Mr. Erik de Kok
City of Sacramento Development Services Department
915 I Street, 3rd Floor
Sacramento, CA 95814

Dear Mr. Kok:

Re: City of Sacramento's Notice of Preparation of a Draft Environmental Impact Report for the 500 Capitol Mall Project; SCH# 2005112038

The California Department of Transportation (Caltrans), Division of Aeronautics (Division), reviewed the above-referenced document with respect to airport-related noise and safety impacts and regional aviation land use planning issues pursuant to the California Environmental Quality Act (CEQA). The Division has technical expertise in the areas of airport operations safety, noise and airport land use compatibility. We are a funding agency for airport projects and we have permit authority for public and special use airports and heliports. The following comments are offered for your consideration.

The proposal is for the construction of a 30-story (455-foot) building that includes approximately 503,000 square feet of office and 34,400 square feet of retail uses, a restaurant, and a 798 parking garage. The 1.13-acre project site is located on the western portion of the block between 5th and 6th streets and Capitol Mall and N streets in the Central Business District of downtown Sacramento.

The proposal may require submission of a Notice of Proposed Construction or Alteration (Form 7460-1) to the Federal Aviation Administration (FAA) in accordance with Federal Aviation Regulation, Part 77, "Objects Affecting Navigable Airspace". For further technical information, please refer to the FAA's web site at http://www.faa.gov/aso/aso500/obst_eval.htm. Please note, the FAA also requires submission of a completed Form 7460-2 Part 1 at least 48 hours prior to starting the actual construction. Form 7460-2 is available at http://forms.faa.gov/forms/faa7460-2.pdf.

These comments reflect the areas of concern to the Division of Aeronautics with respect to airport-related noise and safety impacts and regional airport land use planning issues. We advise you to contact our district office concerning surface transportation issues.

Thank you for the opportunity to review and comment on this proposal. If you have any questions, please call me at (916) 654-5314.

Sincerely,

Sandy Hesnard

SANDY HESNARD
Aviation Environmental Specialist

c: Greg Chew-SACOG

STATE OF CALIFORNIA – THE RESOURCES AGENCY

ARNOLD SCHWARZENEGGER, Governor

DEPARTMENT OF WATER RESOURCES
1416 NINTH STREET, P.O. BOX 942836
SACRAMENTO, CA 942360001
(916) 653-5791

DEC 02 2005

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DEC 07 2005
PLANNING DEPARTMENT

Erik de Kok
City of Sacramento, Development Services Department
915 I Street, 3rd Floor
Sacramento, California 95814

500 Capitol Mall Project
State Clearinghouse (SCH) Number: 2005112038

Staff for The Department of Water Resources has reviewed the subject document and provides the following comments:

Portions of the proposed project may be located within a regulated stream over which The Reclamation Board has jurisdiction and exercises authority. If the project includes any "channel reconfiguration" that was not previously permitted, new plans must be submitted. Section 8710 of the California Water Code requires that a Board permit must be obtained prior to start of any work, including excavation and construction activities, within floodways, levees, and 10 feet landward of the landside levee toes. A list of streams regulated by the Board is contained in the California Code of Regulations, Title 23, Section 112.

Section 8(b)(2) of the Regulations states that applications for permits submitted to the Board must include a completed environmental questionnaire that accompanies the application and a copy of any environmental documents if they are prepared for the project. For any foreseeable significant environmental impacts, mitigation for such impacts shall be proposed. Applications are reviewed for compliance with the California Environmental Quality Act.

Section 8(b)(4) of the Regulations states that additional information, such as geotechnical exploration, soil testing, hydraulic or sediment transport studies, biological surveys, environmental surveys and other analyses may be required at any time prior to Board action on the application.

You may disregard this notice if your project is outside of the Board jurisdiction. For further information, please contact Sam Brandon of my staff at (916) 574-0651.

Sincerely,

Mike Mirmazaheri, Chief
Floodway Protection Section

cc: Governor's Office of Planning and Research
State Clearinghouse
1400 Tenth Street, Room 121
Sacramento, CA 95814

U.S. Department
of Transportation
**Federal Aviation
Administration**

Western Service Area
Technical Operations

P.O. Box 92007
Los Angeles, CA 90009-2007

DEC 0 1 2005

City of Sacramento
Development Services Department
Attn: Erik de Kok
915 I Street, 3rd Floor
Sacramento, CA 95814

RE: Review of Notice of Preparation for a Draft Environmental Impact Report (EIR) for the 500 Capitol Mall Project (005-108)

Dear Mr. de Kok:

The Federal Aviation Administration (FAA) Technical National Airspace System (NAS) Support, Western Service Area, Engineering Services (WSA-ES) reviewed the Notice of Preparation for a Environmental Impact Report for the 500 Capitol Mall Project. The following comments/requirements are provided:

Pursuant to Title 14, Code of Federal Regulations Part 77, Objects Affecting Navigable Airspace, the proponent shall complete and submit a copy of FAA Form 7460-1, "Notice of Proposed Construction or Alteration" for the proposed structure. We recommend that the design of the structure include appropriate obstruction lights consistent with FAA Advisory Circular 70/7460-1H, Obstruction Marking and Lighting. For further information please visit the following web site: http://www.oeaaa.faa.gov

If the proponent intends to construct a heliport for emergency evacuation or other use on the roof of the proposed building, the proponent shall complete and submit a copy of FAA Form 7480-1, Notice of Landing Area Proposal. To obtain a copy, refer to the following website: http://www.faa.gov/arp/forms/f7480-1.doc
A copy of the FAA "Heliport Design Advisory Circular, 150/5390-2B" may be obtained at: http://www.faa.gov/arp/150acs.cfm

Submit the completed "Notice of Proposed Construction or Alteration" form to:

FAA Western Terminal Operations
Air Traffic Division, AWP 520
Attn: Karen McDonald, AWP-520
PO Box 92007
Los Angeles, CA 90009-2007

Once the form is received, an Obstruction Evaluation will be completed to ensure that the proposed project will not interfere with the safety of nearby airport operations.

If you have questions, or require additional information, please contact David Albinus, AWP-472.3/NISC at (310) 725-7735.

Sincerely,

Brad Gee
Manager, Technical NAS System Support, WAS-ES

cc: Dave Kessler, AWP-611
Keith Lusk, NISC

Regional Transit

Sacramento Regional Transit District
A Public Transit Agency
and Equal Opportunity Employer

Mailing Address:
P.O. Box 2110
Sacramento, CA 95812-2110

Administrative Office:
1400 29th Street
Sacramento, CA 95816
(916) 321-2800
(29th St. Light Rail Station/
Bus 36,38,50,67,68)

Light Rail Office:
2700 Academy Way
Sacramento, CA 95815
(916) 648-8400

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DEC 15 2005
PLANNING DEPARTMENT

December 1, 2005

Erik de Kok
Associate Planner
CITY OF SACRAMENTO
915 I Street, 3rd Floor
Sacramento, CA 95814

NAME OF DEVELOPMENT: 500 Capitol Mall Project

CONTROL NUMBER: P05-108

The following comments are provided by Regional Transit (RT) staff:

- RT currently provides bus service (Route 140) to the area from the east. Long range plans call for additional transit service to the area.

- The Environmental Impact Report should discuss the impacts of the development on traffic circulation, parking demand and provision, alternative forms of transportation including bicycling, pedestrian access, and transit alternatives.

- The project proposes between 371 and 1,372 parking spaces more than the demand. It is recommended that the parking not exceed the demand.

- Please see letter dated August 11, 2005 attached.

- The development should participate in a Transportation Management Association. Transit pass subsidies of 50% or greater should be offered to all employees.

- RT staff recommends the creation of developer fees to offset the development of improved transit service for the area. These fees are anticipated to be an important part of the financing strategy for the construction and operation of the improved transit service. RT would like this development to provide its fair share of the local contribution for the new programs.

Thank you for the opportunity to review this project. If you have further

questions regarding these recommendations, please contact me at (916) 556-0506 or dsmith@sacrt.com.

Sincerely,

Don Smith
Senior Planner

c: Taiwo Jaiyeoba, Director of Planning, RT

California Regional Water Quality Control Board

Central Valley Region

Robert Schneider, Chair

Alan C. Lloyd, Ph.D.
Agency Secretary

Sacramento Main Office
11020 Sun Center Drive #200, Rancho Cordova, California 95670-6114
Phone (916) 464-3291 • FAX (916) 464-4645
http://www.waterboards.ca.gov/centralvalley

Arnold Schwarzenegger
Governor

28 November 2005

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PLANNING

Erik de Kok
City of Sacramento
Development Services Department
915 I Street, 3rd Floor
Sacramento, CA 95814

PROPOSED PROJECT REVIEW, CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA), NOTICE OF PREPARATION FOR THE 500 CAPITOL MALL PROJECT, STATE CLEARINGHOUSE #2005112038, SACRAMENTO, SACRAMENTO COUNTY

As a Responsible Agency, as defined by CEQA, we have reviewed the Notice of Preparation for the 500 Capitol Mall project. Based on our review, we have the following comments regarding the proposed project.

Construction Storm Water

A NPDES General Permit for Storm Water Discharges Associated with Construction Activities, NPDES No. CAS000002, Order No. 99-08-DWQ is required when a site involves clearing, grading, disturbances to the ground, such as stockpiling, or excavation that results in soil disturbances of one acre or more of total land area. Construction activity that involves soil disturbances on construction sites of less than one acres and is part of a larger common plan of development or sale, also requires permit coverage. Coverage under the General Permit must be obtained prior to construction. More information may be found at http://www.swrcb.ca.gov/stormwtr/construction.html

Post-Construction Storm Water Management

Manage storm water to retain the natural flow regime and water quality, including not altering baseline flows in receiving waters, not allowing untreated discharges to occur into existing aquatic resources, not using aquatic resources for detention or transport of flows above current hydrology, duration, and frequency. All storm water flows generated on-site during and after construction and entering surface waters should be pre-treated to reduce oil, sediment, and other contaminants. The local municipality where the proposed project is located may now require post construction storm water Best Management Practices (BMPs) pursuant to the Phase II, SWRCB, Water Quality Order No. 2003 – 0005 – DWQ, NPDES General Permit No. CAS000004, WDRS for Storm Water Discharges from Small Municipal Separate Storm Sewers Systems (MS4). The local municipality may require long-term post-construction BMPs to be incorporated into development and significant redevelopment projects to protect water quality and control runoff flow.

Wetlands and/or stream course alteration

Section 401 of the federal Clean Water Act requires any project that impacts waters of the United States (such as streams and wetlands) to file a 401 Water Quality Certification application with this office. The project proponent must certify the project will not violate state water quality standards. Projects include, but are not limited to, stream crossings, modification of stream banks or stream courses, and the filling or modification of wetlands. If a U.S. Army Corp of Engineers (ACOE) permit is required for the project, then Water Quality Certification must be obtained prior to initiation of project activities. The proponent must follow the ACOE 404(b)(1) Guidance to assure approval of their 401 Water Quality Certification application. The guidelines are as follows:

1. **Avoidance** (Is the project the least environmentally damaging *practicable* alternative?)
2. **Minimization** (Does the project minimize any adverse effects to the impacted wetlands?)
3. **Mitigation** (Does the project mitigate to assure a no net loss of functional values?)

If, after avoidance and minimization guidelines are considered and wetland impacts are still anticipated:

- determine functional losses and gains (both permanent and temporal; both direct and indirect)
- conduct adequate baselines of wetland functions including vegetation, wildlife, hydrology, soils, and water quality
- attempt to create/restore the same wetland type that is impacted, in the same watershed
- work with a regional context to maximize benefits for native fish, wildlife, vegetation, as well as for water quality, and hydrology
- use native species and materials whenever possible
- document all efforts made to avoid the minimize adverse wetland impacts
- be prepared to develop performance criteria and to track those for between 5 to 20 years
- be prepared to show project success based on achieving wetland functions
- if the project fails, be prepared to repeat the same process (via financial assurance), with additional acreage added for temporal losses
- specify how the mitigation project will be maintained in perpetuity and who will be responsible for the maintenance

For more information regarding Water Quality Certification may be found at http://www.waterboards.ca.gov/centralvalley/available_documents/wq_cert/application.pdf

Dewatering Permit

The proponent may be required to file a Dewatering Permit covered under Waste Discharge Requirements General Order for Dewatering and Other Low Threat Discharges to Surface Waters Permit, Order No. 5-00-175 (NPDES CAG995001) provided they do not contain significant quantities of pollutants and are either (1) four months or less in duration, or (2) the average dry weather discharge does not exceed 0.25 mgd:

a. Well development water
b. Construction dewatering
c. Pump/well testing
d. Pipeline/tank pressure testing
e. Pipeline/tank flushing or dewatering
f. Condensate discharges
g. Water Supply system discharges
h. Miscellaneous dewatering/low threat discharges

Industrial

A NPDES General Permit for Storm Water Discharges Associated with Industrial Activities, NPDES No. CAS000001, Order No. 97-03-DWQ regulates 10 broad categories of industrial activities. The General Industrial Permit requires the implementation of management measures that will achieve the performance standard of best available technology economically achievable (BAT) and best conventional pollutant control technology (BCT). The General Industrial Permit also requires the development of a Storm Water Pollution Prevention Plan (SWPPP) and a monitoring plan. The General Industrial Permit requires that an annual report be submitted each July 1. More information may be found at http://www.swrcb.ca.gov/stormwtr/industrial.html

For more information, please visit the Regional Boards website at http://www.waterboards.ca.gov/centralvalley/ or contact me at 916.464.4663 or by e-mail at palisoc@waterboards.ca.gov.

CHRISTINE PALISOC
Environmental Scientist
Storm Water Unit
916.464.4663

cc: State Clearinghouse, Sacramento

SACRAMENTO METROPOLITAN
AIR QUALITY
MANAGEMENT DISTRICT

Larry Greene
AIR POLLUTION CONTROL OFFICER

December 9, 2005

Mr Erik de Kok
City of Sacramento
915 I St
Development Services Department
Sacramento, CA 95814

SUBJECT: 500 Capitol Mall, Notice of Preparation for an EIR P05-108
SMAQMD # SAC200500810B

Dear Mr de Kok:

Thank you for providing the project listed above to the Sacramento Metropolitan Air Quality Management District (District). Staff comments follow.

We recommend a construction and operational air quality analysis be performed on this project in preparation for the environmental document. If the air quality impacts for either or both construction and operational activities are found to exceed the District's thresholds of significance, all feasible mitigation needs to be applied.

If operational emissions are found to be significant, an air quality mitigation plan to reduce emissions by at least 15% should be prepared. We would be happy to work with the proponent in choosing appropriate measures for that plan. The plan should be endorsed by the District prior to release of the DEIR so that the plan can be included in the DEIR for public review.

If construction impacts are found to be significant, the District's standard construction mitigation is recommended. That mitigation can be found on our website, www.airquality.org. If construction impacts are not reduced to the District's threshold of 85 lbs NOX/day, we would recommend further mitigation, an off-site mitigation fee. That fee should be specified in the DEIR and should be payable prior to issuance of a grading permit.

All projects are subject to SMAQMD rules and regulations in effect at the time of construction. Please see the attached document describing SMAQMD Rules which may apply to this project.

If you have questions, please contact me at 874-4885 or jborkenhagen@airquality.org

Sincerely,

Jeane Borkenhagen
Associate Air Quality Planner Analyst

cc: Ron Maertz SMAQMD

777 12th Street, 3rd Floor ▮ Sacramento, CA 95814-1908
916/874-4800 ▮ 916/874-4899 fax
www.airquality.org

SMAQMD Rules & Regulations Statement

*The following statement is recommended as standard condition of approval or construction document language for **all** construction projects within the Sacramento Metropolitan Air Quality Management District (SMAQMD):*

All projects are subject to SMAQMD rules and regulations in effect at the time of construction. A complete listing of current rules is available at www.airquality.org or by calling 916.874.4800. Specific rules that may relate to construction activities may include, but are not limited to:

Rule 201: General Permit Requirements. Any project that includes the use of equipment capable of releasing emissions to the atmosphere may require permit(s) from SMAQMD prior to equipment operation. The applicant, developer, or operator of a project that includes an emergency generator, boiler, or heater should contact the District early to determine if a permit is required, and to begin the permit application process. Portable construction equipment (e.g. generators, compressors, pile drivers, lighting equipment, etc) with an internal combustion engine over 50 horsepower are required to have a SMAQMD permit or a California Air Resources Board portable equipment registration.

Rule 403: Fugitive Dust. The developer or contractor is required to control dust emissions from earth moving activities or any other construction activity to prevent airborne dust from leaving the project site.

Rule 442: Architectural Coatings. The developer or contractor is required to use coatings that comply with the volatile organic compound content limits specified in the rule.

Rule 902: Asbestos. The developer or contractor is required to notify SMAQMD of any regulated renovation or demolition activity. Rule 902 contains specific requirements for surveying, notification, removal, and disposal of asbestos containing material.

Other general types of uses that require a permit include dry cleaners, gasoline stations, spray booths, and operations that generate airborne particulate emissions.

City of Sacramento
Development Services Dept.
ATTN. Erik de Kok
Re. 500 Capitol Mall N.O.P.

12-7-05

RECEIVED
DEC ~~NOV~~ 8 2005

We live on the Northwest corner of the 12th floor of Bridgeway Towers, directly across N street from the proposed project. It is right outside our window. Therefore, we are particularly sensitive to noise issues being addressed in the EIR.

1. Noise
   a. In addition to the usual decibel limits etc., we remind you that the City has limited construction noise activities from 8 AM to 6 PM on weekdays with no construction activity on weekends. (See Muriel Wemmer's letter of 8-13-05 attached)
   b. Noise sources such as garbage pickup, deliveries, fire alarms etc. should be on 5th. Street, not N Street.

Other issues are:

2. Traffic
   a. Restrict curbside parking west of the lower garage driveway on N Street so that increased traffic there will not impede our exiting. The best way to do so is to prohibit parking there by high profile vehicles which blocks the view of oncoming traffic.
   b. Prohibit right turns from 5th Street to N Street on the red light.
   c. Continue the public's access and use of the

alley between Capitol Mall and N Street.

d. Time the signals that are across Capitol Mall at 5th and 6th so that more time is provided for seniors and the disabled to get across the Street.

e. Reinstall the pedestrian crossing at 6th Street and N Street to accommodate increasing foot traffic.

f. Eliminate the bus stop shelter on 5th Street so pedestrian and wheel chair traffic can flow by the stop.

g. Provide sufficient handicapped parking spaces.

h. Make parking available in the building on weekends for shoppers and visitors to nearby residences.

3. Amenities

a. Identify and eliminate sources of glare so that there is no reflection into Bridgeway Towers units.

b. Immediately fence the old Wells Fargo building to prevent access to skateboarders and the indigent.

c. Wet down construction dust.

d. Outside illumination of the N street face of the building should be subdued so as to not intrude into the residences across the Street.

e. Establish a good neighbor policy so that future problems can be addressed with the building's neighbors.

4. Aesthetics
Eliminate the Parthenon superstructure proposed for the roof. It is equivalent to the logo that was denied Wells Fargo for the top of its high rise office building. It is unsightly and out of proportion to the proposed building.

Thank you,

Ken Wemmer
Ken Wemmer
500 N ST., #1209
Sacramento, CA
95814
447-2771

Muriel Wemmer
Muriel Wemmer

August 13, 2005

Councilman Ray Tretheway
City Hall
915 I Street
Sacramento, CA 95814

Dear Ray,

During the past week I have talked to both Karen and Randy regarding our concerns about the Parthenon building.

The condominium unit where we have lived for 25 years is right across N Street from the old Wells Fargo building, the site of the new office tower. Therefore we are very interested in the conditions for both destruction and construction on the site.

Many years ago, when the Capitol Bank of Commerce building was erected on the 3rd Street to 4th Street block between Capitol Mall and N Street, we were constantly disturbed by pile driving, iron work, etc. as early as 5:30 a.m. and often on weekends or late at night. The noise was overwhelming and that was a long block away.

In 1989 when the Wells Fargo tower was in the planning process, Ken and I worked very hard to get some "new rules" for our neighborhood. I have enclosed a copy of the "Notice of Decision and Finding of Fact" sent to us by Don Smith, the planner with whom we worked.

Please note in particular Condition number 2.h., which limits high noise activities to the hours of 8:00 a.m. to 6:00 p.m. on weekdays or other such hours satisfactory to the Planning Director and also no construction activity shall occur on Saturday or Sunday. There were no changes from this by the Planning Director, so these hours prevailed.

The long period of destruction and construction was still a difficult time for us, but these mitigations made it tolerable. Various residents of Bridgeway Towers did have to call the police occasionally, but received immediate relief because the mitigations were in effect.

When the PERS building that became the Board of Equalization was built a short time later, the same hours were in effect. That is the building between N and O and 4th and 5th (again right across the street from us). Once more it was difficult for Bridgeway, but workable.

We do feel that there is sufficient precedent from those two towers to continue those mitigations for other buildings near us. If the City wants to build a lot of new office and residential towers, you must take care of those already here.

Sincerely,

Encl.

cc: Mayor Heather Fargo
Luis Sanchez, DRPB
Lindsey Alegozian, Planning

Muriel R. Klammer
580 N St. #1209
Sacramento, CA 95814

In the matter of the decision by the City Council to Certify the Final EIR for the Wells Fargo Center and to approve a Special Permit for a Major Project on 2.41± partially developed acres consisting of a 30 story, 532,000 sq. ft. office building with 17,000 sq. ft. of ground floor retail space, an 18,000 sq. ft. club and a 7,500 sq. ft. fitness center including 1,153 parking spaces in the Central Business District - Special Planning District (C3-SPD) zone for property located between 4th Street, 5th Street, N Street and Capitol Mall (P88-358)	NOTICE OF DECISION AND FINDING OF FACT

At its regular meeting of January 23, 1990, the City Council heard and considered evidence on the appeal of the Planning Commission's approval of the above entitled matter. Based on verbal and documentary evidence at said hearing, the Council made the decision to deny the appeal and uphold the Planning Commission's decision to:

A. Certify the Final EIR as adequate and complete;

B. Approve the Findings of Fact and Statement of Overriding Considerations;

C. Adopt the Mitigation Monitoring Program;

D. Approve the major project Special Permit to develop a 30 story, 532,000 sq. ft. office building with ground floor retail and 994 parking spaces;

E. Approve a Special Permit to allow attendant/tandem parking in the C-3 SPD zone;

F. Approve a Special Permit for a private club with 159 spaces; and,

G. Approve a variance to exceed the 30% compact parking space maximum,

based on the following conditions and findings:

CONDITIONS:

1. The applicant/owner shall provide a plan and agreement which addresses location, capacity, fundraising mechanism, and implementation schedule for child care facilities to the satisfaction of the City's Child Care Coordinator and Planning Director prior to issuance of final building permit. This child care plan shall consider provision for infant-toddler care, in addition to pre-school age care and before/after school care as deemed appropriate for the occupants of the building and/or participants in any joint venture in which the applicant participates. (CPC amended)

2. The applicant shall provide a construction impact mitigation plan for the review and approval of the Planning Director prior to any on-site demolition or construction.

   a. The program shall include the following elements:

      1) The overall construction area.

2) Points of ingress and egress for material deliveries, construction traffic flow, etc.

3) Staging, loading and unloading areas.

4) Fencing, trailer(s), crane(s), storage areas and locations of any other significant equipment facilities.

5) Any sidewalk areas where pedestrian traffic may be restricted.

b. The contractor shall be responsible for keeping debris within the construction area.

c. Construction fencing along Capitol Mall shall be artistically painted to enhance the aesthetics of the construction site and mitigate visual impacts. This project may be accomplished in one of several ways:

1) Work with the Art in Public Places Coordinator of the Sacramento Metropolitan Arts Commission to hire artists to create a design specifically for your panels. The Arts Commission will administer the selection of the artist, design process, and installation of the mural.

A fee of $1,000 is charged for this service. Funds are to go directly to the artist for the design and installation of the mural. Developers are to provide materials (paint, brushes, tarps, etc.) or reimburse artist for provision of said materials.

2) Work directly with community groups (nonprofit corporations, art schools, etc.) to create art work for construction panels. Guidelines for development of art work, subject matter, and installation should be coordinated with City staff.

3) Other processes acceptable to City staff.

d. Flag personnel, as determined by the City Traffic Engineer shall be provided to facilitate vehicular, pedestrian, and delivery traffic throughout the construction period. Additional traffic control by the City Police Department or adequately trained traffic control personnel shall be provided at the applicant/owner's expense to reduce any traffic impacts caused by the moving of large equipment that may impact local intersections and traffic flows.

e. Identify project representative's name, address, and telephone number who will be most responsive to complaints during the construction period.

f. The location for construction worker parking shall be submitted to the Planning Director for review and approval.

g. Dust control measures required by the APCD shall be implemented during construction. Such measures include maintaining soil moisture as well as removing any soil spillage onto traveled roadways through site housekeeping procedures.

h. High noise activities, such as pile driving, the use of jackhammers, drills, and other generators of sporadic high noise peaks, shall be restricted to the hours of 8:00 a.m. to 6:00 p.m. on weekdays or other such hours satisfactory to the Planning Director. No

construction activity shall occur on Saturday or Sunday. The applicant shall submit a plan to mitigate noise from the proposed project to the extent feasible to the satisfaction of the Planning Director prior to issuance of building permit.

i. Obtain street use permit from the Transportation Division of Public Works.

3. Tandem parking spaces shall be marked reserved for designated parkers and not for retail customers.

4. Warning devices shall be provided at garage exists to alert pedestrians of approaching cars from the garage.

5. All compact parking spaces shall be clearly marked. The final interior layout of the parking areas, stalls, entry/exit lanes, signage/markings, and traffic warning devices shall be subject to the approval of the City Traffic Engineer.

6. The applicant shall submit a comprehensive exterior signage program for the review and approval of the Planning Director prior to issuance of any sign permits. The sign program is to include signage for visitor and employee parking, public parking, access to service facilities, a conceptual retail tenancy sign program, directional signage (with consideration given for off hours public parking use, etc.).

7. The roof top should be illuminated to add interest to the skyline at night.

8. The project shall meet the requirements of the City Transportation Division regarding parking garage entrances/exits, signage, card reader locations, the 5th Street turn-out, traffic warning devices and loading docks.

9. The applicant shall coordinate with the City Arborist by providing dates and time schedules for tree removal, prior to the removal of any trees on-site (City Arborist 449-5304).

10. No alterations shall be made to the existing street trees or curb line fronting Capitol Mall. A detailed landscape plan, including landscape treatment of the front plaza area, shall be submitted to City staff for review and approval. The landscape plan shall be compatible to maintaining the formal boulevard edge of Capitol Mall and preservation of the existing street trees.

11. The applicant shall incorporate an N Street design plan into the detailed landscape plan (required by condition #10). The N Street design plan shall include:

    a. a description and location of all landscaping, pavers, benches, gazebos/trellises, sculpture, etc. as shown in exhibit A.

    b. a detailed program defining the type of art, installation, and maintenance of the plaza sculpture/art piece.

    c. installation of potable water, electrical outlets for vendor carts; and provision for storage and commissary for the carts if determined appropriate by City staff and building owner. (CPC amemded)

12. The Transportation Management Plan shall include provisions for 400 transit passes at a 50% subsidy to the employees. (cc amended)

Findings of Fact

1. The project, as conditioned, is based upon sound principles of land use in that the proposed office-retail structure and private club are compatible with the surrounding land uses, and are consistent with the 1980 Central City Community Plan General Commercial and Multi-Use designation.

2. The proposed project is based upon sound principles of land use in that mitigation measures have been incorporated as conditions of development that reduce potentially adverse transportation, noise, air quality, and public service impacts to a less than significant level.

3. The project, as conditioned, will not be detrimental to the public health, safety, or welfare, nor result in the creation of a nuisance in that:

   a. A construction impact mitigation plan is required which would mitigate impacts upon surrounding businesses, vehicular and pedestrian traffic and public improvements;

   b. The project incorporates quality building materials, pedestrian and cultural amenities;

   c. The project is subject to Design Review/Preservation Board review; and

   d. An emergency helistop will be provided on top of the proposed structure.

4. The variance to exceed the 30 percent compact parking space maximum requirement is not a special privilege extended to one property owner in that:

   a. Compact parking ratios exceed 30% have proven workable in similar situations; and

   b. The variance may be granted to any other property owner facing similar circumstances.

5. The project is consistent with the 1988 General Plan and the 1980 Central City Plan in that:

   a. The plans designate the subject site as Central Business District which permits office, retail, and parking facilities; and

   b. The project, as conditioned, conforms to the primary goal of the Central City plan which states..."continue the revitalization of the Sacramento Central City area as a viable living, working, shopping, and cultural environment with a full range of day and night activities".

The additional Findings of Fact and Statement of Override and Mitigation Monitoring Program identified in the January 17, 1990 City Council staff report shall apply.

EARLY PROJECT NOTIFICATION RECEIPT

Association Name BRIDGEWAY TOWERS HOME Phone # 442-2371

Association Contact OWNERS Phone # _____

Please Check and Return By: AUGUST 26, 2005

We have reviewed this application and: ☐ Have no comments

☐ Will need until _____ (date) to complete our review of this project

☒ Our comments are below or attached:

1. This supplements our letter of 8.13.05 to Councilman B. Trotheway, cc. to you.
2. Wells Fargo proposed a logo on the top faces of its building and the City denied it. The Parthenon on top is a logo for Greece.
3. Outside illumination on N St. should be limited because of residents.
4. Identify and limit glare so there is no reflection into condominiums.
5. Preserve alley access for cars and pedestrians on E side.
6. Be cognizant of our driveway on N St. / limit HPV from it + 5th St.
7. Fence the old building now to prevent access to skateboarders and the homeless.

Project Manager LINDSEY ALGOZIAN

Phone # 808-2659 File # P05-108

Thank you, Muriel and Ken Kiemmer

PLEASE PRINT / REVISED 7/04

NOP
April 13, 2006

DEVELOPMENT SERVICES
DEPARTMENT

CITY OF SACRAMENTO
CALIFORNIA

2101 ARENA BLVD, SUITE 200
SACRAMENTO, CA 95834

DATE: April 13, 2006

TO: Interested Persons

FROM: Scott Johnson, Associate Planner

SUBJECT: NOTICE OF PREPARATION FOR AN ENVIRONMENTAL IMPACT REPORT (EIR) FOR THE *500 CAPITOL MALL* PROJECT (P05-108) (REVISED APRIL 13, 2006)

PUBLIC REVIEW PERIOD: April 13, 2006 through May 12, 2006

Introduction

The City of Sacramento, Development Services Department, will be the *Lead Agency* for the preparation of an Environmental Impact Report (EIR) for the 500 Capitol Mall project (P05-108), the "proposed project." The California Environmental Quality Act (CEQA), Section 15082, states that once a decision is made to prepare an EIR, the lead agency must prepare a Notice of Preparation (NOP) to inform all responsible agencies of that decision.

The following is a revised NOP for the 500 Capitol Mall project. An NOP was circulated for public review from November 10, 2005 through December 9, 2005 for a 30-story, 455-foot-tall building. The project has since been redesigned, and a new development application has been filed with the City of Sacramento. The redesigned project is described below.

The purpose of the NOP is to provide responsible agencies and interested persons with sufficient information describing the proposed project and its potential environmental effects to enable them to make a meaningful response as to the scope and content of the information to be included in the EIR. The responses to this NOP will help the City of Sacramento determine the scope of the EIR and ensure an appropriate level of environmental review.

The EIR will evaluate the potential environmental impacts of the proposed project and recommend mitigation measures, as required. The EIR will provide a project-specific evaluation of the environmental effects of the proposed project, pursuant to Section 15161 of the State CEQA Guidelines.

Project Location

The proposed project is located on a 1.13-acre site on the western portion of the block between 5th and 6th streets and Capitol Mall and N streets in the Central Business District of downtown Sacramento (see Figure 1). The project site is within the Central Business District Special Planning District and is zoned for general commercial use (C-3-SPD). The proposed project site is also within the Capitol View Protection Corridor. There is an existing five-story bank building on the site that would be demolished to accommodate the proposed project. Commercial and office uses surround the site to the north, east, and west. Residential uses are located to the south.

Project Description

The proposed project includes the development of a 24-story (13th floor omitted), 396-foot-tall high-rise building, consisting of 467,942 gross square feet of office space, 27,124 gross square feet of retail space, 264,353 gross square feet of parking garage area, and a total of 794 parking spaces for a total building area of 759,419 square feet. An artist rendering of the proposed project is provided on Figure 1.

Permits and Approvals

The proposed project could require the following actions:

- Special Permit: Project over 75,000 square feet
- Design Review: Compliance with Capitol View Protection Guidelines
- Certification of the EIR

Environmental Effects

The technical sections of the Draft EIR will describe the existing conditions in the proposed project area and surrounding lands. Relevant federal, State, and local laws and regulations, including City of Sacramento General Plan policies, will be summarized. The methods and standards of significance used for impacts of the project will be described in each of the technical sections of the EIR, including any assumptions that are important to understand the conclusions of the analysis. The standards for determining impact significance will be based on existing State and federal rules, regulations, and laws; City ordinances and policies; and past practices. The standards will be used both to determine whether an impact is significant and the effectiveness of recommended mitigation. Any feasible mitigation measures will be identified for each significant impact. The description of each mitigation measure will identify the specific actions to be taken, the timing of the action, and the parties responsible for implementation of the measure.

At this time, it is anticipated that the following issue areas will be addressed in the EIR:

Aesthetics / Visual Impacts
Air Quality
Cultural Resources
Land Use Consistency and Compatibility
Noise / Vibration
Traffic and Circulation
Utilities and Service Systems

The project would also include the preparation of a Water Supply Assessment.

During the scoping process, it may be determined that the proposed project would have a less-than-significant impact in one or more of the technical issue areas. Those technical discussions will be included in an Initial Study, which will be attached as an appendix to the Draft EIR. At this time, it is anticipated that the following issue areas will be addressed in the Initial Study:

- Agricultural Resources
- Biological Resources
- Geology and Soils
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Mineral Resources
- Population and Housing
- Public Services
- Recreation

Alternatives

The EIR will examine a range of feasible alternatives to the proposed project. A discussion of alternatives that were considered but rejected without full analysis will also be included. At this time, it is anticipated that the alternatives would include:

- No Project Alternative
- Reduced Intensity Development Alternative
- Off-Site Alternative

Submitting Comments

To ensure that the full range of project issues of interest to responsible government agencies and the public are addressed, comments and suggestions are invited from all interested parties. Written comments or questions concerning the scope of the EIR for the proposed project should be directed to the following address by **5:00 PM on May 12, 2006:**

City of Sacramento, Development Services Department
Attn: Scott Johnson
Environmental Planning Services
2101 Arena Boulevard, Suite 200
Sacramento, CA 95834
(916) 808-5842
(916) 566-3968 (fax)
SRJohnson@cityofsacramento.org

All comments must include full name and address in order for staff to respond appropriately.

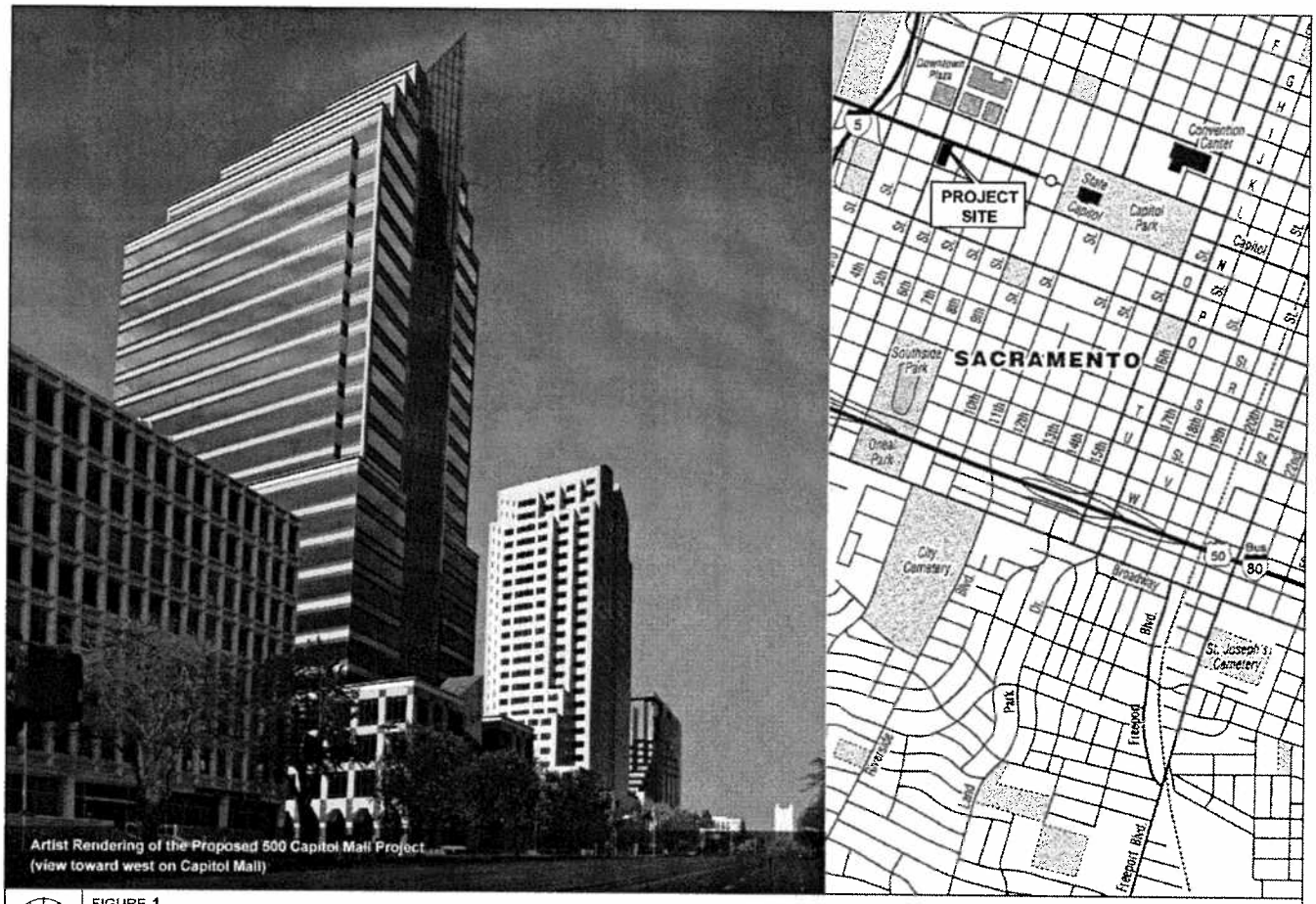


FIGURE 1
Proposed 500 Capitol Mall Project

11121-00

Sources: GEOCON Consultants, Inc. 2005; Edwin Kado Jr., 2006

Development Services
We Help Build A Great City

Environmental Planning Services
City of Sacramento
2101 Arena Blvd., Suite 200
Sacramento, CA 95834

Scott Johnson /
P05-108

PUBLIC NOTICE

NOP
April 13, 2006
Comments

Regional Transit

Sacramento Regional Transit District
A Public Transit Agency
and Equal Opportunity Employer

Mailing Address:
P.O. Box 2110
Sacramento, CA 95812-2110

Administrative Office:
1400 29th Street
Sacramento, CA 95816
(916) 321-2800
(29th St. Light Rail Station/
Bus 36,38,50,67,68)

Light Rail Office:
2700 Academy Way
Sacramento, CA 95815
(916) 648-8400

Public Transit Since 1973

www.sacrt.com

April 13, 2006

Lindsey Alagozian
Associate Planner
City of Sacramento
Planning Division
New City Hall
915 I Street, Third Floor
Sacramento, CA 95814

NAME OF DEVELOPMENT: 500 Capitol Mall Project

CONTROL NUMBER: P05-108

TYPE OF DOCUMENT: Revised Application Submittal

The 500 Capitol Mall project proposes a 24 story high-rise building, consisting of 467,942 square feet of office space, 27,124 square feet of retail space, 264,533 square feet of parking garage area, and a total of 794 parking spaces.

The area has an abundant supply of transit with many bus routes and light rail service provided in the Central City. Regional Transit (RT) currently provides bus service to the area (Routes 38 and 141 from the east and Route 140 downtown). Long range plans call for additional transit service to the area.

RT supports the overall project that will intensify development within Sacramento's Central Business District and support existing transit facilities.

RT staff has reviewed the proposed project and recommends the following:

- Please see letter dated December 1, 2005 attached.
- Contact Robert Hendrix, RT Facilities (916) 649-2759 to determine if a bus shelter pad shall be provided. If determined appropriate (by RT) provide a bus shelter pad as directed.
- Transit information shall be displayed in a prominent location in the building and provided to tenants.

- Applicant shall join the Sacramento TMA. Employers should offer employees subsidized transit passes at 50% or greater discount.

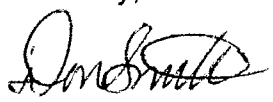
- Parking competes with transit usage. Therefore, parking should not exceed the required standards for the Central City.

- RT staff is interested in engaging the developer in a discussion pertaining to its efforts in developing a streetcar starter line in the downtown Sacramento area. Local developer fees are anticipated to be an important part of the financing strategy for the construction and operation of the streetcar system. RT would like this development to provide a fair share of the local contribution to the streetcar program.

- Project construction shall not impact transit service or pedestrian access to transit stops.

Thank you for the opportunity to comment. Please send any subsequent documents that pertain to this project as they become available. If you have further questions regarding these recommendations, please contact me at (916) 556-0506 or dsmith@sacrt.com.

Sincerely,



Don Smith
Senior Planner

c: Taiwo Jaiyeoba, Director of Planning, RT
Traci Canfield, Planner, RT
Robert Hendrix, Facilities Supervisor, RT

FIRE DEPARTMENT
"An All-Risk Organization"

JULIUS J. CHERRY
FIRE CHIEF

CITY OF SACRAMENTO
CALIFORNIA

5770 FREEPORT BL
SUITE 200
SACRAMENTO, CA
95822-3516

PH 916-433-1300
FAX 916-433-1677

TRANSMITTAL

DATE: April 14, 2006

ATTN: Lindsey Alagozian, 808-2659

FROM: Angie Shook, 433-1611
Fire Department

SUBJECT: **P05-108, 500Capitol Mall**

1. Compliance with City of Sacramento Highrise Ordinance, Title 15, Chapter 15.100, Articles I-XIV.

2. Any booster pump required for pressure must have redundancy and be connected to an emergency back-up power system.

3. Provide the required fire hydrants in accordance with CFC 903.4.2 and Appendix III-B, Section 5.

4. Fire service mains shall not cross property lines unless a reciprocal easement agreement is provided.

5. Provide a water flow test. (Make arrangements at the North Permit Center's walk-in counter: 2101 Arena Blvd., Suite 200, Sacramento, CA 95834)

6. Provide appropriate Knox access for site. Because of secured openings or where the building is served by a fire alarm system monitored by a central station, approved key switches, key boxes or padlocks are to be installed in approved accessible locations or areas in order to permit immediate fire department access.

7. Locate and identify Fire Department Connections (FDCs) on address side of building within 40 feet of a fire hydrant.

DEPARTMENT OF
PARKS AND RECREATION

PARK PLANNING, DESIGN &
DEVELOPMENT DIVISION

CITY OF SACRAMENTO
CALIFORNIA

915 I Street, 5th Floor
SACRAMENTO, CA
95814-2997

(916) 808-8529
FAX 808-8266

MEMORANDUM

Date: April 19, 2006

To: Lindsey Alagozian, City Of Sacramento Planning Division

From: Michele Rudek, Park Planning, Design & Development Division

SUBJECT: P05-108 500 Capitol Mall

The following Advisory Note should be added to this projects conditions of approval

ADVISORY NOTE

☒ As per City Code, the applicant will be responsible to meet his/her obligation regarding Title 18, 18.44 Park Development Impact Fee, due at the time of issuance of building permit. The Park Development Impact Fee due for this project is estimated at $97,657. This is based on 467,942 square feet of office space at the infill fee of $0.20 per square foot and 27124 square feet of retail space at the infill fee of $0.15 per square foot. Any change in these factors will change the amount of the PIF due. The fee is calculated using factors at the time that the project is submitted for building permit.

Additional comments

DEPARTMENT OF
PARKS AND RECREATION

Urban Forest Services Division

CITY OF SACRAMENTO
CALIFORNIIA

5730 24TH STREET
BUILDING 12
SACRAMENTO, CA
95822-3699

(916) 433-6305
FAX (916) 808-4996

Arborist Comments

Date: 4/20/06
Project Number: P05-108
Project Name: 500 Capitol

N Street:

-Existing planter width is 7'. Proposed planter width is 5'. The planter is to remain @ a width of 7' as a continuous park strip to help reduce runoff and provide pervious bed space for the trees.

-Canopies or awnings directly north of the two proposed plantings have a south edge 8' from the center trunk line of each tree. Remove two canopies.

5th Street:

-Enlarge park strip width to between 7' and 8' this will increase the pervious area and bring the width up to City standards, (pedestrian path of travel will still be more than 9' wide). Eliminate proposed pavement that encroaches into the park strip to the north and south of the bus stop and north of the mailroom.

-Eliminate canopies that are directly east of each tree.

Capitol Mall:

-Existing park strip is continuous and 7' wide. The park strip is to remain 7' wide and continuous.

-A second row of Tilia trees will be planted in an alternate (triangulated) spacing south of the existing park strip to match the existing rows to the east. A planting of six trees can accomplish this without reducing the pedestrian path of travel to a width less than 8'.

Duane Goosen
City Arborist

From: "Kennedy, Donald" <DLKn@pge.com>
To: <lalagozian@cityofsacramento.org>
Date: 04/09/2006 8:59:51 AM
Subject: 500 Capitol Mall (P05-108)

Direct: (530) 889-5089

Fax: (530) 889-3392

Email: dlkn@pge.com

Pacific Gas and Electric Company

Land Services Office

343 Sacramento Street

Auburn, CA 95603

April 10, 2006

City of Sacramento

Attn: Lindsey Alagozian

915 I Street, 3rd Floor

Sacramento, CA 95814

RE: 500 Capitol Mall

FILE NUMBER: P05-108

Dear City of Sacramento:

PG&E has reviewed this project and has no objection to the proposed modifications.

Gas service may be available to this project if desired. The developer should contact PG&E's Service Planning Department at (916) 386-5112 as soon as possible to coordinate construction so as not to delay the project.

If you have any questions I may be contacted at (530) 889-5089 or dlkn@pge.com.

Sincerely,

Donald Kennedy

Land Agent

File Number: P05-108
Project Name: 500 Capitol Mall
CSO Shannon Price

Alarms
All alarm plans shall be approved by The Sacramento Police Department's Alarm Unit.

Misc. Security Measures

- Any safe on site will have minimum rating of TL-15 or Class "C" and should be equipped with a duress alarm capability.
- One or more closed circuit television cameras shall be employed to monitor the lobby areas in case of robbery or other serious felony. Additional cameras should be considered to monitor other areas of the complex, such as other ground-floor entry doors, if access is not limited to the front entry after dark, ground floor restroom doors and any vending area.
- The complex shall employ at least one uniformed security person 24 hours daily to patrol the parking areas, hallways, and other public areas on site. The Police Department reserves the right to increase the minimum number of guards without further public hearings, should negative activity warrant it.
- Access into miscellaneous storage, electrical rooms, should be strictly controlled.
- As much care as possible shall be taken not to impair the view of the main floor lobby area by passing patrol units outside the business. Use of such restrictors, as potted plants, draperies, reflective window treatments, etc. should be closely monitored.
- The elevators in the complex shall be equipped with mirrors to allow persons to view the interior of the car before entering.
- Any vending machines installed on site should be positioned in such a location that they are visible to passersby and shall be emptied of money daily and sign posted to indicate this provision.
- The applicant shall have the responsibility of assuring that the perimeter of the construction site is fenced during construction with security lighting and guard patrols employed as necessary. If the general contractor is assigned this responsibility, it shall be the applicant's responsibility to assure compliance.
- The applicant shall install a system which allow the individual offices to be easily rekeyed on a frequent basis as renters change. A computer based card access system or a hard key computer based system is encouraged.

Building Security Requirements

Doors

- Employee / pedestrian, unit entry, storage, linen, laundry, mechanical, electrical, maintenance, and roof access doors shall be of solid core wood or hollow sheet metal with a minimum thickness of 1 ¾ inches and shall be secured by a deadbolt lock with a minimum throw of one inch.
- Entrance doors into individual units shall be secured with a single cylinder deadbolt lock with a minimum throw of one inch, in addition to door latches with a one-half inch minimum throw. The locks should be so constructed that both deadbolt and dead latch can be retracted by a single action of the inside door knob.
- A viewing device (peephole) shall be installed in each individual unit entrance door and shall allow for 180 degree vision.
- A 180 degree viewing device (or peephole) shall be installed in delivery (loading dock) area entry doors to screen persons before allowing entry.
- Outside hinges on all exterior doors shall be provided with non-removable pins when pintype hinges are used or shall be provided with hinge studs, to prevent removal of the door.
- Exterior doors into hallways and doors leading into stairwells shall have self locking (dead latch) devices allowing egress to the exterior of the building or stairwell but requiring a key to be used to gain access to the interior of the building from the outside or into the hallway from the stairwell.
- Exterior doors into the building and doors leading into stairwells shall be equipped with self-closing devices.
  The jamb on all aluminum frame swinging doors shall be so constructed or protected to withstand 1600 pounds of pressure in both a vertical distance of three inches and a horizontal distance of one inch each side of the strike.

  Glass doors shall be secured with a deadbolt lock with a minimum throw of one inch. The outside ring should be free-moving and case hardened.

  Doors with glass panels and doors with glass panels adjacent to the door frame shall be secured with burglary-resistant glazing or the equivalent, if double-cylinder deadbolt locks are not installed.

  On pairs of doors, the active leaf shall be secured with the type of lock required for single doors in this section. The inactive leaf shall be equipped with automatic flush extension bolts protected by hardened material with a minimum throw of three-fourths inch at head and foot and shall have no door knob or surface-mounted hardware. Multiple point locks, cylinder activated from the active leaf and satisfying the requirements, may be used in lieu of flushbolts.

  Any single or pair of doors requiring locking at the bottom or top rail shall have locks with a minimum of one throw bolt at both the top and bottom rails.

Doors with panic bars will have vertical rod panic hardware with top and bottom latch bolts.

Any rear door used to admit employees or deliveries shall be equipped with a 180 degree viewing device to screen persons before allowing entry.

Any office which contains a safe or will be used to count receipts shall be equipped with a 180 degree viewing device.

Windows

- Windows shall be constructed so that when the window is locked it cannot be lifted from the frame (sliding).
- The sliding portion of a sliding glass window shall be on the inside track.
- Window locking devices shall be capable of withstanding a force of 300 pounds in any direction.
- Secondary locking devices are required on ground floor windows and any windows accessible from outside connecting balconies.

Numbering

- The address number of every commercial building shall be illuminated during the hours of darkness so that it shall be easily visible from the street. The numerals in these numbers shall be no less than 10 inches in height and of a color contrasting with the background.
- Each individual office within the building shall display a prominent identification number not less than three to four inches in height, which is easily visible to pedestrian traffic on site and throughout the building.

Interior Lighting

- Stairwell, hall, and elevator lighting shall be equipped with vandal-resistant lenses and shall remain on at all times.

Parking Structure

- Parking in the structure should be limited to patrons and employees only.
- Entry into the structure should be controlled.
- The parking structure should be illuminated at a level of 5 foot-candles minimum at all hours, with ramps, corners, and entrances 10-50 foot-candles during evening hours.
- The structure should be routinely patrolled by security anytime there are vehicles inside.
- The structure should be equipped with an emergency panic alarm system that reports to a central security office. Alarm buttons should be placed no more than 40-50 feet apart.
- In conjunction with the alarm system, a two way audio system should be installed.
- An extensive closed circuit television system should be incorporated throughout the structure with recorder capability.
- The perimeter design of the structure should restrict access to only persons with a legal right to enter, especially at ground level.
- The structure should be equipped with emergency telephones (not pay phones).
- The design of the structure should be simple, from a circulation aspect, with ample directional arrows, exit signs, and location maps provided.
- Stairwells, elevator towers, and connecting bridges should be glass enclosed to provide added visibility and a sense of security.
- The vertical clearance into the parking structure shall be sufficient to allow entry and exit by a tow truck with a vehicle in tow.
- The entrance to the parking areas and other highly visible locations on-site shall be posted with appropriate signs per 22658 (a) CVC to assist in removing vehicles at the property owner/manager's request.

Commercial Retail

An effort should be made to separate Retail and Office Business activities, and to cluster businesses according to operating hours.

Landscaped areas should be planned for maximum growth while at the same time provide unobstructed observation of parking lots, buildings, and pathways; day and night.

Parking areas should be laid out to allow a high degree of observation. Close in employee parking for people working late should be provided adjacent to the employee entrances.

A Central Security Office with restricted access should be included to monitor:
Intrusion detection annunciators in all project phases
Closed circuit TV monitors

Key card access control and mini-processor with hard copy print out and annunciators
Base station radio equipment
Telephones
Fire protective devices
Emergency-power supply equipment
Public safety communications systems and inter-com system
Documented procedures manuals for emergency operations

Entrances to the building should be clearly visible to patrol and the public and held to a minimum number.

Security personnel should be provided to monitor activity 24 hours, 7 days per week, **including time of construction**.

Security lighting must be provided for courtyards and entryways.

Intrusion detection for stairwell doors in the building, as well as a capability to electronically open stairwell doors in case of emergency.

Key card access for entrances and elevators in each building. Key cards used in elevators would be programmed for a specific floor within various buildings.

Access restrictions for restrooms above the ground floor.

External lighting requirements should consider general lighting level of one foot-candle minimum maintained at ground level for medium use facilities, utilizing High Intensity Discharge fixtures with vandal-resistant covers.

Intercom and public address systems for stairwells and internal corridors.

All exterior doors shall be provided with their own light source and shall be adequately illuminated at all hours to make clearly visible the presence of any person on or about the premises and provide adequate illumination for persons exiting the building.

The premises, while closed for business after dark, must be sufficiently lighted by use of interior night lights.

Exterior door, perimeter, parking area, and canopy lights shall be controlled by photocell and shall be left on during hours of darkness or diminished lighting.

Roof Openings

All glass skylights on the roof of any building shall be provided with:

Rated burglary resistant glass or glass like acrylic material

Or

Iron bars of at least ½" round or one by one-fourth inch flat steel material spaced no more than five inches apart under the skylight and securely fastened.

Or

A steel grill of at least 1/8" material or two inch mesh under skylight and securely fastened.

All hatchway openings on the roof of any building shall be secured as follows:
If the hatchway is of wooden material, it shall be covered on the outside with at least 16 gauge sheet steel or its equivalent attached with screws.

The hatchway shall be secured from the inside with a slide bar or slide bolts. The use of crossbar or padlock must be approved by the fire department.

Outside hinges on all hatchway openings shall be provided with nonremovable pins when using pin-type hinges.

All air duct or air vent openings exceeding 8" x 12" on the roof or exterior walls of any building shall be secured by covering the same with either of the following:

Iron bars of at least ½" round or one by one-fourth inch flat steel material, spaced no more than five inches apart and securely fastened.

Or

A steel grill of at least 1/8" material or two inch mesh and securely fastened.

If the barrier is on the outside, it shall be secured with galvanized rounded head flush bolts of at least 3/8" diameter on the outside.

Special Security Measures

Commercial establishments having one hundred dollars or more in cash on the premises after closing hours shall lock such money in an approved type money safe with a minimum rating of TL-15 or class "C". The cash on hand in the registers shall be limited, and frequent drops into the safe should be made. The safe should be equipped with duress alarm capability.

The cash register area shall be covered by a CCTV system with a recorder.

General Site Issues:

- The developer/applicant shall enclose the entire perimeter of the project with a chain link fence with necessary construction gates to be locked after normal construction hours. A security person shall be provided to patrol the project after normal working hours during all phases of construction, and adequate security lighting shall be provided to illuminate vulnerable equipment and materials.

Entire Project Conditions:

- Beer shall not be sold in quantities of less than one six pack.
- Wine coolers shall not be sold in quantities of less than factory packs of four.
- No advertising of beer or wine sales shall be allowed on the exterior signs or window signs on the site.
- The word beer, wine or liquor shall not appear in the name or on any signs.
- The applicant shall post the property "No Trespassing" and sign an agreement with the Police Department to prosecute all violators. This agreement shall be kept on file on the premises and at the Police Department.
- No public telephone shall be installed or maintained on the **exterior** of the premises.
- Signs shall be posted prohibiting consumption of alcoholic beverages in the business or in the parking areas. Signs shall read: "It is unlawful to enter or remain on these premises, adjacent parking lot, or adjacent public sidewalk with and open alcoholic beverage container. P.C. 647e (a)" plus any appropriate local ordinances. Lettering to be block style and a minimum of 2 ½" in height. Signs will be clearly visible to the patrons of the business parking lot and to persons on the public sidewalk.
- Business rules shall be posted in the business interior in a conspicuous place.
- Store / Restaurant windows shall be left unobstructed by either signage and/or display racks, shelving, and merchandise in order to allow viewing of the interior of the business by patrolling police.
- The applicant shall be responsible for the daily removal of all litter generated by the business, from the subject site, adjacent properties and streets.
- All dumpsters must be kept locked.
- The applicant shall agree to a "good neighbor policy." The "good neighbor policy" shall require that if any significant problems arise and the city receives complaints about the use, the City will commence with Special Permit revocation hearings at the cost of the property owner. The revocation hearing shall be at the discretion and direction of the Planning Commission.
- The applicant shall install bicycle security racks at the front of the business.
- Address shall be located on the roof so that it is easily viewed from law enforcement aircraft.

Public Safety 800MHZ Building Amplification System

A. Adequate measures or remediation shall be made to allow public safety radio communication. The building must support adequate radio coverage for the City of Sacramento radio communications system, including but not limited to firefighters and police officers. For purposes of this section, adequate radio coverage shall include all of the following: 1) a minimum signal strength of –95 dbm available 90% of the area of each floor of the building when transmitted from the closest City of Sacramento radio communications system site; 2) a minimum signal strength of –95 dbm received at the closest City of Sacramento radio communications system site when transmitted from 90%of the area of each floor of the building; 3) the frequency range which must be supported shall be the current band of frequencies used by the City of Sacramento; and 4) a 100% reliability factor.

B Buildings and structures which cannot support the required level of radio coverage shall be equipped with any of the following in order to achieve the required adequate radio coverage: a radiating cable system or an internal multiple antenna system with or without FCC type accepted bi-directional 800 MHZ amplifiers as needed. If any part of the installed system or systems contains an electrically powered component, the system shall be capable of operating on an independent battery and/or generator system for a period of at least 12 hours without external power input.

C. Testing Procedures

- Acceptance test procedure. When an in-building radio system is required, and upon completion of installation, it will be the building owner's responsibility to have, the radio system tested to ensure that two-way coverage on each floor of the building is a minimum of 90%. The test shall be conducted using a Motorola MTS 2000, or equivalent, portable radio, talking through the City of Sacramento radio communications system as specified by the authorities having public safety jurisdiction.
- Field testing. Police and Fire personnel, after providing reasonable notice to the owner or his representative, shall have the right to enter onto property to conduct field testing to be certain that the required level of radio coverage is present.

Shannon Price #8186 Phone: 433-0712 Date: 04-14-06

DEPARTMENT
OF UTILITES

ENGINEERING
SERVICES DIVISION

CITY OF SACRAMENTO
CALIFORNIA

1395 35TH AVENUE
SACRAMENTO, CA
95822-2911

PH 916-808-1400
FAX 916-808-1497/1498

May 1, 2006
60375:TB:tb

MEMORANDUM

TO: Lindsey Alagozian, Planning Division

FROM: Tony Bertrand, Department of Utilities

SUBJECT: **P05-108: 500 Capitol Mall, SP**

The Department of Utilities has the following conditions and comments on the applicant's request for a **Special Permit** for a major project to construct 24 story (13th story omitted), 396 foot tall high-rise building consisting of 467,942 square feet of office space, 27,124 square feet of retail space, 264,533 square feet of parking garage area, and a total of 794 parking spaces on 1.13 acres in the Central Business District, Special Planning District (C-3-SPD) zone.

1. This project is served by the Combined Sewer System (CSS). Therefore, the developer/property owner will be required to pay the Combined Sewer System Development Fee prior to the issuance of any building permit. The impact to the CSS due to office and retail uses is estimated to be 68 ESD. The Combined Sewer System fee at time of building permit is estimated to be $115,844 plus any increases to the fee due to inflation. The fee will be used for improvements to the CSS.

2. All new groundwater discharges to the Combined or Separated Sewers must be regulated and monitored by the Department of Utilities (City Council Resolution #92-439). Groundwater discharges to the City's sewer system are defined as follows:

    a. Construction dewatering discharges

    b. Treated or untreated contaminated groundwater cleanup discharges

    c. Uncontaminated groundwater discharges

Foundation or basement dewatering discharges to the CSS will not be allowed. The CSS does not have adequate capacity to allow for dewatering discharges for foundations or basements. Foundations and basements shall be designed without the need for dewatering.

Groundwater discharges may contain toxic and/or explosive chemicals that could be harmful to the environment and to service workers working in the City's sewer system. Groundwater discharges to the sewer system go beyond the original design of the City's system, thus removing existing sewer capacity from other system users and potentially causing overflows or restricting development. The additional water from groundwater discharges must be conveyed and pumped by the City's existing facilities. The additional volume of water increases the City's operations and maintenance costs through increased capacity, power, and maintenance costs.

Currently, two types of groundwater discharges are recognized by the Department of Utilities; limited discharges and long-term discharges. These types of discharges are described as follows:

a. "limited discharges" are short groundwater discharges of 7-days duration or less. Limited discharges must be approved through the Department of Utilities by acceptance letter.

b. "long-term discharges" are groundwater discharges of greater duration than 7-days. Long-term discharge must be approved through the Department of Utilities and the City Manager through a Memorandum of Understanding (MOU) process.

The Groundwater MOU has a term of one year and requires the discharger to:

a Provide a description of the groundwater discharge,

b. Obtain a Regional Sanitation District permit,

c. Obtain approval from the Regional Water Quality Board if discharge is part of groundwater cleanup or contains contaminants above MCLs,

d. Pay fees based on flow amounts when a fee schedule is established by ordinance,

e. Comply with any new pertinent laws,

f. Assess and repair sewer lines if the discharge exceeds MCLs,

g. Suspend discharges during storm events or at City request,

h. Provide shut-off switches accessible to the City, and

i. Indemnify the City against all claims related to the MOU.

3. If this project disturbs greater than 1 acre of property, the project is required to comply with the State "NPDES General Permit for Stormwater Discharges Associated with Construction Activity" (State Permit). To comply with the State Permit, the applicant will need to file a Notice of Intent (NOI) with the State Water Resources Control Board (SWRCB) and prepare a Stormwater Pollution Prevention Plan (SWPPP) prior to construction. A copy of the State Permit and NOI may be obtained at www.swrcb.ca.gov/stormwtr/construction.html. The SWPPP will be reviewed by the Department of Utilities prior to issuing a grading permit or approval of improvement plans to assure that the following items are included: 1) vicinity map, 2) site map, 3) list of potential pollutant sources, 4) type and location of erosion and sediment BMPs, 5) name and phone number of person responsible for SWPPP, 6) signed certification page by property owner or authorized representative.

4. The applicant must comply with the City of Sacramento's Grading, Erosion and Sediment Control Ordinance. This ordinance will require the applicant to prepare erosion and sediment control plans for both during and after construction of the proposed project, prepare preliminary and final grading plans, and prepare plans to control urban runoff pollution from the project site during construction.

5. This project is adjacent to a separated drainage system and is greater than 1 acre therefore post construction, stormwater quality control measures shall be incorporated into the development to minimize the increase of urban runoff pollution caused by development of the area. Since the project is not served by a regional water quality control facility and is greater than 1 acre, both source controls and on-site treatment control measures are required. On-site treatment control measures may affect site design and site configuration and therefore, should be considered during the early planning stages. Improvement plans must include on-site treatment control measures. Refer to the "Guidance Manual for On-site Stormwater Quality Control Measures" dated January 2000 for appropriate source control measures and on-site treatment control measures.

6. Per City Code 13.04.070, except for separate irrigation service connections and fire service connections, each lot or parcel shall only have one (1) metered domestic water service. Requests for multiple domestic water service connections to a single commercial lot or parcel, consistent with the Department of Utilities "Commercial Tap Policy", may be approved on a case-by-case basis by the Department of Utilities. Contact the Department of Utilities at (916) 808-1400 for a copy of the tap policy. Excess services shall be abandoned to the satisfaction of the Department of Utilities.

7. Per City Code, the point of service for water, sewer and storm drain service is located at the back of curb for separated sidewalks and at the back of sidewalk for attached

sidewalks. The onsite water, sewer and storm drain systems shall be private systems maintained by the ownership association.

8. All water connections shall comply with the City of Sacramento's Cross Connection Control Policy.

ADVISORY COMMENTS TO THE SPECIAL PERMIT:

1. The proposed project is located in the Flood zone designated as a **Shaded X** zone on the Federal Emergency Management Agency (FEMA) Federal Insurance Rate Maps (FIRMs) that have been revised by a Letter of Map Revision effective February 18, 2005. Within the **Shaded X** zone, there are no requirements to elevate or flood proof.

2. Prior to design of the subject project, the Department of Utilities suggests that the applicant request a water supply test to determine what pressure and flows the surrounding public water distribution system can provide to the site. This information can then be used to assist the engineers in the design of the fire suppression systems.

cc: Anis Ghobril, DEAF Division

SRCSD

Wastewater Treatment

10545 Armstrong Avenue
Mather, CA 95655
Tele: [916] 876-6000
Fax: [916] 876-6160
Website: www.srcsd.com

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Plant Manager

Wendell H. Kido
District Manager

Marcia Maurer
Chief Financial Officer

April 20, 2006
E225.000

Lindsey Alagozian
City of Sacramento
Planning Division
1231 I Street, Room 300
Sacramento, CA 95814

Subject: 500 Capitol Mall
APN: 006-0146-030
Control No. P05-108

Dear Ms. Alagozian:

Both the County Sanitation District 1 (CSD-1) and the Sacramento Regional County Sanitation District (SRCSD) reviewed the subject documents and have the following comments.

The comments sent in a letter dated September 6, 2005 are still valid and are repeated below for your convenience.

The subject property is outside the boundaries of CSD-1 but within the Urban Service Boundary and SRCSD shown on the Sacramento County General Plan. Sacramento City Utilities Department approval will be required for sewage service.

The subject project will not significantly impact CSD-1 Facilities. Further CSD-1 comments and conditions of approval are not needed at this time.

If you have any questions regarding these comments, please call Stephen Moore at (916) 876-6296 or myself at (916) 876-6094.

Sincerely,
Wendy Haggard
Wendy Haggard, P.E.
Department of Water Quality
Development Services

WH/JRO: cc

cc: Melenie Spahn
Amber Schalansky
David Ocenosak
E. M. Kado. AIA. Inc.
1661 Garden Highway, Suite 200
Sacramento, CA 95833

alagozian042006.ltr.doc

Technology in balance with nature

City of Sacramento
Inter-Office Memorandum
Development Service Department

Date: April 17, 2006

To: Lindsey Alagozian

From: Bryon Nakashima

Location: 500 Capitol Mall
Project Name: 500 Capitol Mall
File: P05-108

Conditional review comments:

1. For the ramps either provide a shaft enclosure or submit and Alternate Means per CBC Section 104.2.8 with drawing for approval.
2. On the upper floors the distance between the exit enclosures shall be equal or greater then one-half the length of the maximum overall diagonal dimension of the area served.
3. The exit enclosures shall be continuous and fully enclosed and shall exit directly to the exterior of the building.

Advisory review comments:

1. A fire pump and a fire pump room shall be installed on one of the upper floors for the fire sprinklers.
2. Handicap parking stalls shall comply with CBC Section 1129B.

The above comments are Code requirements and cannot be waived.

DEVELOPMENT SERVICES
DEPARTMENT

CITY OF SACRAMENTO
CALIFORNIA

1231 I STREET
SUITE 200
SACRAMENTO, CA
95814-2998

MEMORANDUM

Date: June 5, 2006

To: Lindsey Alagozian, Development Services Department

From: Anis Ghobril, Development Services Department

SUBJECT: 500 Capitol Mall (P05-108)

I have reviewed the subject project and have the following initial conditions/comments:

1. A traffic study is required for this project to determine if there is a potential for creating any significant impacts;

2. Construct standard improvements as noted in these conditions pursuant to section16.48.110 of the City Code. Improvements shall be designed and constructed to City standards in place at the time that the Building Permit is issued. All improvements shall be designed and constructed to the satisfaction of the Development Engineering and Finance Division. Any public improvement not specifically noted in these conditions shall be designed and constructed to City Standards;

3. Repair or replace/reconstruct any existing deteriorated curb, gutter and sidewalk per City standards and to the satisfaction of the Development Engineering and Finance Division. Any proposed textured paving within the right of way shall be maintained by;

4. Provide additional right-of-way for expanded intersections, if required, at locations specified by and to the satisfaction of the Development Engineering and Finance Division;

5. The site plan shall conform to A.D.A. requirements in all respects. This shall include the replacement of any curb ramp that does not meet current A.D.A. standards;

6. The site plan shall conform to the parking requirements set forth in chapter 17 of City

Development Services
We Help Build A Great City

Code (Zoning Ordinance);

7. The design of walls fences and signage near intersections and driveways shall allow stopping sight distance per Caltrans standards and comply with City Code Section 12.28.010 (25' sight triangle). Walls shall be set back 3' behind the sight line needed for stopping sight distance to allow sufficient room for pilasters. Landscaping in the area required for adequate stopping sight distance shall be limited 3.5' in height at maturity. The area of exclusion shall be determined by the Development Engineering and Finance Division;

8. All new driveways shall be designed and constructed to City Standards to the satisfaction of the Development Engineering and Finance Division;

9. The minimum throat distance for all site driveways shall be 100-feet (throat distance is that distance a vehicle can move from the public right-of-way into a given site before encountering a conflict with parking stalls, aisles, etc). **The entrance to the parking structure does not meet the stacking requirements as currently shown**;

10. The applicant should contact and coordinate with all Dry Utilities Departments to determine how much of a Public Utility Easement do they require to service this site, and also to ensure that there are no conflicts with the design of the building as shown;

11. The proposed loading off 5th Street requires the trucks to back into the building. This is generally is not supported on busy streets. Once the traffic analysis is completed, and depending on the traffic volumes, those maneuvers would be evaluated. One outcome could be a restriction on the times of deliveries to the site;

12. If unusual amounts of bone, stone, or artifacts are uncovered, work within 50 meters of the area will cease immediately and a qualified archaeologist shall be consulted to develop, if necessary, further mitigation measures to reduce any archaeological impact to a less than significant effect before construction resumes. A note shall be placed on the final improvement plans referencing this condition;

13. Prior to submittal of improvement plans for any phase of this project, the developer's design consultant(s) shall participate in a pre-design conference with City staff. The purpose of this conference is to allow City staff and the design consultants to exchange information on project design requirements and to coordinate the improvement plan review process. Contact the Development Engineering and Finance Division, Plan Check Engineer at 808-7493 to schedule the conference. It is strongly recommended that the conference be held as early in the design process as possible;

14. The applicant shall install bulb outs/curb extensions where there is on-street parking in

the Central City within the project boundary. Locations of said improvements shall be approved by the Department of Transportation and the Development Services Department;

15. Additional comments may be provided once the traffic analysis is completed;

CITY OF SACRAMENTO
CALIFORNIA

DEPARTMENT OF TRANSPORTATION
Engineering Services Division

915 I STREET, STE. 2000
SACRAMENTO, CA
95814-2700

PH. (916) 808-8300
FAX (916) 808-7903

May 25, 2006

File Number: P05-108

A. P. N.: 006-0146-030

Project Name: 500 Capitol Mall

Location: 500 Capitol Mall

From: Transportation – Engineering Services – Electrical Section

Comments: This project does not require street lighting. There is an existing street lighting system in this project area. Improvements of right-of-way may require modification to the existing system. Electrical equipment shall be protected and remain functional during construction.

Reviewed By: Art Del Carmen Date: 05/26/2006

Art Del Carmen
Engineering Technician

cc: Scott Tobey, Assistant Engineer

STATE OF CALIFORNIA

Governor's Office of Planning and Research

State Clearinghouse and Planning Unit

Arnold Schwarzenegger
Governor

Sean Walsh
Director

Notice of Preparation

April 13, 2006

To: Reviewing Agencies

Re: 500 Capitol Mall Project
SCH# 2005112038

Attached for your review and comment is the Notice of Preparation (NOP) for the 500 Capitol Mall Project draft Environmental Impact Report (EIR).

Responsible agencies must transmit their comments on the scope and content of the NOP, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of the NOP from the Lead Agency. This is a courtesy notice provided by the State Clearinghouse with a reminder for you to comment in a timely manner. We encourage other agencies to also respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

Scott Johnson
City of Sacramento
2101 Arena Boulevard, Suite 200
Sacramento, CA 95834

with a copy to the State Clearinghouse in the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the environmental document review process, please call the State Clearinghouse at (916) 445-0613.

Sincerely,

Scott Morgan
Project Analyst, State Clearinghouse

Attachments
cc: Lead Agency

1400 TENTH STREET P.O. BOX 3044 SACRAMENTO, CALIFORNIA 95812-3044
TEL (916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

Document Details Report
State Clearinghouse Data Base

SCH# 2005112038
Project Title 500 Capitol Mall Project
Lead Agency Sacramento, City of

Type NOP Notice of Preparation

Description The proposed project is the development of a 24-story (13th floor omitted), 396-foot-tall high-rise building, consisting of 467,942 gross square feet of office space, 27,124 gross square feet of retail space, 264,353 gross square feet of parking garage area, and a total of 794 parking spaces for a total building area of 759,419 square feet.

Lead Agency Contact

Name Scott Johnson
Agency City of Sacramento
Phone (916) 808-5842 **Fax**
email
Address 2101 Arena Boulevard, Suite 200
City Sacramento **State** CA **Zip** 95834

Project Location

County Sacramento
City Sacramento
Region
Cross Streets 5th Street and Capitol Mall
Parcel No. 006-0146-030
Township **Range** **Section** **Base**

Proximity to:

Highways I-5, I-80, Hwy 50
Airports
Railways UPRR
Waterways Sacramento River, American River
Schools Yes
Land Use Office / Central Business District Zone - Special Planning District (C-3-SPD) / Regional Commercial and Offices

---

Project Issues Aesthetic/Visual; Air Quality; Archaeologic-Historic; Noise; Sewer Capacity; Solid Waste; Traffic/Circulation; Water Supply; Landuse

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Reviewing Agencies Resources Agency; Office of Historic Preservation; Department of Parks and Recreation; Department of Water Resources; Department of Fish and Game, Region 2; Department of Health Services; Office of Emergency Services; Native American Heritage Commission; Caltrans, Division of Aeronautics; California Highway Patrol; Caltrans, District 3; Department of Toxic Substances Control; Regional Water Quality Control Bd., Region 5 (Sacramento)

Date Received 04/13/2006 **Start of Review** 04/13/2006 **End of Review** 05/12/2006

Note: Blanks in data fields result from insufficient information provided by lead agency.

OP Distribution List

U46

County: SACRAMENTO

SCH# 2005112033

esources Agency

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- California Coastal Commission
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- Colorado River Board
  Gerald R. Zimmerman
- Dept. of Conservation
  Roseanne Taylor
- California Energy Commission
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  Habitat Conservation Program
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  Tammy Allen
  Inyo/Mono, Habitat Conservation Program
- Dept. of Fish & Game M
  George Isaac
  Marine Region

Other Departments

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  Steve Shaffer
  Dept. of Food and Agriculture
- Depart. of General Services
  Public School Construction
- Dept. of General Services
  Robert Sleppy
  Environmental Services Section
- Dept. of Health Services
  Veronica Ramertz
  Dept. of Health/Drinking Water

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- Office of Emergency Services
  Dennis Castrillo
- Governor's Office of Planning & Research
  State Clearinghouse
- Native American Heritage Comm.
  Debbie Treadway
- Public Utilities Commission
  Ken Lewis
- State Lands Commission
  Jean Sarino
- Tahoe Regional Planning Agency (TRPA)
  Cherry Jacques

Business, Trans & Housing

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  Sandy Hesnard
- Caltrans - Planning
  Terri Pencovic
- California Highway Patrol
  John Olejnik
  Office of Special Projects
- Housing & Community Development
  Lisa Nichols
  Housing Policy Division

Dept. of Transportation

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- Caltrans, District 2
  Marcelino Gonzalez
- Caltrans, District 3
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Cal EPA

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- California Integrated Waste Management Board
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  Division of Financial Assistance
- State Water Resources Control Board
  Student Intern, 401 Water Quality Certification Unit
  Division of Water Quality
- State Water Resouces Control Board
  Steven Herrera
  Division of Water Rights
- Dept. of Toxic Substances Control
  CEQA Tracking Center
- Department of Pesticide Regulation

Regional Water Quality Control Board (RWQCB)

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  North Coast Region (1)
- RWQCB 2
  Environmental Document Coordinator
  San Francisco Bay Region (2)
- RWQCB 3
  Central Coast Region (3)
- RWQCB 4
  Jonathan Bishop
  Los Angeles Region (4)
- RWQCB 5S
  Central Valley Region (5)
  - RWQCB 5F
    Central Valley Region (5)
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- RWQCB 6
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  - RWQCB 6V
    Lahontan Region (6)
    Victorville Branch Office
- RWQCB 7
  Colorado River Basin Region (7)
- RWQCB 8
  Santa Ana Region (8)
- RWQCB 9
  San Diego Region (9)

- Other _____

Last Updated on 08/10/05

5-11-06

Scott Johnson

Re 500 capitalmall
N.O.P.

Please refer to our previous correspondence of August and December, 2005 on this subject for the current N.O.P.

Thanks,

Ken & Muriel Wemmer
500 N St., #1209 Sac 95814

SACRAMENTO CA 957
12 MAY 2006 PM 1 T

City of Sacto. Develop. Svcs. Dept.
Attn: Scott Johnson
Environmental Planning Svcs.
2101 Arena Blvd., Ste 200
Sacramento, CA 95834

DEPARTMENT OF TRANSPORTATION
DIVISION OF AERONAUTICS – M.S.#40
1120 N STREET
P. O. BOX 942873
SACRAMENTO, CA 94273-0001
PHONE (916) 654-4959
FAX (916) 653-9531
TTY (916) 651-6827

Flex your power!
Be energy efficient!

Mr. Scott Johnson
City of Sacramento
2101 Arena Boulevard, Suite 200
Sacramento, CA 95834

April 27, 2006

Dear Mr. Johnson:

Re: City of Sacramento's Revised Notice of Preparation of a Draft Environmental Impact Report for the 500 Capitol Mall Project; SCH# 2005112038

The California Department of Transportation (Caltrans), Division of Aeronautics (Division), reviewed the above-referenced document with respect to airport-related noise and safety impacts and regional aviation land use planning issues pursuant to the California Environmental Quality Act (CEQA). The Division has technical expertise in the areas of airport operations safety, noise and airport land use compatibility. We are a funding agency for airport projects and we have permit authority for public and special use airports and heliports. The following comments are offered for your consideration.

The proposal is for the construction of a 24-story (396-foot) building on a 1.13-acre project site, located on the western portion of the block between 5th and 6th streets and Capitol Mall and N streets in the Central Business District of downtown Sacramento.

The proposal may require submission of a Notice of Proposed Construction or Alteration (Form 7460-1) to the Federal Aviation Administration (FAA) in accordance with Federal Aviation Regulation, Part 77, "Objects Affecting Navigable Airspace". Form 7460-1 is available at http://forms.faa.gov/forms/faa7460-1.pdf.

These comments reflect the areas of concern to the Division of Aeronautics with respect to airport-related noise and safety impacts and regional airport land use planning issues. We advise you to contact our district office concerning surface transportation issues.

Thank you for the opportunity to review and comment on this proposal. If you have any questions, please call me at (916) 654-5314.

Sincerely,

Sandy Hesnard

SANDY HESNARD
Aviation Environmental Specialist

c: State Clearinghouse

DEPARTMENT OF TRANSPORTATION
DISTRICT 3 – SACRAMENTO AREA OFFICE
VENTURE OAKS – MS 15
P.O. BOX 942874
SACRAMENTO, CA 94274-0001
PHONE (916) 274-0614
FAX (916) 274-0648
TTY (530) 741-4509

Flex your power!
Be energy efficient!

May 12, 2006

06SAC0076
500 Capitol Mall (P05-108)
Notice of Preparation for a Draft Environmental Impact Report
SCH# 2005112038

Mr. Scott Johnson
City of Sacramento
2101 Arena Boulevard, Suite 200
Sacramento, CA 95834

Dear Mr. Johnson:

Thank you for the opportunity to review and comment on the Notice of Preparation for a Draft Environmental Impact Report for the 500 Capitol Mall project. The project proposes construction of a 759,419 sq. ft., 24-story, 396 foot high rise building with 467,942 gross square feet (gsf) of office space, 27,124 gsf of retail space, and 794 parking spaces. The project's size was reduced from prior application. Our comments are as follows:

- A Traffic Impact Study (TIS) should be completed. At a minimum, the TIS should consider all possible traffic impacts to all ramps, ramp intersections, and mainline Interstate 5 (I-5) between the I-5/US 50 interchange and I-5/Richards Boulevard interchange. The "Guide for Preparation of Traffic Impact Studies" can be found on our website at: http://www.dot.ca.gov/hq/traffops/developserv/operationalsystems/. We would appreciate the opportunity to review the scope of the TIS before the Study begins.

- Caltrans looks forward to reviewing the City of Sacramento's Downtown Traffic Study, which includes the 500 Capitol Mall project. The project's TIS should incorporate the cumulative findings from the Downtown Traffic Study.

- Any significant impacts to the State Highway System must be mitigated. Feasible mitigation measures include proportional funding for ramp widening, ramp intersection improvements, signalization modification, or mainline bus/carpool lane projects on I-5 (EA 1E610), US 50 (EA 44161), or I-80 (EA 2C990).

If you have any questions about these comments please contact Alyssa Begley at (916) 274-0635.

Sincerely,

BRUCE DE TERRA, Chief
Office of Transportation Planning—South

CSD-1
COUNTY SANITATION DISTRICT 1
Wastewater Collection For a Growing Sacramento

10545 Armstrong Avenue
Mather
California
95655
Tele: (916) 876-6000
Fax: (916) 876-6160
www.csd-1.com

Board of Directors
Representing:

County of Sacramento
City of Citrus Heights
City of Elk Grove
City of Folsom
City of Rancho Cordova
City of Sacramento

Mary K. Snyder
District Engineer

Christoph Dobson
Acting Collection Systems Manager

Wendell H. Kido
District Manager

Marcia Maurer
Chief Financial Officer

April 27, 2006
E225.000

Scott Johnson
City of Sacramento
Development Services Department
2101 Arena Boulevard, Suite 200
Sacramento, CA 95834

Subject: Notice of Preparation (NOP) for an Environmental Impact Report (EIR) for the 500 Capitol Mall Project
APN: 006-0146-030
Control No. P05-108

Dear Mr. Johnson:

Both the County Sanitation District 1 (CSD-1) and the Sacramento Regional County Sanitation District (SRCSD) reviewed the subject documents and have the following comments.

The subject property is outside the boundaries of CSD-1 but within the Urban Service Boundary and SRCSD shown on the Sacramento County General Plan. Sacramento City Utilities Department approval will be required for sewage service.

The subject project will not significantly impact CSD-1 Facilities. Further CSD-1 comments and conditions of approval are not needed at this time.

If you have any questions regarding these comments, please call Stephen Moore at (916) 876-6296 or myself at (916) 876-6094.

Sincerely,

Wendy Haggard

Wendy Haggard, P.E.
Department of Water Quality
Development Services

WH/JRO: cc

cc: Melenie Spahn
Amber Schalansky
David Ocenosak (128-101BC)

johnson042706.ltr.doc

Appendix C

AIR QUALITY MODELING RESULTS

			months	6-nov-06 to 27-nov-06	01-feb-07 to 28-feb-07	1-mar-07 to 19-mar-07	20-mar-07 to 11-apr-07	12-apr-07 to 13-apr-07	16-apr-07 to 27-apr-07
			days	16		13	17	2	10
		NOX Emission in lbs/day							
	Worker Trips	6.09		incorporated in phase			incorporated in phase		
	Demolition	239.07		239.07					
	Sitework	49.37			49.37	49.37	49.37		
	Foundation	28.37				28.37	28.37	28.37	28.37
	Underground Utilities	13.57					13.57	13.57	13.57
	Slab on Grade (SOG)	16.78							16.78
	Steel Erection	6.66							
	Decking / Slabs	16.02							
	Fireproofing	13.19							
	Framing	0							
	Finishing	5.92							
	TOTAL NOX EMISSIONS (lbs/day)			239.07		77.74	91.31	41.94	58.72

30-apr-07 to 24-may-07	25-may-07 to 18-jul-07	15-nov-07 to 19-dec-07	20-dec-07 to 29-feb-08	3-mar-08 to 31-mar-08	1-apr-08 to 21-may-08	22-may-08 to 4-jun-08	5-jun-08 to 31-dec-08	1-jan-09 to 22-jan-09
19	39		52	21	37	10		16
		6.09	6.09	6.09	6.09	6.09	6.09	6.09
28.37	28.37							
16.78								
		6.66	6.66	6.66	6.66			
			16.02	16.02	16.02	16.02		
				13.19	13.19	13.19		
					0	0	0	0
								5.92
		12.75	28.77	41.96	41.96	35.3		12.01

Activity	Activity Start Date	Equipment	Fuel	Hours used per work day	# of days (weekdays only)	Notes
Demolition	6-Nov-06	Water Truck	gas	4	16 days	
	6-Nov-06	Excavator w /claw	diesel	8		
	6-Nov-06	Loader	diesel	4		
	6-Nov-06	Crane	diesel	6		
Sitework	1-Feb-07	Crawler tractor	diesel	4	50 days	
	1-Feb-07	Grader	diesel	8		
	1-Feb-07	Loader	diesel	4		
	1-Feb-07	Compactor (Roller)	diesel	4		
	1-Feb-07	Water Truck	gas	4		
	1-Feb-07	Pile Driver/Drill	diesel	8		
Foundations	1-Mar-07	Water Truck	gas	4	100 days	
	1-Mar-07	Back hoe (2)	diesel	8		
	1-Mar-07	Loader	diesel	4		
	1-Mar-07	Forklift	diesel	4		
Underground Utilities	20-Mar-07	Backhoe	diesel	4	29 days	
	20-Mar-07	Water truck	diesel	4		
Slab on Grade (SOG)	15-Apr-07	Skip loader	diesel	8	29 days	April 15 2007 is a Sunday so date assumed to be Monday April 16
	15-Apr-07	bobcat tractor	diesel	8		
	15-Apr-07	Forklift	diesel	2		
Steel Erection	15-Nov-07	Crane	Electric	8	140 Days	not included in modeling
Tower & Parking	15-Nov-07	Air Compressors (2)	Electric	8		not included in modeling
	15-Nov-07	Welders (2)	diesel	8		Concrete saw changed to Welders with 33hp and .75 load factor
Decking / Slabs	20-Dec-07	Welding Machine	diesel	5	120 Days	Concrete saw changed to Welders with 33hp and .75 load factor
Tower & Parking	20-Dec-07	Generator	diesel	5		modeled as "other equipment"
	20-Dec-07	Concrete pump	diesel	2		Concrete pump assumed as processing equipment in modelling
Fireproofing	1-Mar-08	Spray Machine	gas	7		March 1 2008 is a Saturday so date assumed to be Monday March 3 - Spray Machine modeled as "other equipment"
Interior Framing / Drywall	1-Apr-08	N/A		0	218 days	not modeled
Exterior Framing / Glazing	1-May-08	N/A		0	200 Days	not modeled
Interior Finishes	1-Jan-09	N/A		0		not modeled
Exterior Finishes	1-Jan-09	Forklift	diesel	4		
		Concrete Pump	diesel	2		Concrete pump assumed as processing equipment in modelling

URBEMIS 2002 For Windows 8.7.0

File Name: P:\Projects - All Employees\51121.00 500 Capitol Mall EIR\Staff Folders\MF (do not alter)\Air\500 - Worker Trips.urb
Project Name: 500 - Worker Trips
Project Location: Lower Sacramento Valley Air Basin
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Summer)

CONSTRUCTION EMISSION ESTIMATES

*** 2007 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	5.04	6.09	109.64	0.06	0.45	0.17	0.28

*** 2008 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	4.89	6.01	108.00	0.06	0.45	0.17	0.28

*** 2009 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	4.73	5.92	106.26	0.06	0.45	0.17	0.28

URBEMIS 2002 For Windows 8.7.0

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Project Name: 500 - Worker Trips
Project Location: Lower Sacramento Valley Air Basin
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Winter)

CONSTRUCTION EMISSION ESTIMATES

*** 2007 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	5.04	6.09	109.64	0.06	0.45	0.17	0.28

*** 2008 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	4.89	6.01	108.00	0.06	0.45	0.17	0.28

*** 2009 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	4.73	5.92	106.26	0.06	0.45	0.17	0.28

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Project Name: 500 - Worker Trips
Project Location: Lower Sacramento Valley Air Basin
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Winter)

Construction Start Month and Year: April, 2007
Construction Duration: 22
Total Land Use Area to be Developed: 0 acres
Maximum Acreage Disturbed Per Day: 0 acres
Single Family Units: 0 Multi-Family Units: 0
Retail/Office/Institutional/Industrial Square Footage: 732295

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2007***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Bldg Const Worker Trips	5.04	6.09	109.64	0.06	0.45	0.17	0.28
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	5.04	6.09	109.64	0.06	0.45	0.17	0.28
Max lbs/day all phases	5.04	6.09	109.64	0.06	0.45	0.17	0.28
*** 2008***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Bldg Const Worker Trips	4.89	6.01	108.00	0.06	0.45	0.17	0.28
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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Maximum lbs/day	4.89	6.01	108.00	0.06	0.45	0.17	0.28
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*** 2009***

Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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Phase 3 - Building Construction							
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Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
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Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	4.73	5.92	106.26	0.06	0.45	0.17	0.28
Max lbs/day all phases	4.73	5.92	106.26	0.06	0.45	0.17	0.28

Phase 2 - Site Grading Assumptions: Phase Turned OFF

Phase 3 - Building Construction Assumptions
Start Month/Year for Phase 3: Apr '07
Phase 3 Duration: 22 months
Start Month/Year for SubPhase Building: Apr '07
SubPhase Building Duration: 22 months
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day

SubPhase Architectural Coatings Turned OFF
SubPhase Asphalt Turned OFF

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Construction

The user has overridden the Default Phase Lengths

URBEMIS 2002 For Windows 8.7.0

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(Pounds/Day - Summer)

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Construction Duration: 22
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Maximum Acreage Disturbed Per Day: 0 acres
Single Family Units: 0 Multi-Family Units: 0
Retail/Office/Institutional/Industrial Square Footage: 732295

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2007***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
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*** 2008***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	4.89	6.01	108.00	0.06	0.45	0.17	0.28
Max lbs/day all phases	4.89	6.01	108.00	0.06	0.45	0.17	0.28

*** 2009***

Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Bldg Const Worker Trips	4.73	5.92	106.26	0.06	0.45	0.17	0.28
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	4.73	5.92	106.26	0.06	0.45	0.17	0.28
Max lbs/day all phases	4.73	5.92	106.26	0.06	0.45	0.17	0.28

Phase 2 - Site Grading Assumptions: Phase Turned OFF

Phase 3 - Building Construction Assumptions
Start Month/Year for Phase 3: Apr '07
Phase 3 Duration: 22 months
Start Month/Year for SubPhase Building: Apr '07
SubPhase Building Duration: 22 months
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day

SubPhase Architectural Coatings Turned OFF
SubPhase Asphalt Turned OFF

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Construction

The user has overridden the Default Phase Lengths

URBEMIS 2002 For Windows 8.7.0

File Name: P:\Projects - All Employees\51121.00 500 Capitol Mall EIR\Staff Folders\MF (do not alter)\Air\Sectioned Modeling\500 - Utilities.urb
Project Name: 500 - Utilities
Project Location: Lower Sacramento Valley Air Basin
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Summer)

CONSTRUCTION EMISSION ESTIMATES

*** 2007 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	2.15	13.57	18.34	0.00	11.82	0.52	11.30

URBEMIS 2002 For Windows 8.7.0

File Name: P:\Projects - All Employees\51121.00 500 Capitol Mall EIR\Staff Folders\MF (do not alter)\Air\Sectioned Modeling\500 - Utilities.urb
Project Name: 500 - Utilities
Project Location: Lower Sacramento Valley Air Basin
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Winter)

CONSTRUCTION EMISSION ESTIMATES

*** 2007 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	2.15	13.57	18.34	0.00	11.82	0.52	11.30

URBEMIS 2002 For Windows 8.7.0

File Name: P:\Projects - All Employees\51121.00 500 Capitol Mall EIR\Staff Folders\MF (do not alter)\Air\Sectioned Modeling\500 - Utilities.urb
Project Name: 500 - Utilities
Project Location: Lower Sacramento Valley Air Basin
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Winter)

Construction Start Month and Year: March, 2007
Construction Duration: 1.32
Total Land Use Area to be Developed: 1.13 acres
Maximum Acreage Disturbed Per Day: 1.13 acres

Single Family Units: 0 Multi-Family Units: 0
Retail/Office/Institutional/Industrial Square Footage: 732295

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

Source *** 2007***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	11.30	-	11.30
Off-Road Diesel	2.12	13.51	17.70	-	0.52	0.52	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.03	0.06	0.64	0.00	0.00	0.00	0.00
Maximum lbs/day	2.15	13.57	18.34	0.00	11.82	0.52	11.30
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Bldg Const Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Max lbs/day all phases	2.15	13.57	18.34	0.00	11.82	0.52	11.30

Phase 3 - Building Construction Assumptions: Phase Turned OFF

Phase 2 - Site Grading Assumptions
Start Month/Year for Phase 2: Mar '07
Phase 2 Duration: 1.32 months
On-Road Truck Travel (VMT): 0
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Off Highway Trucks	417	0.490	4.0
1	Tractor/Loaders/Backhoes	79	0.465	4.0

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Construction

The user has overridden the Default Phase Lengths

URBEMIS 2002 For Windows 8.7.0

File Name: P:\Projects - All Employees\51121.00 500 Capitol Mall EIR\Staff Folders\MF (do not alter)\Air\Sectioned Modeling\500 - Utilities.urb
Project Name: 500 - Utilities
Project Location: Lower Sacramento Valley Air Basin
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Summer)

Construction Start Month and Year: March, 2007
Construction Duration: 1.32
Total Land Use Area to be Developed: 1.13 acres
Maximum Acreage Disturbed Per Day: 1.13 acres
Single Family Units: 0 Multi-Family Units: 0
Retail/Office/Institutional/Industrial Square Footage: 732295

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

Source *** 2007***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	11.30	-	11.30
Off-Road Diesel	2.12	13.51	17.70	-	0.52	0.52	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.03	0.06	0.64	0.00	0.00	0.00	0.00
Maximum lbs/day	2.15	13.57	18.34	0.00	11.82	0.52	11.30
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Bldg Const Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Max lbs/day all phases	2.15	13.57	18.34	0.00	11.82	0.52	11.30

Phase 3 - Building Construction Assumptions: Phase Turned OFF

Phase 2 - Site Grading Assumptions
Start Month/Year for Phase 2: Mar '07
Phase 2 Duration: 1.32 months
On-Road Truck Travel (VMT): 0
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Off Highway Trucks	417	0.490	4.0
1	Tractor/Loaders/Backhoes	79	0.465	4.0

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Construction

The user has overridden the Default Phase Lengths

URBEMIS 2002 For Windows 8.7.0

File Name: P:\Projects - All Employees\51121.00 500 Capitol Mall EIR\Staff Folders\MF (do not alter)\Air\Sectioned Modeling\500 - Steel Erection.urb
Project Name: 500 - Steel Erection
Project Location: Lower Sacramento Valley Air Basin
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Summer)

CONSTRUCTION EMISSION ESTIMATES

*** 2007 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	0.87	6.66	6.45	0.00	0.30	0.30	0.00

*** 2008 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	0.87	6.33	6.69	0.00	0.27	0.27	0.00

URBEMIS 2002 For Windows 8.7.0

File Name: P:\Projects - All Employees\51121.00 500 Capitol Mall EIR\Staff Folders\MF (do not alter)\Air\Sectioned Modeling\500 - Steel Erection.urb
Project Name: 500 - Steel Erection
Project Location: Lower Sacramento Valley Air Basin
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Winter)

CONSTRUCTION EMISSION ESTIMATES

*** 2007 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	0.87	6.66	6.45	0.00	0.30	0.30	0.00

*** 2008 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	0.87	6.33	6.69	0.00	0.27	0.27	0.00

URBEMIS 2002 For Windows 8.7.0

File Name: P:\Projects - All Employees\51121.00 500 Capitol Mall EIR\Staff Folders\MF (do not alter)\Air\Sectioned Modeling\500 - Steel Erection.urb
Project Name: 500 - Steel Erection

Project Location: Lower Sacramento Valley Air Basin
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Winter)

Construction Start Month and Year: November, 2007
Construction Duration: 6.37
Total Land Use Area to be Developed: 1.13 acres
Maximum Acreage Disturbed Per Day: 1.13 acres
Single Family Units: 0 Multi-Family Units: 0
Retail/Office/Institutional/Industrial Square Footage: 732295

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2007***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	0.87	6.66	6.45	-	0.30	0.30	0.00
Bldg Const Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.87	6.66	6.45	0.00	0.30	0.30	0.00
Max lbs/day all phases	0.87	6.66	6.45	0.00	0.30	0.30	0.00
*** 2008***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	0.87	6.33	6.69	-	0.27	0.27	0.00
Bldg Const Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.87	6.33	6.69	0.00	0.27	0.27	0.00

Max lbs/day all phases	0.87	6.33	6.69	0.00	0.27	0.27	0.00

Phase 2 - Site Grading Assumptions: Phase Turned OFF

Phase 3 - Building Construction Assumptions
Start Month/Year for Phase 3: Nov '07
Phase 3 Duration: 6.37 months
Start Month/Year for SubPhase Building: Nov '07
SubPhase Building Duration: 6.37 months
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
2	Concrete/Industrial saws	33	0.750	8.0

SubPhase Architectural Coatings Turned OFF
SubPhase Asphalt Turned OFF

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Construction

The user has overridden the Default Phase Lengths

URBEMIS 2002 For Windows 8.7.0

File Name: P:\Projects - All Employees\51121.00 500 Capitol Mall EIR\Staff Folders\MF (do not alter)\Air\Sectioned Modeling\500 - Steel Erection.urb
Project Name: 500 - Steel Erection
Project Location: Lower Sacramento Valley Air Basin
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Summer)

Construction Start Month and Year: November, 2007
Construction Duration: 6.37
Total Land Use Area to be Developed: 1.13 acres
Maximum Acreage Disturbed Per Day: 1.13 acres
Single Family Units: 0 Multi-Family Units: 0
Retail/Office/Institutional/Industrial Square Footage: 732295

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2007***							
Phase 1 - Demolition Emissions							

Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	0.87	6.66	6.45	-	0.30	0.30	0.00
Bldg Const Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.87	6.66	6.45	0.00	0.30	0.30	0.00
Max lbs/day all phases	0.87	6.66	6.45	0.00	0.30	0.30	0.00

*** 2008***

Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	0.87	6.33	6.69	-	0.27	0.27	0.00
Bldg Const Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.87	6.33	6.69	0.00	0.27	0.27	0.00
Max lbs/day all phases	0.87	6.33	6.69	0.00	0.27	0.27	0.00

Phase 2 - Site Grading Assumptions: Phase Turned OFF

Phase 3 - Building Construction Assumptions
Start Month/Year for Phase 3: Nov '07
Phase 3 Duration: 6.37 months

Start Month/Year for SubPhase Building: Nov '07
SubPhase Building Duration: 6.37 months
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
2	Concrete/Industrial saws	33	0.750	8.0

SubPhase Architectural Coatings Turned OFF
SubPhase Asphalt Turned OFF

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Construction

The user has overridden the Default Phase Lengths

URBEMIS 2002 For Windows 8.7.0

File Name: P:\Projects - All Employees\51121.00 500 Capitol Mall EIR\Staff Folders\MF (do not alter)\Air\Sectioned Modeling\500 - SOG.urb
Project Name: 500 - Slab on Grade
Project Location: Lower Sacramento Valley Air Basin
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Summer)

CONSTRUCTION EMISSION ESTIMATES

*** 2007 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	6.34	16.78	116.59	0.06	0.93	0.65	0.28

URBEMIS 2002 For Windows 8.7.0

File Name: P:\Projects - All Employees\51121.00 500 Capitol Mall EIR\Staff Folders\MF (do not alter)\Air\Sectioned Modeling\500 - SOG.urb
Project Name: 500 - Slab on Grade
Project Location: Lower Sacramento Valley Air Basin
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Winter)

CONSTRUCTION EMISSION ESTIMATES

*** 2007 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	6.34	16.78	116.59	0.06	0.93	0.65	0.28

URBEMIS 2002 For Windows 8.7.0

File Name: P:\Projects - All Employees\51121.00 500 Capitol Mall EIR\Staff Folders\MF (do not alter)\Air\Sectioned Modeling\500 - SOG.urb
Project Name: 500 - Slab on Grade
Project Location: Lower Sacramento Valley Air Basin
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Winter)

Construction Start Month and Year: April, 2007
Construction Duration: 1.32
Total Land Use Area to be Developed: 1.13 acres
Maximum Acreage Disturbed Per Day: 1.13 acres

Single Family Units: 0 Multi-Family Units: 0
Retail/Office/Institutional/Industrial Square Footage: 732295

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

Source *** 2007***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	1.49	11.05	11.25	-	0.48	0.48	0.00
Bldg Const Worker Trips	4.85	5.73	105.34	0.06	0.45	0.17	0.28
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	6.34	16.78	116.59	0.06	0.93	0.65	0.28
Max lbs/day all phases	6.34	16.78	116.59	0.06	0.93	0.65	0.28

Phase 2 - Site Grading Assumptions: Phase Turned OFF

Phase 3 - Building Construction Assumptions
Start Month/Year for Phase 3: Apr '07
Phase 3 Duration: 1.32 months
Start Month/Year for SubPhase Building: Apr '07
SubPhase Building Duration: 1.32 months
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Rough Terrain Forklifts	94	0.475	2.0
2	Tractor/Loaders/Backhoes	79	0.465	8.0

SubPhase Architectural Coatings Turned OFF
SubPhase Asphalt Turned OFF

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Construction

The user has overridden the Default Phase Lengths

URBEMIS 2002 For Windows 8.7.0

File Name: P:\Projects - All Employees\51121.00 500 Capitol Mall EIR\Staff Folders\MF (do not alter)\Air\Sectioned Modeling\500 - SOG.urb
Project Name: 500 - Slab on Grade
Project Location: Lower Sacramento Valley Air Basin
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Summer)

Construction Start Month and Year: April, 2007
Construction Duration: 1.32
Total Land Use Area to be Developed: 1.13 acres
Maximum Acreage Disturbed Per Day: 1.13 acres
Single Family Units: 0 Multi-Family Units: 0
Retail/Office/Institutional/Industrial Square Footage: 732295

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2007***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	1.49	11.05	11.25	-	0.48	0.48	0.00
Bldg Const Worker Trips	4.85	5.73	105.34	0.06	0.45	0.17	0.28
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	6.34	16.78	116.59	0.06	0.93	0.65	0.28
Max lbs/day all phases	6.34	16.78	116.59	0.06	0.93	0.65	0.28

Phase 2 - Site Grading Assumptions: Phase Turned OFF

Phase 3 - Building Construction Assumptions
Start Month/Year for Phase 3: Apr '07
Phase 3 Duration: 1.32 months
Start Month/Year for SubPhase Building: Apr '07
SubPhase Building Duration: 1.32 months
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Rough Terrain Forklifts	94	0.475	2.0
2	Tractor/Loaders/Backhoes	79	0.465	8.0

SubPhase Architectural Coatings Turned OFF
SubPhase Asphalt Turned OFF

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Construction

The user has overridden the Default Phase Lengths

URBEMIS 2002 For Windows 8.7.0

File Name: P:\Projects - All Employees\51121.00 500 Capitol Mall EIR\Staff Folders\MF (do not alter)\Air\Sectioned Modeling\500 - Sitework.urb
Project Name: 500 - Sitework
Project Location: Lower Sacramento Valley Air Basin
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Summer)

CONSTRUCTION EMISSION ESTIMATES

*** 2007 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	8.05	49.37	68.88	0.00	13.03	1.72	11.31

URBEMIS 2002 For Windows 8.7.0

File Name: P:\Projects - All Employees\51121.00 500 Capitol Mall EIR\Staff Folders\MF (do not alter)\Air\Sectioned Modeling\500 - Sitework.urb
Project Name: 500 - Sitework
Project Location: Lower Sacramento Valley Air Basin
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Winter)

CONSTRUCTION EMISSION ESTIMATES

*** 2007 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	8.05	49.37	68.88	0.00	13.03	1.72	11.31

URBEMIS 2002 For Windows 8.7.0

File Name: P:\Projects - All Employees\51121.00 500 Capitol Mall EIR\Staff Folders\MF (do not alter)\Air\Sectioned Modeling\500 - Sitework.urb
Project Name: 500 - Sitework
Project Location: Lower Sacramento Valley Air Basin
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Winter)

Construction Start Month and Year: February, 2007
Construction Duration: 2.27
Total Land Use Area to be Developed: 1.13 acres
Maximum Acreage Disturbed Per Day: 1.13 acres

Single Family Units: 0 Multi-Family Units: 0
Retail/Office/Institutional/Industrial Square Footage: 732295

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2007***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	11.30	-	11.30
Off-Road Diesel	7.92	49.12	66.20	-	1.72	1.72	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.13	0.25	2.68	0.00	0.01	0.00	0.01
Maximum lbs/day	8.05	49.37	68.88	0.00	13.03	1.72	11.31
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Bldg Const Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Max lbs/day all phases	8.05	49.37	68.88	0.00	13.03	1.72	11.31

Phase 3 - Building Construction Assumptions: Phase Turned OFF

Phase 2 - Site Grading Assumptions
Start Month/Year for Phase 2: Feb '07
Phase 2 Duration: 2.27 months
On-Road Truck Travel (VMT): 0
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Bore/Drill Rigs	218	0.750	8.0
1	Crawler Tractors	143	0.575	4.0
1	Graders	174	0.575	8.0
1	Off Highway Trucks	417	0.490	4.0
1	Rollers	114	0.430	4.0
1	Tractor/Loaders/Backhoes	79	0.465	4.0

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Construction

The user has overridden the Default Phase Lengths

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URBEMIS 2002 For Windows 8.7.0

File Name: P:\Projects - All Employees\51121.00 500 Capitol Mall EIR\Staff Folders\MF (do not alter)\Air\Sectioned Modeling\500 - Sitework.urb
Project Name: 500 - Sitework
Project Location: Lower Sacramento Valley Air Basin
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Summer)

Construction Start Month and Year: February, 2007
Construction Duration: 2.27
Total Land Use Area to be Developed: 1.13 acres
Maximum Acreage Disturbed Per Day: 1.13 acres
Single Family Units: 0 Multi-Family Units: 0
Retail/Office/Institutional/Industrial Square Footage: 732295

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2007***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	11.30	-	11.30
Off-Road Diesel	7.92	49.12	66.20	-	1.72	1.72	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.13	0.25	2.68	0.00	0.01	0.00	0.01
Maximum lbs/day	8.05	49.37	68.88	0.00	13.03	1.72	11.31
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Bldg Const Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Max lbs/day all phases	8.05	49.37	68.88	0.00	13.03	1.72	11.31

Phase 3 - Building Construction Assumptions: Phase Turned OFF

Phase 2 - Site Grading Assumptions
Start Month/Year for Phase 2: Feb '07
Phase 2 Duration: 2.27 months
On-Road Truck Travel (VMT): 0
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Bore/Drill Rigs	218	0.750	8.0
1	Crawler Tractors	143	0.575	4.0
1	Graders	174	0.575	8.0
1	Off Highway Trucks	417	0.490	4.0
1	Rollers	114	0.430	4.0
1	Tractor/Loaders/Backhoes	79	0.465	4.0

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Construction

The user has overridden the Default Phase Lengths

URBEMIS 2002 For Windows 8.7.0

File Name: P:\Projects - All Employees\51121.00 500 Capitol Mall EIR\Staff Folders\MF (do not alter)\Air\Sectioned Modeling\500 - Decking-Slabs.urb
Project Name: 500 - Decking - Slabs
Project Location: Lower Sacramento Valley Air Basin
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Summer)

CONSTRUCTION EMISSION ESTIMATES

*** 2007 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	2.10	16.02	15.53	0.00	0.71	0.71	0.00

*** 2008 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	2.10	15.24	16.10	0.00	0.65	0.65	0.00

URBEMIS 2002 For Windows 8.7.0

File Name: P:\Projects - All Employees\51121.00 500 Capitol Mall EIR\Staff Folders\MF (do not alter)\Air\Sectioned Modeling\500 - Decking-Slabs.urb
Project Name: 500 - Decking - Slabs
Project Location: Lower Sacramento Valley Air Basin
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Winter)

CONSTRUCTION EMISSION ESTIMATES

*** 2007 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	2.10	16.02	15.53	0.00	0.71	0.71	0.00

*** 2008 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	2.10	15.24	16.10	0.00	0.65	0.65	0.00

URBEMIS 2002 For Windows 8.7.0

File Name: P:\Projects - All Employees\51121.00 500 Capitol Mall EIR\Staff Folders\MF (do not alter)\Air\Sectioned Modeling\500 - Decking-Slabs.urb
Project Name: 500 - Decking - Slabs

Project Location: Lower Sacramento Valley Air Basin
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Winter)

Construction Start Month and Year: December, 2007
Construction Duration: 5.46
Total Land Use Area to be Developed: 1.13 acres
Maximum Acreage Disturbed Per Day: 1.13 acres
Single Family Units: 0 Multi-Family Units: 0
Retail/Office/Institutional/Industrial Square Footage: 732295

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2007***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	2.10	16.02	15.53	-	0.71	0.71	0.00
Bldg Const Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	2.10	16.02	15.53	0.00	0.71	0.71	0.00
Max lbs/day all phases	2.10	16.02	15.53	0.00	0.71	0.71	0.00
*** 2008***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	2.10	15.24	16.10	-	0.65	0.65	0.00
Bldg Const Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	2.10	15.24	16.10	0.00	0.65	0.65	0.00

Max lbs/day all phases	2.10	15.24	16.10	0.00	0.65	0.65	0.00

Phase 2 - Site Grading Assumptions: Phase Turned OFF

Phase 3 - Building Construction Assumptions
Start Month/Year for Phase 3: Dec '07
Phase 3 Duration: 5.46 months
Start Month/Year for SubPhase Building: Dec '07
SubPhase Building Duration: 5.46 months
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Concrete/Industrial saws	33	0.750	5.0
1	Crushing/Processing Equip	154	0.780	2.0
1	Other Equipment	190	0.620	5.0

SubPhase Architectural Coatings Turned OFF
SubPhase Asphalt Turned OFF

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Construction

The user has overridden the Default Phase Lengths

URBEMIS 2002 For Windows 8.7.0

File Name: P:\Projects - All Employees\51121.00 500 Capitol Mall EIR\Staff Folders\MF (do not alter)\Air\Sectioned Modeling\500 - Decking-Slabs.urb
Project Name: 500 - Decking - Slabs
Project Location: Lower Sacramento Valley Air Basin
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Summer)

Construction Start Month and Year: December, 2007
Construction Duration: 5.46
Total Land Use Area to be Developed: 1.13 acres
Maximum Acreage Disturbed Per Day: 1.13 acres
Single Family Units: 0 Multi-Family Units: 0
Retail/Office/Institutional/Industrial Square Footage: 732295

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST

*** 2007***

Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	2.10	16.02	15.53	-	0.71	0.71	0.00
Bldg Const Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	2.10	16.02	15.53	0.00	0.71	0.71	0.00
Max lbs/day all phases	2.10	16.02	15.53	0.00	0.71	0.71	0.00

*** 2008***

Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	2.10	15.24	16.10	-	0.65	0.65	0.00
Bldg Const Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	2.10	15.24	16.10	0.00	0.65	0.65	0.00
Max lbs/day all phases	2.10	15.24	16.10	0.00	0.65	0.65	0.00

Phase 2 - Site Grading Assumptions: Phase Turned OFF

Phase 3 - Building Construction Assumptions

Start Month/Year for Phase 3: Dec '07
Phase 3 Duration: 5.46 months
Start Month/Year for SubPhase Building: Dec '07
SubPhase Building Duration: 5.46 months
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Concrete/Industrial saws	33	0.750	5.0
1	Crushing/Processing Equip	154	0.780	2.0
1	Other Equipment	190	0.620	5.0

SubPhase Architectural Coatings Turned OFF
SubPhase Asphalt Turned OFF

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Construction

The user has overridden the Default Phase Lengths

URBEMIS 2002 For Windows 8.7.0

File Name: P:\Projects - All Employees\51121.00 500 Capitol Mall EIR\Staff Folders\MF (do not alter)\Air\Sectioned Modeling\500 - Demolition.urb
Project Name: 500 - Demolition
Project Location: Lower Sacramento Valley Air Basin
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Summer)

CONSTRUCTION EMISSION ESTIMATES

*** 2006 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	15.50	239.07	82.17	3.02	61.61	5.65	55.96

URBEMIS 2002 For Windows 8.7.0

File Name: P:\Projects - All Employees\51121.00 500 Capitol Mall EIR\Staff Folders\MF (do not alter)\Air\Sectioned Modeling\500 - Demolition.urb
Project Name: 500 - Demolition
Project Location: Lower Sacramento Valley Air Basin
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Winter)

CONSTRUCTION EMISSION ESTIMATES

*** 2006 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	15.50	239.07	82.17	3.02	61.61	5.65	55.96

URBEMIS 2002 For Windows 8.7.0

File Name: P:\Projects - All Employees\51121.00 500 Capitol Mall EIR\Staff Folders\MF (do not alter)\Air\Sectioned Modeling\500 - Demolition.urb
Project Name: 500 - Demolition
Project Location: Lower Sacramento Valley Air Basin
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Winter)

Construction Start Month and Year: November, 2006
Construction Duration: 0.73
Total Land Use Area to be Developed: 0 acres
Maximum Acreage Disturbed Per Day: 0 acres

Single Family Units: 0 Multi-Family Units: 0
Retail/Office/Institutional/Industrial Square Footage: 732295

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

Source *** 2006***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	55.19	-	55.19
Off-Road Diesel	5.04	31.45	42.42	-	1.20	1.20	0.00
On-Road Diesel	10.40	207.47	38.37	3.02	5.22	4.45	0.77
Worker Trips	0.06	0.15	1.38	0.00	0.00	0.00	0.00
Maximum lbs/day	15.50	239.07	82.17	3.02	61.61	5.65	55.96
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Bldg Const Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Max lbs/day all phases	15.50	239.07	82.17	3.02	61.61	5.65	55.96

Phase 3 - Building Construction Assumptions: Phase Turned OFF
Start Month/Year for Phase 1: Nov '06
Phase 1 Duration: .73 months
Building Volume Total (cubic feet): 2229530.88
Building Volume Daily (cubic feet): 131400
On-Road Truck Travel (VMT): 7299
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Cranes	190	0.430	6.0
1	Excavators	180	0.580	8.0
1	Off Highway Trucks	417	0.490	4.0
1	Tractor/Loaders/Backhoes	79	0.465	4.0

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Construction

The user has overridden the Default Phase Lengths

URBEMIS 2002 For Windows 8.7.0

File Name: P:\Projects - All Employees\51121.00 500 Capitol Mall EIR\Staff Folders\MF (do not alter)\Air\Sectioned Modeling\500 - Demolition.urb
Project Name: 500 - Demolition
Project Location: Lower Sacramento Valley Air Basin
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Summer)

Construction Start Month and Year: November, 2006
Construction Duration: 0.73
Total Land Use Area to be Developed: 0 acres
Maximum Acreage Disturbed Per Day: 0 acres
Single Family Units: 0 Multi-Family Units: 0
Retail/Office/Institutional/Industrial Square Footage: 732295

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2006***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	55.19	-	55.19
Off-Road Diesel	5.04	31.45	42.42	-	1.20	1.20	0.00
On-Road Diesel	10.40	207.47	38.37	3.02	5.22	4.45	0.77
Worker Trips	0.06	0.15	1.38	0.00	0.00	0.00	0.00
Maximum lbs/day	15.50	239.07	82.17	3.02	61.61	5.65	55.96
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Bldg Const Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Max lbs/day all phases	15.50	239.07	82.17	3.02	61.61	5.65	55.96

Phase 3 - Building Construction Assumptions: Phase Turned OFF
Start Month/Year for Phase 1: Nov '06
Phase 1 Duration: .73 months
Building Volume Total (cubic feet): 2229530.88
Building Volume Daily (cubic feet): 131400
On-Road Truck Travel (VMT): 7299
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Cranes	190	0.430	6.0
1	Excavators	180	0.580	8.0
1	Off Highway Trucks	417	0.490	4.0
1	Tractor/Loaders/Backhoes	79	0.465	4.0

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Construction

The user has overridden the Default Phase Lengths

URBEMIS 2002 For Windows 8.7.0

File Name: P:\Projects - All Employees\51121.00 500 Capitol Mall EIR\Staff Folders\MF (do not alter)\Air\Sectioned Modeling\500 - Finishing.urb
Project Name: 500 - Finishing
Project Location: Lower Sacramento Valley Air Basin
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Summer)

CONSTRUCTION EMISSION ESTIMATES

*** 2009 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	0.92	5.92	7.55	0.00	0.22	0.22	0.00

URBEMIS 2002 For Windows 8.7.0

File Name: P:\Projects - All Employees\51121.00 500 Capitol Mall EIR\Staff Folders\MF (do not alter)\Air\Sectioned Modeling\500 - Finishing.urb
Project Name: 500 - Finishing
Project Location: Lower Sacramento Valley Air Basin
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Winter)

CONSTRUCTION EMISSION ESTIMATES

*** 2009 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	0.92	5.92	7.55	0.00	0.22	0.22	0.00

URBEMIS 2002 For Windows 8.7.0

File Name: P:\Projects - All Employees\51121.00 500 Capitol Mall EIR\Staff Folders\MF (do not alter)\Air\Sectioned Modeling\500 - Finishing.urb
Project Name: 500 - Finishing
Project Location: Lower Sacramento Valley Air Basin
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Winter)

Construction Start Month and Year: January, 2009
Construction Duration: 0.73
Total Land Use Area to be Developed: 0 acres
Maximum Acreage Disturbed Per Day: 0 acres

Single Family Units: 0 Multi-Family Units: 0
Retail/Office/Institutional/Industrial Square Footage: 732295

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2009***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	0.92	5.92	7.55	-	0.22	0.22	0.00
Bldg Const Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.92	5.92	7.55	0.00	0.22	0.22	0.00
Max lbs/day all phases	0.92	5.92	7.55	0.00	0.22	0.22	0.00

Phase 2 - Site Grading Assumptions: Phase Turned OFF

Phase 3 - Building Construction Assumptions
Start Month/Year for Phase 3: Jan '09
Phase 3 Duration: .73 months
Start Month/Year for SubPhase Building: Jan '09
SubPhase Building Duration: .73 months
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Crushing/Processing Equip	154	0.780	2.0
1	Rough Terrain Forklifts	94	0.475	4.0

SubPhase Architectural Coatings Turned OFF
SubPhase Asphalt Turned OFF

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Construction

The user has overridden the Default Phase Lengths

URBEMIS 2002 For Windows 8.7.0

File Name: P:\Projects - All Employees\51121.00 500 Capitol Mall EIR\Staff Folders\MF (do not alter)\Air\Sectioned Modeling\500 - Finishing.urb
Project Name: 500 - Finishing
Project Location: Lower Sacramento Valley Air Basin
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Summer)

Construction Start Month and Year: January, 2009
Construction Duration: 0.73
Total Land Use Area to be Developed: 0 acres
Maximum Acreage Disturbed Per Day: 0 acres
Single Family Units: 0 Multi-Family Units: 0
Retail/Office/Institutional/Industrial Square Footage: 732295

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2009***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	0.92	5.92	7.55	-	0.22	0.22	0.00
Bldg Const Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.92	5.92	7.55	0.00	0.22	0.22	0.00
Max lbs/day all phases	0.92	5.92	7.55	0.00	0.22	0.22	0.00

Phase 2 - Site Grading Assumptions: Phase Turned OFF

Phase 3 - Building Construction Assumptions
Start Month/Year for Phase 3: Jan '09
Phase 3 Duration: .73 months
Start Month/Year for SubPhase Building: Jan '09
SubPhase Building Duration: .73 months
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Crushing/Processing Equip	154	0.780	2.0
1	Rough Terrain Forklifts	94	0.475	4.0

SubPhase Architectural Coatings Turned OFF
SubPhase Asphalt Turned OFF

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Construction

The user has overridden the Default Phase Lengths

URBEMIS 2002 For Windows 8.7.0

File Name: P:\Projects - All Employees\51121.00 500 Capitol Mall EIR\Staff Folders\MF (do not alter)\Air\Sectioned Modeling\500 - Fireproofing.urb
Project Name: 500 - Fireproofing
Project Location: Lower Sacramento Valley Air Basin
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Summer)

CONSTRUCTION EMISSION ESTIMATES

*** 2008 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	1.82	13.19	13.93	0.00	0.56	0.56	0.00

URBEMIS 2002 For Windows 8.7.0

File Name: P:\Projects - All Employees\51121.00 500 Capitol Mall EIR\Staff Folders\MF (do not alter)\Air\Sectioned Modeling\500 - Fireproofing.urb
Project Name: 500 - Fireproofing
Project Location: Lower Sacramento Valley Air Basin
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Winter)

CONSTRUCTION EMISSION ESTIMATES

*** 2008 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	1.82	13.19	13.93	0.00	0.56	0.56	0.00

URBEMIS 2002 For Windows 8.7.0

File Name: P:\Projects - All Employees\51121.00 500 Capitol Mall EIR\Staff Folders\MF (do not alter)\Air\Sectioned Modeling\500 - Fireproofing.urb
Project Name: 500 - Fireproofing
Project Location: Lower Sacramento Valley Air Basin
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Winter)

Construction Start Month and Year: March, 2008
Construction Duration: 3.1
Total Land Use Area to be Developed: 1.13 acres
Maximum Acreage Disturbed Per Day: 1.13 acres

Single Family Units: 0 Multi-Family Units: 0
Retail/Office/Institutional/Industrial Square Footage: 732295

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2008***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	1.82	13.19	13.93	-	0.56	0.56	0.00
Bldg Const Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	1.82	13.19	13.93	0.00	0.56	0.56	0.00
Max lbs/day all phases	1.82	13.19	13.93	0.00	0.56	0.56	0.00

Phase 2 - Site Grading Assumptions: Phase Turned OFF

Phase 3 - Building Construction Assumptions
Start Month/Year for Phase 3: Mar '08
Phase 3 Duration: 3.1 months
Start Month/Year for SubPhase Building: Mar '08
SubPhase Building Duration: 3.1 months
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Other Equipment	190	0.620	7.0

SubPhase Architectural Coatings Turned OFF
SubPhase Asphalt Turned OFF

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Construction

The user has overridden the Default Phase Lengths

URBEMIS 2002 For Windows 8.7.0

File Name: P:\Projects - All Employees\51121.00 500 Capitol Mall EIR\Staff Folders\MF (do not alter)\Air\Sectioned Modeling\500 - Fireproofing.urb
Project Name: 500 - Fireproofing
Project Location: Lower Sacramento Valley Air Basin
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Summer)

Construction Start Month and Year: March, 2008
Construction Duration: 3.1
Total Land Use Area to be Developed: 1.13 acres
Maximum Acreage Disturbed Per Day: 1.13 acres
Single Family Units: 0 Multi-Family Units: 0
Retail/Office/Institutional/Industrial Square Footage: 732295

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2008***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	1.82	13.19	13.93	-	0.56	0.56	0.00
Bldg Const Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	1.82	13.19	13.93	0.00	0.56	0.56	0.00
Max lbs/day all phases	1.82	13.19	13.93	0.00	0.56	0.56	0.00

Phase 2 - Site Grading Assumptions: Phase Turned OFF

Phase 3 - Building Construction Assumptions
Start Month/Year for Phase 3: Mar '08
Phase 3 Duration: 3.1 months
Start Month/Year for SubPhase Building: Mar '08
SubPhase Building Duration: 3.1 months
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Other Equipment	190	0.620	7.0

SubPhase Architectural Coatings Turned OFF
SubPhase Asphalt Turned OFF

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Construction

The user has overridden the Default Phase Lengths

URBEMIS 2002 For Windows 8.7.0

File Name: P:\Projects - All Employees\51121.00 500 Capitol Mall EIR\Staff Folders\MF (do not alter)\Air\Sectioned Modeling\500 - Foundation.urb
Project Name: 500 - Foundation
Project Location: Lower Sacramento Valley Air Basin
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Summer)

CONSTRUCTION EMISSION ESTIMATES

*** 2007 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	4.23	28.37	34.95	0.00	12.46	1.15	11.31

URBEMIS 2002 For Windows 8.7.0

File Name: P:\Projects - All Employees\51121.00 500 Capitol Mall EIR\Staff Folders\MF (do not alter)\Air\Sectioned Modeling\500 - Foundation.urb
Project Name: 500 - Foundation
Project Location: Lower Sacramento Valley Air Basin
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Winter)

CONSTRUCTION EMISSION ESTIMATES

*** 2007 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	4.23	28.37	34.95	0.00	12.46	1.15	11.31

URBEMIS 2002 For Windows 8.7.0

File Name: P:\Projects - All Employees\51121.00 500 Capitol Mall EIR\Staff Folders\MF (do not alter)\Air\Sectioned Modeling\500 - Foundation.urb
Project Name: 500 - Foundation
Project Location: Lower Sacramento Valley Air Basin
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Winter)

Construction Start Month and Year: March, 2007
Construction Duration: 4.55
Total Land Use Area to be Developed: 1.13 acres
Maximum Acreage Disturbed Per Day: 1.13 acres

Single Family Units: 0 Multi-Family Units: 0
Retail/Office/Institutional/Industrial Square Footage: 732295

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2007***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	11.30	-	11.30
Off-Road Diesel	4.14	28.19	33.02	-	1.15	1.15	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.09	0.18	1.93	0.00	0.01	0.00	0.01
Maximum lbs/day	4.23	28.37	34.95	0.00	12.46	1.15	11.31
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Bldg Const Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Max lbs/day all phases	4.23	28.37	34.95	0.00	12.46	1.15	11.31

Phase 3 - Building Construction Assumptions: Phase Turned OFF

Phase 2 - Site Grading Assumptions
Start Month/Year for Phase 2: Mar '07
Phase 2 Duration: 4.55 months
On-Road Truck Travel (VMT): 0
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Off Highway Trucks	417	0.490	4.0
1	Rough Terrain Forklifts	94	0.475	4.0
3	Tractor/Loaders/Backhoes	79	0.465	8.0

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Construction

The user has overridden the Default Phase Lengths

URBEMIS 2002 For Windows 8.7.0

File Name: P:\Projects - All Employees\51121.00 500 Capitol Mall EIR\Staff Folders\MF (do not alter)\Air\Sectioned Modeling\500 - Foundation.urb
Project Name: 500 - Foundation
Project Location: Lower Sacramento Valley Air Basin
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Summer)

Construction Start Month and Year: March, 2007
Construction Duration: 4.55
Total Land Use Area to be Developed: 1.13 acres
Maximum Acreage Disturbed Per Day: 1.13 acres
Single Family Units: 0 Multi-Family Units: 0
Retail/Office/Institutional/Industrial Square Footage: 732295

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2007***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	11.30	-	11.30
Off-Road Diesel	4.14	28.19	33.02	-	1.15	1.15	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.09	0.18	1.93	0.00	0.01	0.00	0.01
Maximum lbs/day	4.23	28.37	34.95	0.00	12.46	1.15	11.31
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Bldg Const Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Max lbs/day all phases	4.23	28.37	34.95	0.00	12.46	1.15	11.31

Phase 3 - Building Construction Assumptions: Phase Turned OFF

Phase 2 - Site Grading Assumptions
Start Month/Year for Phase 2: Mar '07
Phase 2 Duration: 4.55 months
On-Road Truck Travel (VMT): 0
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Off Highway Trucks	417	0.490	4.0
1	Rough Terrain Forklifts	94	0.475	4.0
3	Tractor/Loaders/Backhoes	79	0.465	8.0

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Construction

The user has overridden the Default Phase Lengths

URBEMIS 2002 For Windows 8.7.0

File Name: P:\Projects - All Employees\51121.00 500 Capitol Mall EIR\Staff Folders\MF (do not alter)\Air\Sectioned Modeling\500 - Operation.urb
Project Name: 500 Capitol Mall - Operation
Project Location: Lower Sacramento Valley Air Basin
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Summer)

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	7.38	3.39	4.16	0.00	0.01

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	44.57	53.42	526.71	0.34	57.74

SUM OF AREA AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	51.95	56.81	530.87	0.34	57.74

URBEMIS 2002 For Windows 8.7.0

File Name: P:\Projects - All Employees\51121.00 500 Capitol Mall EIR\Staff Folders\MF (do not alter)\Air\Sectioned Modeling\500 - Operation.urb
Project Name: 500 Capitol Mall - Operation
Project Location: Lower Sacramento Valley Air Basin
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Winter)

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	7.18	3.38	2.84	0.00	0.01

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	49.69	80.14	605.87	0.33	57.74

SUM OF AREA AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	56.87	83.52	608.71	0.33	57.74

URBEMIS 2002 For Windows 8.7.0

File Name: P:\Projects - All Employees\51121.00 500 Capitol Mall EIR\Staff Folders\MF (do not alter)\Air\Sectioned Modeling\500 - Operation.urb
Project Name: 500 Capitol Mall - Operation
Project Location: Lower Sacramento Valley Air Basin
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Winter)

AREA SOURCE EMISSION ESTIMATES (Winter Pounds per Day, Unmitigated)

Source	ROG	NOx	CO	SO2	PM10
Natural Gas	0.25	3.38	2.84	0	0.01
Hearth	0.00	0.00	0.00	0.00	0.00
Landscaping - No winter emissions					
Consumer Prdcts	0.00	-	-	-	-
Architectural Coatings	6.94	-	-	-	-
TOTALS(lbs/day,unmitigated)	7.18	3.38	2.84	0.00	0.01

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Strip mall	18.03	28.37	217.29	0.12	20.16
General office building	31.66	51.77	388.58	0.22	37.58
TOTAL EMISSIONS (lbs/day)	49.69	80.14	605.87	0.33	57.74

Does not include correction for passby trips.
Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2009 Temperature (F): 40 Season: Winter

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Units	Total Trips
Strip mall		107.21 trips/1000 sq. ft.	27.12	2,908.00
General office building		9.35 trips/1000 sq. ft.	467.94	4,377.00
		Sum of Total Trips		7,285.00
		Total Vehicle Miles Traveled		38,029.86

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.90	1.30	98.40	0.30
Light Truck < 3,750 lbs	15.10	2.60	95.40	2.00
Light Truck 3,751- 5,750	16.10	1.20	98.10	0.70
Med Truck 5,751- 8,500	7.30	1.40	95.90	2.70
Lite-Heavy 8,501-10,000	1.10	0.00	81.80	18.20
Lite-Heavy 10,001-14,000	0.30	0.00	66.70	33.30
Med-Heavy 14,001-33,000	1.00	0.00	20.00	80.00
Heavy-Heavy 33,001-60,000	0.90	0.00	11.10	88.90

Line Haul > 60,000	lbs	0.00	0.00	0.00	100.00
Urban Bus		0.20	0.00	50.00	50.00
Motorcycle		1.60	75.00	25.00	0.00
School Bus		0.10	0.00	0.00	100.00
Motor Home		1.40	7.10	85.70	7.20

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	9.7	3.8	4.6	7.8	4.5	4.5
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip Speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	27.3	21.2	51.5			

% of Trips - Commercial (by land use)

Strip mall	2.0	1.0	97.0
General office building	35.0	17.5	47.5

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Area

The hearth option switch changed from on to off.
The consumer products option switch changed from on to off.
The natural gas residential percentage changed from 60 to 0.
The landscape year changed from 2005 to 2009.

Changes made to the default values for Operations

The operational emission year changed from 2005 to 2009.

URBEMIS 2002 For Windows 8.7.0

File Name: P:\Projects - All Employees\51121.00 500 Capitol Mall EIR\Staff Folders\MF (do not alter)\Air\Sectioned Modeling\500 - Operation.urb
Project Name: 500 Capitol Mall - Operation
Project Location: Lower Sacramento Valley Air Basin
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Summer)

AREA SOURCE EMISSION ESTIMATES (Summer Pounds per Day, Unmitigated)

Source	ROG	NOx	CO	SO2	PM10
Natural Gas	0.25	3.38	2.84	0	0.01
Hearth - No summer emissions					
Landscaping	0.19	0.01	1.32	0.00	0.00
Consumer Prdcts	0.00	-	-	-	-
Architectural Coatings	6.94	-	-	-	-
TOTALS(lbs/day,unmitigated)	7.38	3.39	4.16	0.00	0.01

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Strip mall	14.07	18.97	182.00	0.12	20.16
General office building	30.50	34.45	344.71	0.22	37.58
TOTAL EMISSIONS (lbs/day)	44.57	53.42	526.71	0.34	57.74

Does not include correction for passby trips.
Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2009 Temperature (F): 85 Season: Summer

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Units	Total Trips
Strip mall		107.21 trips/1000 sq. ft.	27.12	2,908.00
General office building		9.35 trips/1000 sq. ft.	467.94	4,377.00
		Sum of Total Trips		7,285.00
		Total Vehicle Miles Traveled		38,029.86

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.90	1.30	98.40	0.30
Light Truck < 3,750 lbs	15.10	2.60	95.40	2.00
Light Truck 3,751- 5,750	16.10	1.20	98.10	0.70
Med Truck 5,751- 8,500	7.30	1.40	95.90	2.70
Lite-Heavy 8,501-10,000	1.10	0.00	81.80	18.20
Lite-Heavy 10,001-14,000	0.30	0.00	66.70	33.30
Med-Heavy 14,001-33,000	1.00	0.00	20.00	80.00
Heavy-Heavy 33,001-60,000	0.90	0.00	11.10	88.90
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.20	0.00	50.00	50.00
Motorcycle	1.60	75.00	25.00	0.00
School Bus	0.10	0.00	0.00	100.00
Motor Home	1.40	7.10	85.70	7.20

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	9.7	3.8	4.6	7.8	4.5	4.5
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip Speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	27.3	21.2	51.5			
% of Trips - Commercial (by land use)						
Strip mall				2.0	1.0	97.0
General office building				35.0	17.5	47.5

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Area

The hearth option switch changed from on to off.
The consumer products option switch changed from on to off.
The natural gas residential percentage changed from 60 to 0.
The landscape year changed from 2005 to 2009.

Changes made to the default values for Operations

The operational emission year changed from 2005 to 2009.

URBEMIS 2002 For Windows 8.7.0

File Name: P:\Projects - All Employees\51121.00 500 Capitol Mall EIR\Staff Folders\MF (do not alter)\Air\ALTS\500 - ALTS.urb
Project Name: 500 Capitol Mall - ALTS
Project Location: Lower Sacramento Valley Air Basin
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Summer)

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	5.09	2.34	3.28	0.00	0.01

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	34.28	41.79	410.36	0.26	45.05

SUM OF AREA AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	39.36	44.13	413.64	0.26	45.06

URBEMIS 2002 For Windows 8.7.0

File Name: P:\Projects - All Employees\51121.00 500 Capitol Mall EIR\Staff Folders\MF (do not alter)\Air\ALTS\500 - ALTS.urb
Project Name: 500 Capitol Mall - ALTS
Project Location: Lower Sacramento Valley Air Basin
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Winter)

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	4.89	2.33	1.96	0.00	0.00

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	39.01	62.67	474.72	0.26	45.05

SUM OF AREA AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	43.90	65.00	476.67	0.26	45.06

URBEMIS 2002 For Windows 8.7.0

File Name: P:\Projects - All Employees\51121.00 500 Capitol Mall EIR\Staff Folders\MF (do not alter)\Air\ALTS\500 - ALTS.urb
Project Name: 500 Capitol Mall - ALTS
Project Location: Lower Sacramento Valley Air Basin
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Winter)

AREA SOURCE EMISSION ESTIMATES (Winter Pounds per Day, Unmitigated)

Source	ROG	NOx	CO	SO2	PM10
Natural Gas	0.17	2.33	1.96	0	0.00
Hearth	0.00	0.00	0.00	0.00	0.00
Landscaping - No winter emissions					
Consumer Prdcts	0.00	-	-	-	-
Architectural Coatings	4.72	-	-	-	-
TOTALS(lbs/day,unmitigated)	4.89	2.33	1.96	0.00	0.00

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UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Strip mall	18.03	28.37	217.29	0.12	20.16
General office building	20.97	34.30	257.43	0.14	24.90
TOTAL EMISSIONS (lbs/day)	39.01	62.67	474.72	0.26	45.05

Does not include correction for passby trips.
Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2009 Temperature (F): 40 Season: Winter

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Units	Total Trips
Strip mall		107.21 trips/1000 sq. ft.	27.12	2,908.00
General office building		9.35 trips/1000 sq. ft.	310.00	2,899.65

Sum of Total Trips 5,807.65
Total Vehicle Miles Traveled 29,675.47

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.90	1.30	98.40	0.30
Light Truck < 3,750 lbs	15.10	2.60	95.40	2.00
Light Truck 3,751- 5,750	16.10	1.20	98.10	0.70
Med Truck 5,751- 8,500	7.30	1.40	95.90	2.70
Lite-Heavy 8,501-10,000	1.10	0.00	81.80	18.20
Lite-Heavy 10,001-14,000	0.30	0.00	66.70	33.30
Med-Heavy 14,001-33,000	1.00	0.00	20.00	80.00
Heavy-Heavy 33,001-60,000	0.90	0.00	11.10	88.90

Line Haul > 60,000	lbs	0.00	0.00	0.00	100.00
Urban Bus		0.20	0.00	50.00	50.00
Motorcycle		1.60	75.00	25.00	0.00
School Bus		0.10	0.00	0.00	100.00
Motor Home		1.40	7.10	85.70	7.20

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	9.7	3.8	4.6	7.8	4.5	4.5
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip Speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	27.3	21.2	51.5			

% of Trips - Commercial (by land use)

Strip mall	2.0	1.0	97.0
General office building	35.0	17.5	47.5

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Area

The hearth option switch changed from on to off.
The consumer products option switch changed from on to off.
The natural gas residential percentage changed from 60 to 0.
The landscape year changed from 2005 to 2009.

Changes made to the default values for Operations

The operational emission year changed from 2005 to 2009.

URBEMIS 2002 For Windows 8.7.0

File Name: P:\Projects - All Employees\51121.00 500 Capitol Mall EIR\Staff Folders\MF (do not alter)\Air\ALTS\500 - ALTS.urb
Project Name: 500 Capitol Mall - ALTS
Project Location: Lower Sacramento Valley Air Basin
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Summer)

AREA SOURCE EMISSION ESTIMATES (Summer Pounds per Day, Unmitigated)

Source	ROG	NOx	CO	SO2	PM10
Natural Gas	0.17	2.33	1.96	0	0.00
Hearth - No summer emissions					
Landscaping	0.19	0.01	1.32	0.00	0.00
Consumer Prdcts	0.00	-	-	-	-
Architectural Coatings	4.72	-	-	-	-
TOTALS(lbs/day,unmitigated)	5.09	2.34	3.28	0.00	0.01

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Strip mall	14.07	18.97	182.00	0.12	20.16
General office building	20.21	22.82	228.36	0.15	24.90
TOTAL EMISSIONS (lbs/day)	34.28	41.79	410.36	0.26	45.05

Does not include correction for passby trips.
Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2009 Temperature (F): 85 Season: Summer

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Units	Total Trips
Strip mall		107.21 trips/1000 sq. ft.	27.12	2,908.00
General office building		9.35 trips/1000 sq. ft.	310.00	2,899.65
		Sum of Total Trips		5,807.65
		Total Vehicle Miles Traveled		29,675.47

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.90	1.30	98.40	0.30
Light Truck < 3,750 lbs	15.10	2.60	95.40	2.00
Light Truck 3,751- 5,750	16.10	1.20	98.10	0.70
Med Truck 5,751- 8,500	7.30	1.40	95.90	2.70
Lite-Heavy 8,501-10,000	1.10	0.00	81.80	18.20
Lite-Heavy 10,001-14,000	0.30	0.00	66.70	33.30
Med-Heavy 14,001-33,000	1.00	0.00	20.00	80.00
Heavy-Heavy 33,001-60,000	0.90	0.00	11.10	88.90
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.20	0.00	50.00	50.00
Motorcycle	1.60	75.00	25.00	0.00
School Bus	0.10	0.00	0.00	100.00
Motor Home	1.40	7.10	85.70	7.20

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	9.7	3.8	4.6	7.8	4.5	4.5
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip Speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	27.3	21.2	51.5			

% of Trips - Commercial (by land use)

Strip mall	2.0	1.0	97.0
General office building	35.0	17.5	47.5

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Area

The hearth option switch changed from on to off.
The consumer products option switch changed from on to off.
The natural gas residential percentage changed from 60 to 0.
The landscape year changed from 2005 to 2009.

Changes made to the default values for Operations

The operational emission year changed from 2005 to 2009.

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Number: D51121.00
Project Title: 500 Capitol Mall

Background Information

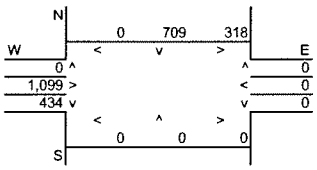
Nearest Air Monitoring Station measuring CO:	T Street
Background 1-hour CO Concentration (ppm):	4.6
Background 8-hour CO Concentration (ppm):	3.6
Persistence Factor:	0.8
Analysis Year:	2009

Roadway Data

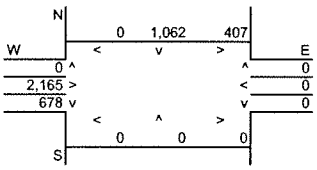
Intersection: 15th & J
Analysis Condition: Cumulative 2030 Plus Project

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	15th Street	At Grade	2	20	10
East-West Roadway:	J Street	At Grade	2	20	10

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	1,143	N-S Road:	1,740
E-W Road:	1,533	E-W Road:	2,843

Roadway CO Contributions and Concentrations
Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 Reference CO Concentrations 25 Feet	A_2 50 Feet	A_3 100 Feet	B Traffic Volume	C Emission Factors[2]	Estimated CO Concentrations 25 Feet	50 Feet	100 Feet
A.M. Peak Traffic Hour								
North-South Road	2.7	2.2	1.7	1,143	4.97	0.15	0.13	0.10
East-West Road	7.6	5.7	4.0	1,533	4.97	0.58	0.43	0.31
P.M. Peak Traffic Hour								
North-South Road	2.7	2.2	1.7	1,740	6.92	0.33	0.26	0.20
East-West Road	7.6	5.7	4.0	2,843	6.92	1.49	1.12	0.79

[1] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
[2] Emission factors from EMFAC2002 (2003).

Total Roadway CO Concentrations
Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
25 Feet from Roadway Edge	5.3	6.4	5.1
50 Feet from Roadway Edge	5.1	5.9	4.7
100 Feet from Roadway Edge	5.0	5.5	4.4

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Number: D51121.00
Project Title: 500 Capitol Mall

Background Information

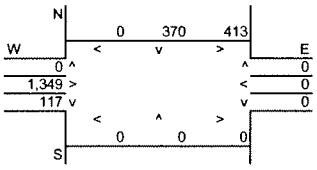
Nearest Air Monitoring Station measuring CO:	T Street
Background 1-hour CO Concentration (ppm):	4.6
Background 8-hour CO Concentration (ppm):	3.6
Persistence Factor:	0.8
Analysis Year:	2009

Roadway Data

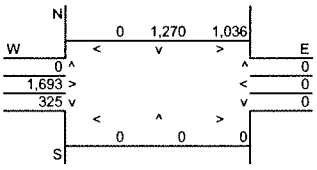
Intersection: 15th & X
Analysis Condition: Cumulative 2030 Plus Project

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	15th Street	At Grade	2	15	10
East-West Roadway:	X Street	At Grade	4	15	10

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	783	N-S Road:	2,306
E-W Road:	1,762	E-W Road:	2,729

Roadway CO Contributions and Concentrations
Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 Reference CO Concentrations 25 Feet	A_2 50 Feet	A_3 100 Feet	B Traffic Volume	C Emission Factors[2]	Estimated CO Concentrations 25 Feet	50 Feet	100 Feet
A.M. Peak Traffic Hour								
North-South Road	2.7	2.2	1.7	783	5.78	0.12	0.10	0.08
East-West Road	7.0	5.4	3.8	1,762	5.78	0.71	0.55	0.39
P.M. Peak Traffic Hour								
North-South Road	2.7	2.2	1.7	2,306	6.92	0.43	0.35	0.27
East-West Road	7.0	5.4	3.8	2,729	6.92	1.32	1.02	0.72

[1] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
[2] Emission factors from EMFAC2002 (2003).

Total Roadway CO Concentrations
Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
25 Feet from Roadway Edge	5.4	6.3	5.0
50 Feet from Roadway Edge	5.2	5.9	4.7
100 Feet from Roadway Edge	5.0	5.5	4.4

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Number: D51121.00
Project Title: 500 Capitol Mall

Background Information

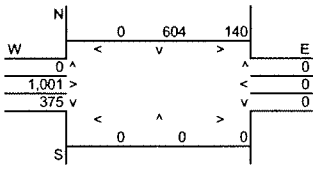
Nearest Air Monitoring Station measuring CO:	T Street
Background 1-hour CO Concentration (ppm):	4.6
Background 8-hour CO Concentration (ppm):	3.6
Persistence Factor:	0.8
Analysis Year:	2009

Roadway Data

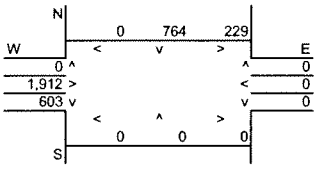
Intersection: 15th & J
Analysis Condition: Baseline Plus Project

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	15th Street	At Grade	2	10	10
East-West Roadway:	J Street	At Grade	2	10	10

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	979	N-S Road:	1,367
E-W Road:	1,376	E-W Road:	2,515

Roadway CO Contributions and Concentrations
Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 Reference CO Concentrations 25 Feet	A_2 50 Feet	A_3 100 Feet	B Traffic Volume	C Emission Factors[2]	Estimated CO Concentrations 25 Feet	50 Feet	100 Feet
A.M. Peak Traffic Hour								
North-South Road	2.7	2.2	1.7	979	6.92	0.18	0.15	0.12
East-West Road	7.6	5.7	4.0	1,376	6.92	0.72	0.54	0.38
P.M. Peak Traffic Hour								
North-South Road	2.7	2.2	1.7	1,367	6.92	0.26	0.21	0.16
East-West Road	7.6	5.7	4.0	2,515	6.92	1.32	0.99	0.70

[1] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
[2] Emission factors from EMFAC2002 (2003).

Total Roadway CO Concentrations
Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
25 Feet from Roadway Edge	5.5	6.1	4.9
50 Feet from Roadway Edge	5.2	5.7	4.6
100 Feet from Roadway Edge	5.0	5.4	4.3

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Number: D51121.00
Project Title: 500 Capitol Mall

Background Information

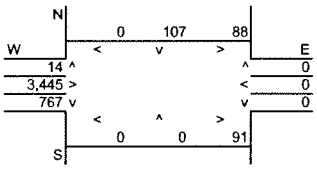
Nearest Air Monitoring Station measuring CO:	T Street
Background 1-hour CO Concentration (ppm):	4.6
Background 8-hour CO Concentration (ppm):	3.6
Persistence Factor:	0.8
Analysis Year:	2009

Roadway Data

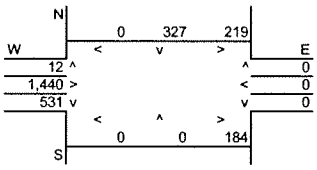
Intersection: 3rd & J
Analysis Condition: Baseline Plus Project

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	3rd Street	At Grade	2	10	20
East-West Roadway:	J Street	At Grade	4	10	20

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	965	N-S Road:	1,042
E-W Road:	4,226	E-W Road:	1,983

Roadway CO Contributions and Concentrations
Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 Reference CO Concentrations 25 Feet	A_2 50 Feet	A_3 100 Feet	B Traffic Volume	C Emission Factors[2]	Estimated CO Concentrations 25 Feet	50 Feet	100 Feet
A.M. Peak Traffic Hour								
North-South Road	2.7	2.2	1.7	965	6.92	0.18	0.15	0.11
East-West Road	7.0	5.4	3.8	4,226	6.92	2.05	1.58	1.11
P.M. Peak Traffic Hour								
North-South Road	2.7	2.2	1.7	1,042	4.97	0.14	0.11	0.09
East-West Road	7.0	5.4	3.8	1,983	4.97	0.69	0.53	0.37

[1] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
[2] Emission factors from EMFAC2002 (2003).

Total Roadway CO Concentrations
Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
25 Feet from Roadway Edge	6.8	5.4	5.4
50 Feet from Roadway Edge	6.3	5.2	5.0
100 Feet from Roadway Edge	5.8	5.0	4.6

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Number: D51121.00
Project Title: 500 Capitol Mall

Background Information

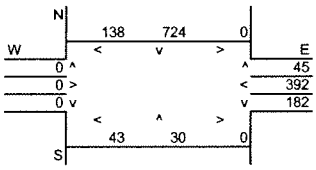
Nearest Air Monitoring Station measuring CO:	T Street
Background 1-hour CO Concentration (ppm):	4.6
Background 8-hour CO Concentration (ppm):	3.6
Persistence Factor:	0.8
Analysis Year:	2009

Roadway Data

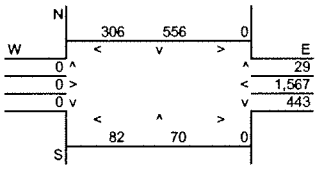
Intersection: 3rd & L
Analysis Condition: Baseline Plus Project

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	3rd Street	At Grade	2	20	10
East-West Roadway:	L Street	At Grade	4	20	10

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	979	N-S Road:	1,151
E-W Road:	619	E-W Road:	2,039

Roadway CO Contributions and Concentrations
Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 Reference CO Concentrations 25 Feet	A_2 50 Feet	A_3 100 Feet	B Traffic Volume	C Emission Factors[2]	Estimated CO Concentrations 25 Feet	50 Feet	100 Feet
A.M. Peak Traffic Hour								
North-South Road	7.6	5.7	4.0	979	4.97	0.37	0.28	0.19
East-West Road	2.6	2.2	1.7	619	4.97	0.08	0.07	0.05
P.M. Peak Traffic Hour								
North-South Road	2.7	2.2	1.7	1,151	6.92	0.22	0.18	0.14
East-West Road	7.0	5.4	3.8	2,039	6.92	0.99	0.76	0.54

[1] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
[2] Emission factors from EMFAC2002 (2003).

Total Roadway CO Concentrations
Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
25 Feet from Roadway Edge	5.0	5.8	4.6
50 Feet from Roadway Edge	4.9	5.5	4.4
100 Feet from Roadway Edge	4.8	5.2	4.2

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Number: D51121.00
Project Title: 500 Capitol Mall

Background Information

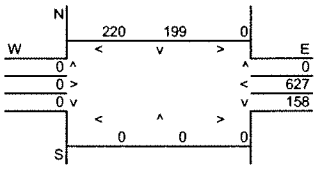
Nearest Air Monitoring Station measuring CO:	T Street
Background 1-hour CO Concentration (ppm):	4.6
Background 8-hour CO Concentration (ppm):	3.6
Persistence Factor:	0.8
Analysis Year:	2009

Roadway Data

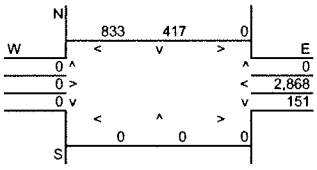
Intersection: 3rd & P
Analysis Condition: Baseline Plus Project

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	3rd Street	At Grade	2	25	10
East-West Roadway:	P Street	At Grade	4	25	10

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	419	N-S Road:	1,250
E-W Road:	847	E-W Road:	3,701

Roadway CO Contributions and Concentrations
Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 Reference CO Concentrations 25 Feet	A_2 50 Feet	A_3 100 Feet	B Traffic Volume	C Emission Factors[2]	Estimated CO Concentrations 25 Feet	50 Feet	100 Feet
A.M. Peak Traffic Hour								
North-South Road	2.7	2.2	1.7	419	4.40	0.05	0.04	0.03
East-West Road	7.0	5.4	3.8	847	4.40	0.26	0.20	0.14
P.M. Peak Traffic Hour								
North-South Road	2.7	2.2	1.7	1,250	6.92	0.23	0.19	0.15
East-West Road	7.0	5.4	3.8	3,701	6.92	1.79	1.38	0.97

[1] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).
[2] Emission factors from EMFAC2002 (2003).

Total Roadway CO Concentrations
Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
25 Feet from Roadway Edge	4.9	6.6	5.3
50 Feet from Roadway Edge	4.8	6.1	4.9
100 Feet from Roadway Edge	4.7	5.7	4.5

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

Appendix D

NATIVE AMERICAN CORRESPONDENCE

STATE OF CALIFORNIA Arnold Schwarzenegger, Governor

NATIVE AMERICAN HERITAGE COMMISSION
915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-4082
Fax (916) 657-5390
Web Site www.nahc.ca.gov

January 24, 2006

Steven D. Smith
EIP
1200 Second Street, Suite 200
Sacramento, CA 95814

Sent by Fax: 916-325-4810
Number of Pages: 4

RE: Proposed R Street Medical Office Building project; Epic Tower project; 500 Capitol Mall project; Sacramento County

Dear Mr. Smith:

A record search of the sacred land file has failed to indicate the presence of Native American cultural resources in the immediate project area. The absence of specific site information in the sacred lands file does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Enclosed is a list of Native Americans individuals/organizations who may have knowledge of cultural resources in the project area. The Commission makes no recommendation or preference of a single individual, or group over another. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated, if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe or group. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from any of these individuals or groups, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions or need additional information, please contact me at (916) 653-4038.

Sincerely,

Debbie Pilas-Treadway
Environmental Specialist III

Native American Contacts
Sacramento County
January 24, 2006

Rose Enos
15310 Bancroft Road
Auburn , CA 95603
(530) 878-2378

Maidu
Washoe

Shingle Springs Band of Miwok Indians
Jeff Murray, Cultural Resources Manager
P.O. Box 1340
Shingle , CA 95682
shingle_springs_rancheria@ho
(530) 676-8010
(530) 676-8033 Fax

Miwok
Maidu

Shingle Springs Band of Miwok Indians
Nicholas Fonseca, Chairperson
P.O. Box 1340
Shingle , CA 95682
shingle_springs_rancheria@ho
(530) 676-8010
(530) 676-8033 Fax

Miwok
Maidu

United Auburn Indian Community of the Auburn
Jessica Tavares, Chairperson
575 Menlo Drive, Suite 2
Rocklin , CA 95765
916 663-3720
916 663-3727 - Fax

Maidu
Miwok

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resource assessment for proposed R Street medical Office Building project, Sacramento County.

EIP
ASSOCIATES

August 2, 2006

Ms. Rose Enos
15310 Bancroft Road
Auburn, CA 95603

SUBJECT: 500 Capitol Mall Project

Dear Ms. Enos:

EIP Associates is preparing an Environmental Impact Report for a proposed project located on the southeast corner of 5th Street and Capitol Mall in downtown Sacramento, as demonstrated on the attached map, and I am preparing the Cultural Resources of the document. A record search was completed by the North Central Information Center which indicated sensitivity in the area for archaeological resources.

The Native American Heritage Commission provided your name as a possible contact for information on the block. A letter was originally sent to you in March 2006 and this notice is being sent as follow-up. If you have any knowledge regarding prehistoric sites or areas of concern in or near the project site, could you please contact me? 916.325.4800 Thank you.

Sincerely,

Amber Grady

Amber Grady
Associate Manager

Project Location Map

EIP
ASSOCIATES

August 2, 2006

Jessica Tavares, Chairperson
United Auburn Indian Community of the Auburn
575 Menlo Drive, Suite 2
Rocklin, CA 95765

SUBJECT: 500 Capitol Mall Project

Dear Ms. Tavares:

EIP Associates is preparing an Environmental Impact Report for a proposed project located on the southeast corner of 5th Street and Capitol Mall in downtown Sacramento, as demonstrated on the attached map, and I am preparing the Cultural Resources of the document. A record search was completed by the North Central Information Center which indicated sensitivity in the area for archaeological resources.

The Native American Heritage Commission provided your name as a possible contact for information on the block. A letter was originally sent to you in March 2006 and this notice is being sent as follow-up. If you have any knowledge regarding prehistoric sites or areas of concern in or near the project site, could you please contact me? 916.325.4800 Thank you.

Sincerely,

Amber Grady

Amber Grady
Associate Manager

Project Location Map

A division of
PBSJ
An employee-owned company

1200 Second Street • Suite 200 • Sacramento, CA 95814 • Telephone 916.325.4800 • Fax 916.325.4810 • www.pbsj.com • www.eipassociates.com

EIP
ASSOCIATES

August 2, 2006

Jeff Murray, Cultural Resources Manager
Shingle Springs Band of Miwok Indians
P.O. Box 1340
Shingle Springs, CA 95682

SUBJECT: 500 Capitol Mall Project

Dear Mr. Murray:

EIP Associates is preparing an Environmental Impact Report for a proposed project located on the southeast corner of 5th Street and Capitol Mall in downtown Sacramento, as demonstrated on the attached map, and I am preparing the Cultural Resources of the document. A record search was completed by the North Central Information Center which indicated sensitivity in the area for archaeological resources.

The Native American Heritage Commission provided your name as a possible contact for information on the block. A letter was originally sent to you in March 2006 and this notice is being sent as follow-up. If you have any knowledge regarding prehistoric sites or areas of concern in or near the project site, could you please contact me? 916.325.4800 Thank you.

Sincerely,

Amber Grady

Amber Grady
Associate Manager

Project Location Map

EIP
ASSOCIATES

August 2, 2006

Nicholas Fonseca, Chairperson
Shingle Springs Band of Miwok Indians
P.O. Box 1340
Shingle Springs, CA 95682

SUBJECT: 500 Capitol Mall Project

Dear Mr. Fonseca:

EIP Associates is preparing an Environmental Impact Report for a proposed project located on the southeast corner of 5th Street and Capitol Mall in downtown Sacramento, as demonstrated on the attached map, and I am preparing the Cultural Resources of the document. A record search was completed by the North Central Information Center which indicated sensitivity in the area for archaeological resources.

The Native American Heritage Commission provided your name as a possible contact for information on the block. A letter was originally sent to you in March 2006 and this notice is being sent as follow-up. If you have any knowledge regarding prehistoric sites or areas of concern in or near the project site, could you please contact me? 916.325.4800 Thank you.

Sincerely,

Amber Grady

Amber Grady
Associate Manager

Project Location Map

A division of
PBSJ
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1200 Second Street • Suite 200 • Sacramento, CA 95814 • Telephone 916.325.4800 • Fax 916.325.4810 • www.pbsj.com • www.eipassociates.com

Appendix E

HISTORICAL RESOURCE EVALUATION RECORD FOR EXISTING BUILDING ON PROJECT SITE

State of California — The Resources Agency DEPARTMENT OF PARKS AND RECREATION **PRIMARY RECORD**	Primary # HRI # Trinomial NRHP Status Code
Other Listings Review Code	Reviewer / Date

 *Resource Name or #: Wells Fargo Bank and Regional Office Building

P1. Other Identifier: 500 Capitol Mall

***P2. Location:** ☐ **Not for Publication** ☒ **Unrestricted** ***a. County:** Sacramento

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad:** Sacramento West **Date:** 1992**T** 8N; **R** 4E; **¼ of ¼ of Sec** ; M.D. **B.M.**

c. Address: 500 Capitol Mall City: Sacramento Zip: 95814

d. UTM: Zone: 10 ; mE/ mN (G.P.S.)

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) APN #044-041-001-000

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

The subject property is a 1.13 acre commercial parcel at the southeast corner of Capitol Mall and 5th Street in downtown Sacramento, which contains a vacant building and the associated parking structure. The surrounding area along Capitol Mall consists of primarily office buildings and government offices, with the State Capitol building located four blocks to the east.

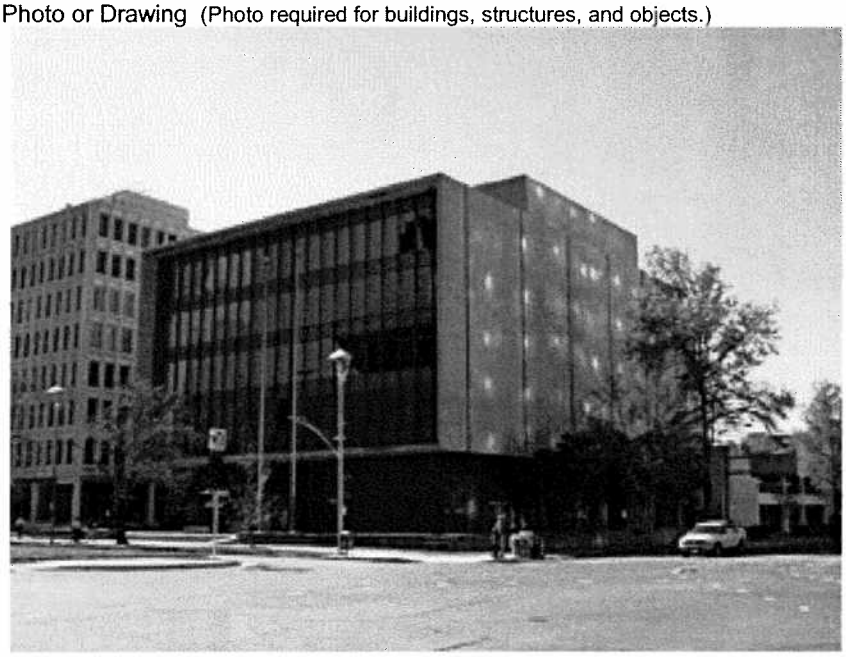
The subject property contains the former Wells Fargo Bank and Regional Office Building. The 5-story main building is Modern in style, with American modernist architect Edward Durell Stone influences seen in the decorative elements of the north facade. The first floor façade of the building is recessed and is sheathed in highly polished granite. The front façade of the second through fifth floors is nearly entirely glass with simplified decorative bands separating the floors. The side façades of the second through fifth floors are solid with no window openings. Narrow bands visually divide both horizontally and vertically these large expances of solid surface. The north and west facades both have entrances with and large plate glass windows. The parking structure to the south is attached to the main building and has three above ground levels. It is a simple concrete structure with no decorative details.

The main building and parking structure are both in good condition overall. The level of integrity appears to be high.

***P3b. Resource Attributes:** (List attributes and codes) HP7: 3+ story commercial building

***P4. Resources Present:** ☒Building ☐Structure ☐Object ☐Site ☐District ☐Element of District ☐Other (Isolates, etc.)

P5a. Photo or Drawing (Photo required for buildings, structures, and objects.)



P5b. Description of Photo: (View, date, accession #)
Looking southeast across Capitol Mall, June 2006

***P6. Date Constructed/Age and Sources:** ☒Historic ☐Prehistoric ☐Both
1962/Building plans

***P7. Owner and Address:**
Tsakopoulos Investments
7423 Fair Oaks Boulevard, Suite 10
Sacramento, CA 95814

***P8. Recorded by:** (Name, affiliation, and address)
Amber Grady
EIP, a division of PBS&J
1200 Second Street, Suite 200
Sacramento, CA 95814

***P9. Date Recorded:** June 27, 2006

***P10. Survey Type:** (Describe)
Wind shield survey

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.") None

***Attachments:** ☐NONE ☐Location Map ☐Sketch Map ☒Continuation Sheet ☒Building, Structure, and Object Record ☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (List):

BUILDING, STRUCTURE, AND OBJECT RECORD

*NRHP Status Code

*Resource Name or # (Assigned by recorder) Wells Fargo Bank and Regional Office Building

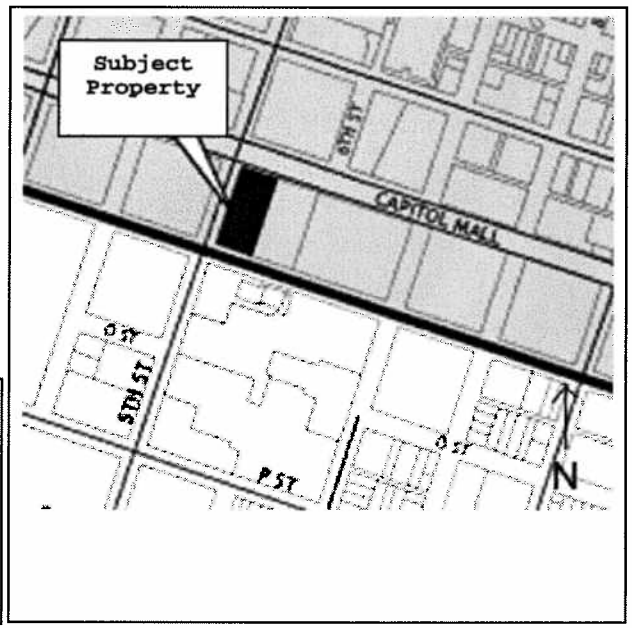
B1. Historic Name: Wells Fargo Bank and Regional Office Building
B2. Common Name: Wells Fargo Building
B3. Original Use: Offices of Wells Fargo Bank B4. Present Use: Vacant
*B5. **Architectural Style:** Modern
*B6. **Construction History:** (Construction date, alterations, and date of alterations)
Built in 1962. No known additions or major alterations.
*B7. **Moved?** ☒No ☐Yes ☐Unknown **Date:** n/a **Original Location:** n/a
*B8. **Related Features:** Parking structure located at the rear of the parcel.
B9a. Architect: Harry J. Devine b. Builder: Unknown
*B10. **Significance: Theme:** Commercial development/redevelopment **Area:** City of Sacramento
Period of Significance: 1960s **Property Type:** Commercial **Applicable Criteria:** C
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

The office building is the former Wells Fargo Bank and Regional Office Building, designed by Harry J. Devine, Sr., a prominent Sacramento archtiect. This office building and parking structure were constructed in 1962. In 1950 the City Council designated the first redevelopment area and created the Redevelopment Agency. The Redevelopment Agency targeted "the red-light district near the Capitol for renovation" in the 1950s. Redevelopment Area No. One originally included 60 city blocks and was expanded twice; once in 1951 and again in 1958. As shown on the City of Sacramento Redevelopment Agency's Boundaries & Project Areas Map of August 1961, the proposed project site was within Redevelopment Area No. One and also within the Capitol Mall Project No. 2-A, a sub-area within the Redevelopment Area No. One. The Capitol Mall Project No. 2-A included an approximately 15-block area that included Capitol Mall (then called Capitol Avenue and previously called M Street) from 4th to 7th Streets.

Prominent architects involved in the Redevelopment effort included Wurster, Bernardi & Emmons, DeMars and Reay, Edward L. Barnes, Leo Daly and Associates, Harry J. Devine, Sr., John S. Bolles, and Dreyfuss and Blackford. A number of buildings were planned along Capitol Mall as a part of the redevelopment, including the federal court building, a downtown hotel, the I.B.M. building, the Wells Fargo Bank and Regional Office building (the existing building on the proposed project site), office buildings, and the Crocker-Angelo National Bank. Of those, the federal court building, the I.B.M building, and the Wells Fargo Bank still exist. An existing office building located on the north side of Capitol Mall between 4th and 5th Streets also appears to be from the same era. This office building may have been part of the redevelopment project, but this has not been confirmed. The federal court building (John E. Moss Federal Building) was completed in 1959 and was a collaborative effort between architects Harry J. Devine, Sr., Herbert E. Goodpastor, Raymond R. Franceschi, Dreyfuss and Blackford, and Ricky and Brooks. It was a prominent feature of the redevelopment effort and the first building to be built as a part of that effort. The I.B.M office building was built circa 1959 and was designed by Dreyfuss and Blackford. The Crocker-Angelo Bank building no longer exists. Other downtown redevelopment efforts in the 1950s and 1960s included the K Street Mall and the construction of I-5 through Sacramento.

B11. Additional Resource Attributes: (List attributes and codes) none

*B12. **References:**
Sacramento County Assessor's Records for APN 006-0146-030-000
Sacramento Valley Magazine, July/August 1976
Sacramento Register
B13. Remarks:
None
*B14. **Evaluator:** Amber Grady
*Date of Evaluation: June 29, 2006



(This space reserved for official comments.)

*B10. Significance: (cont.)

The building was evaluated for potential eligibility on the NRHP, CRHR, or the Sacramento Register, both individually and as a contributing structure to a potential district. The evaluation was completed with reference to three possible significance contexts. First, the architect of the building was Harry J. Devine, Sr., a prominent local architect. Second, the building was constructed as part of a large redevelopment effort that occurred in the downtown area, specifically the development of Capitol Mall and its transformation in the 1950s and 1960s to a regional business and commercial center. The third significance context is the potential effect of a new high-rise structure on the Capitol Historic District.

In 1926, Harry J. Devine, Sr. opened his architectural office at 926 J Street in downtown Sacramento. Devine designed many schools and churches for the Catholic Church."[1] Buildings designed by Devine include Sacred Heart Church (1040 39th St), St. Ignatius Church (3235 Arden Way), Our Lady of Guadalupe Church (711 T St), Christian Brothers High School (4315 Martin Luther King Jr. Boulevard), the Federal Building (Capitol Mall), the Sacramento County Jail (651 I Street), Mercy Hospital (4001 J Street), and the St. Pius Seminary in Galt. He was also the supervising architect for the Sacramento School District for 15 years.

If eligible, the former Wells Fargo building would most likely qualify for listing on the NRHP under Criterion C or on the CRHR under Criterion 3. Therefore, it was against these criteria that the building was evaluated. While the building does display some typical Modern characteristics and is representative of late 1950s and early 1960s commercial architecture in Sacramento, it does not embody distinctive characteristics of a type, period, region, or method of construction. Also, while Harry J. Devine, Sr. was a prominent local architect, the Wells Fargo Building does not represent the work of a master at a statewide or national level. Therefore, it would not be eligible for inclusion on either the NRHP or the CRHR under the criteria identified above. As stated previously, the Wells Fargo Building and associated parking structure were constructed in 1962, making the structures 44 years old. Potential historic resources are usually evaluated when they are at 45 years old. The City of Sacramento Historic Preservation Ordinance (15.124) provides factors to be considered when evaluating resources for inclusion on the Sacramento Register, including allowances for properties "achieving significance within the past fifty (50) years." Properties less than fifty years old must be of "exceptional importance" to be listed as Sacramento landmarks. Harry J. Devine, Sr. was a prominent local architect who practiced in Sacramento from 1926 until his death in the early 1960s; however, other significant examples of his work still exist, including the Federal Building located one block east along Capitol Mall. The Federal Building was a prominent component of the Capitol Mall redevelopment and was the first building constructed. He is also better known for his churches and schools, many of which still exist. Therefore, the Wells Fargo Building is not considered to be of exceptional importance, as is required of a building less than 50 years old, as a work of Harry J. Devine, Sr. and would not be eligible for individual listing on the Sacramento Register.

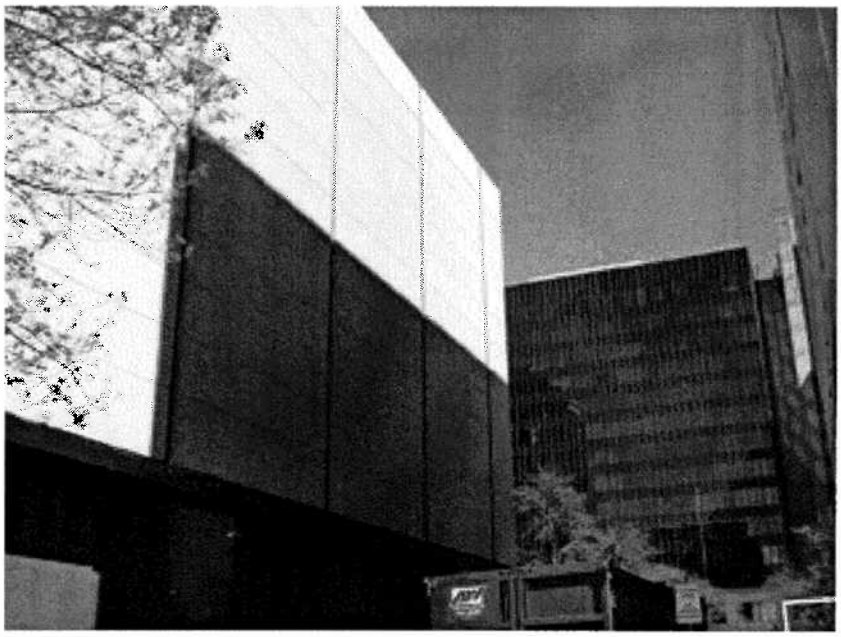
It has also been suggested that the Wells Fargo Building could be a contributing structure to a commercial district as a major work on Capitol Mall. No such district has been evaluated at this time. Prior to its redevelopment, Capitol Mall was named M Street and was developed with a multitude of smaller, primarily wood-frame structures that were typical of late nineteenth and early twentieth century architecture. Redevelopment documents note the blighted "Victorian" structures in the area. Capitol Mall was not developed as a regional commercial center until the late 1950s and early 1960s. The majority of the buildings along Capitol Mall between the State Capitol building and the Sacramento River were built from the early 1960s to the present. The redevelopment of parcels along Capitol Mall continues today, with two sites currently under construction. Considering that construction of the State Capitol building took place from 1860–1874 and that Capitol Mall has been evolving as a regional commercial center for the past several decades, it is difficult to ascertain a period of significance for such a district. The majority of the buildings west of the State Capitol building were built in the last 50 years, so the district would have to be of "exceptional importance" to be listed, as required by the Sacramento Register. With the wide range of building construction dates along Capitol Mall and the small number of structures remaining from the 1950s and 1960s redevelopment, it is unlikely that a cohesive district exists.

The third area of concern would be the impact on nearby historic districts, specifically the Capitol Historic District, which is four blocks east of the project site. The Capitol Historic District, as discussed above in the Setting portion of this section, is comprised of the State Capitol, Capitol Park, the landscaped circular fountain and roundabout, the Insectary Building, and Office Building One. None of these structures or features would be directly affected by the proposed project; however, the surrounding context of the district would be altered by the presence of a new high-rise structure. The nature of Capitol Mall is an active, evolving business area that has experienced almost constant alteration over the past 50-plus years. Therefore, the removal of the existing building at 500 Capitol Mall and the addition of a new high-rise building on this constantly evolving street would have no impact on the significance of the Capitol Historic District.

Therefore, the Wells Fargo Bank and Regional Office Building at 500 Capitol Mall has been deemed ineligible for listing on the NRHP, CRHP, and the Sacramento Register.

[1] Sacramento Valley Magazine, *First Families*, July/August 1976, page 27.

Looking northeast from intersection at 5th and N Streets



East Facade

Appendix F

NOISE MODELING RESULTS

TRAFFIC NOISE LEVELS

Project Number: D51121.00
Project Name: 500 Capitol Mall

Background Information

Model Description: FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels.
Analysis Scenario(s): Baseline w/o Project
Source of Traffic Volumes: DKS/Dowling
Community Noise Descriptor: L_{dn}: X CNEL: _____

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

Traffic Noise Levels

Analysis Condition Roadway Segment	Land Use	Lanes	Median Width	Peak Hour Volume	ADT Volume	Design Speed (mph)	Dist. from Center to Receptor	Alpha Factor	Barrier Attn. dB(A)	Vehicle Mix Medium Trucks	Vehicle Mix Heavy Trucks	Peak Hou dB(A) L_{eq}	24-Hour dB(A) Ldn
Analysis Condition													
7th Street	RMU	3	0	1,472	14,720	30	50	0	0	1.8%	0.7%	66.0	64.9
5th Street	RMU	3	0	2,044	20,440	30	50	0	0	1.8%	0.7%	67.4	66.3
3rd Street	RMU	3	0	1,886	18,860	30	50	0	0	1.8%	0.7%	67.1	66.0
Capitol Mall	RMU	3	0	3,146	31,460	30	50	0	0	1.8%	0.7%	69.3	68.2
N Street	RMU	3	0	1,313	13,130	30	50	0	0	1.8%	0.7%	65.5	64.4
P Street	RMU	3	0	3,673	36,730	30	50	0	0	1.8%	0.7%	70.0	68.9
Q Street	RMU	3	0	3,736	37,360	30	50	0	0	1.8%	0.7%	70.1	68.9

[1] Distance is from the centerline of the roadway segment to the receptor location.

TRAFFIC NOISE LEVELS

Project Number: D51121.00
Project Name: 500 Capitol Mall

Background Information

Model Description: FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels.
Analysis Scenario(s): Baseline with Project
Source of Traffic Volumes: DKS/Dowling
Community Noise Descriptor: L_{dn}: X CNEL: _____

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

Traffic Noise Levels

Analysis Condition Roadway Segment	Land Use	Lanes	Median Width	Peak Hour Volume	ADT Volume	Design Speed (mph)	Dist. from Center to Receptor	Alpha Factor	Barrier Attn. dB(A)	Vehicle Mix Medium Trucks	Vehicle Mix Heavy Trucks	Peak Hou dB(A) L_{eq}	24-Hour dB(A) Ldn
Analysis Condition													
7th Street	RMU	3	0		16,710	30	50	0	0	1.8%	0.7%	66.6	65.4
5th Street	RMU	3	0		23,320	30	50	0	0	1.8%	0.7%	68.0	66.9
3rd Street	RMU	3	0	1,886	18,860	30	50	0	0	1.8%	0.7%	67.1	66.0
Capitol Mall	RMU	3	0		32,030	30	50	0	0	1.8%	0.7%	69.4	68.3
N Street	RMU	3	0		19,690	30	50	0	0	1.8%	0.7%	67.3	66.2
P Street	RMU	3	0		38,040	30	50	0	0	1.8%	0.7%	70.1	69.0
Q Street	RMU	3	0		38,870	30	50	0	0	1.8%	0.7%	70.2	69.1

[1] Distance is from the centerline of the roadway segment to the receptor location.

TRAFFIC NOISE LEVELS

Project Number: D51121.00
Project Name: 500 Capitol Mall

Background Information

Model Description: FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels.
Analysis Scenario(s): Cumulative 2030 + Projects
Source of Traffic Volumes: DKS/Dowling
Community Noise Descriptor: L_{dn}: X CNEL: _____

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

Traffic Noise Levels

Analysis Condition Roadway Segment	Land Use	Lanes	Median Width	Peak Hour Volume	ADT Volume	Design Speed (mph)	Dist. from Center to Receptor	Alpha Factor	Barrier Attn. dB(A)	Vehicle Mix Medium Trucks	Vehicle Mix Heavy Trucks	Peak Hou dB(A) L_{eq}	24-Hour dB(A) Ldn
Analysis Condition													
7th Street	RMU	3	0	2,421	24,210	30	50	0	0	1.8%	0.7%	68.2	67.1
5th Street	RMU	3	0	2,598	25,980	30	50	0	0	1.8%	0.7%	68.5	67.4
3rd Street	RMU	3	0	2,212	22,120	30	50	0	0	1.8%	0.7%	67.8	66.7
Capitol Mall	RMU	3	0	3,719	37,190	30	50	0	0	1.8%	0.7%	70.0	68.9
N Street	RMU	3	0	2,854	28,540	30	50	0	0	1.8%	0.7%	68.9	67.8
P Street	RMU	3	0	4,110	41,100	30	50	0	0	1.8%	0.7%	70.5	69.4
Q Street	RMU	3	0	4,332	43,320	30	50	0	0	1.8%	0.7%	70.7	69.6

[1] Distance is from the centerline of the roadway segment to the receptor location.

Appendix G

WATER SUPPLY ASSESSMENT

City of Sacramento

DRAFT

Water Supply Assessment

for the Proposed

500 Capitol Mall Project

Prepared by:

EIP
WATER RESOURCES GROUP

EIP Associates, a Division of PBS&J
1200 Second Street, Suite 200
Sacramento, CA

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EXECUTIVE SUMMARY

The City of Sacramento (City) is the lead agency for the development of the proposed 500 Capital Mall project (proposed project); a commercial and residential project bounded by Capitol Mall, N, 5th and 6th streets. The project site is within the Central Business District Special Planning District and within the Capitol View Protection Corridor. The proposed project is a mixed-use, 24-story high-rise building with offices, retail and restaurant space, and a parking garage.

As the public water system that supplies water to the proposed project area, the City is preparing this water supply assessment (WSA), as per the requirements of Senate Bill 610 (passed in 2002), and the California Water Code (primarily Sections 10910 through 10913). There are three primary areas to be addressed in a water supply assessment: (1) all relevant water supply entitlements, water rights, and water contracts; (2) a description of the available water supplies; and (3) an analysis of the demand placed on those supplies, both by the project, and all existing and planned future uses in the area.

The water supply for the proposed project comes from the City's water rights and a 1957 contract with the United States Bureau of Reclamation (USBR). Under the contract, the City is entitled to 326,800 acre-ft per year (AFY). As a signatory of the Water Forum Agreement (WFA), the city has agreed to withdrawal limitations from the American River. During the driest year scenario, the WFA limits annual withdrawal from the American River to 50,000 AFY. The WFA does not limit withdrawal from the Sacramento River; therefore, entitled American River water may be diverted at the Sacramento River Water Treatment Plant (WTP) below the confluence of the American and Sacramento Rivers. The resulting annual limitation is a function of the annual treatment plant capacity, resulting in a total supply of 230,000 AFY. The total supply during the driest year scenario can meet the anticipated annual demand in 2025 and the anticipated annual demand at 2030 with existing groundwater infrastructure.

The withdrawal rate from the American River is limited during low flow conditions. Based on modeling of historical climatic data, low flow conditions occur during 59 percent of the years during the peak demand months. During low flow conditions, the WFA limits the diversion rate from the American River to 155

cubic feet per second (cfs) during June through August when the peak demand occurs. Assuming treatment at the reduced diversion rate from the American River and maximum treatment at the Sacramento River WTP, the total surface water supply is 260 million gallons per day (mgd). The projected maximum day demand exceeds 260 mgd in 2010. The additional 24 mgd available from the current groundwater sources would ensure maximum day demand is met up to 2014. Additional demand from the proposed project will not significantly alter this timeline. The City is already undertaking studies to evaluate an additional Sacramento River diversion and treatment facility. With continued efforts to secure additional treatment capacity on the Sacramento River, the City has sufficient time to ensure reliable delivery of water for the proposed project and future demand past 2030.

This WSA concludes that the City's annual entitlements will meet the proposed project and projected future demand over the next 20 years, but due to diversion limitations agreed to in the WFA and the current infrastructure capabilities, an additional diversion structure and treatment plant on the Sacramento River or additional groundwater wells will be required to meet the maximum demand.

1.0 INTRODUCTION

500 Capitol Mall (proposed project) is located on a 1.13-acre site on the western portion of the block between 5th and 6th streets and Capitol Mall and N streets in the Central Business District of downtown Sacramento. The project site is within the Central Business District Special Planning District and is zoned for general commercial use. The proposed project is within the Capitol View Protection Corridor. The proposed project includes the development of a 24-story, 396-foot-tall high-rise building, consisting of office space, retail and restaurant space, and a parking garage. The building is 759,419 square feet.

The City of Sacramento (City) is conducting an environmental review under the requirements of the California Environmental Quality Act (CEQA) for the proposed project. This water supply assessment (WSA) will provide information for use in the CEQA analysis for this project. The environmental review for the proposed project includes the need for an assessment of the available water supply to serve the project. The requirements for such a WSA are described in the sections of the California Water Code (Water Code) amended by the enactment of Senate Bill 610 (SB 610) in 2002. Approval of any tentative subdivision maps may also require a written verification of available water supplies under the sections of the Public Resources Code amended by the enactment of Senate Bill 221 (SB 221) in 2002.

SB 610 and SB 221 provide a nexus between the regional land use planning process and the environmental review process. These laws also reflect the growing awareness of the need to incorporate water supply and demand analysis at the earliest possible stage in the land use planning process. The core of these laws is an assessment of whether available water supplies are sufficient to serve the demand generated by a project, as well as the reasonably foreseeable cumulative demand in the region over the next 20 years under a range of hydrologic conditions.

This WSA provides information on the available water supply to serve the proposed project, based on the sections of the Water Code amended by SB 610. In addition, this information can be used as part of the written verification of water supplies, as required under SB 221.

This document is divided into 4 sections: Introduction, Water Supply, Demand Analysis, and Conclusion. The Introduction describes the project and water supply planning under SB 610 and SB 221.

1.1. Project Description

500 Capital Mall is the proposed project. The proposed project is a mixed-use 24-story, 396-foot-tall high-rise building, consisting of 467,942 gross square feet of office space, 27,124 gross square feet of retail and restaurant space, and 264,353 gross square feet of parking garage area (794 parking spaces). The building is 759,419 square feet overall. The proposed project is within the Capitol View Protection Corridor.

FIGURE **1-1** and FIGURE **1-2** show the proposed project vicinity and location. The project site would be bounded by Capitol Mall, N, 5th and 6th streets.

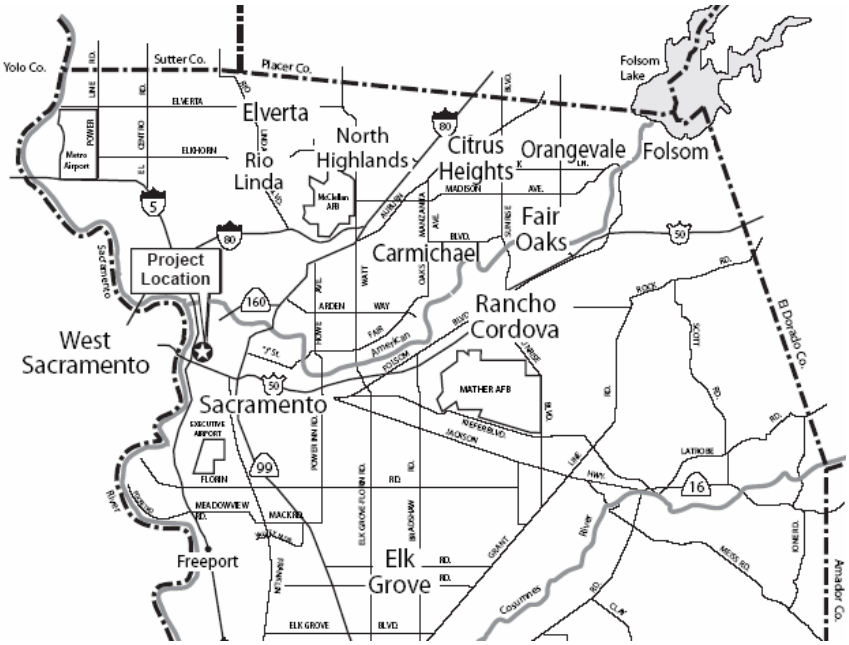

FIGURE 1-1. Project Vicinity Map –500 Capitol Mall

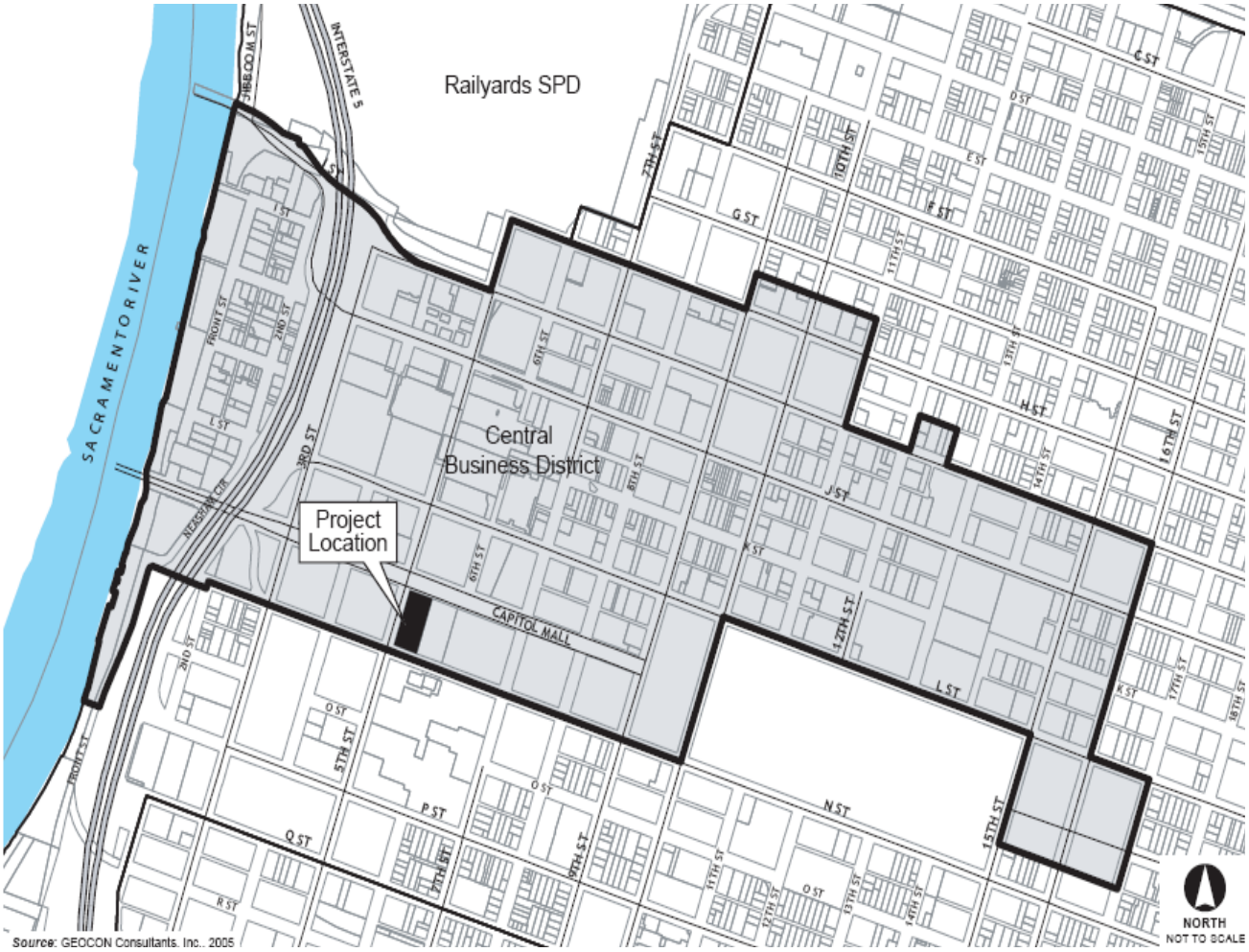

FIGURE 1-2 Proposed Project Site Map - 500 Capitol Mall

Climate

The City of Sacramento and the surrounding region has an arid Mediterranean climate; the weather consists of long, dry summers and cool, rainy winters. Summer trends extend from May to October. Average temperatures in July are 93°F with lows in the mid 60s. The rainy season is from late November to mid-April; average precipitation is 18.5 inches annually; snow is uncommon and rare. Winter daytime temperatures are generally in the mid-50s to low 40s, and overnight lows often dip below 30°F.

Sacramento has experienced two declared droughts in the last three decades. The drought of 1975 – 1977 accounted for only 7.5 inches of rain and the drought of 1987–1992 is considered the most severe drought in California's history[1] (Priest, et al., 1993). Conversely, in years following drought periods Sacramento was drenched with rainfall, for example in 1997 regional water levels rose to record highs which threatened levee breaks and flooded parts of the out-lying metropolitan area. This extreme climatic variability is common throughout California.

1.2. Water Supply Planning Under SB 610 and SB 221

Senate Bill 610 and SB 221 were passed into law on January 1, 2002. These laws reflect the need to incorporate water supply and demand analysis at the earliest possible stage in the planning process. SB 610 amended portions of the Water Code, including Section 10631, which contains the Urban Water Management Planning Act, as well as adding Sections 10910, 10911, 10912, 10913, and 10915, which describe the required elements of a WSA. SB 221 amended Section 65867.5 and added Sections 66455.3 and 66473.7 to the Government Code. Upon signing these bills, Governor Gray Davis stated, “Most notably, these bills will coordinate local water supply and land use decisions to help provide California’s cities, farms and rural communities with adequate water supplies. Additionally, these bills increase requirements and incentives for urban water suppliers to prepare and adopt comprehensive management plans on a timely basis.”[2]

Senate Bill 610 is designed to build on the information that is typically contained in an Urban Water Management Plan (UWMP). The amendments to Water Code Section 10631 were designed to make water supply assessments and UWMPs consistent. A key difference between the WSA’s and UWMPs is that UWMPs are required to be revised every five years, in years ending with either zero or five, while

[1] Priest, D.F. et al. 1993. *California's 1987-92 Drought: A summary of six years of drought*. State of California Department of Water Resources.
[2] Department of Water Resources, *Guidebook for Implementation of SB 610 and SB 221* of 2001, 2003.

WSAs are required as part of the environmental review process for each individually qualifying project. As a result, the 20-year planning horizons for each type of document may cover slightly different planning periods than other WSAs or the current UWMP. Additionally, not all water providers who must prepare a WSA under SB 610 are required to prepare an UWMP.

Under SB 221, approval by a city or county of certain residential subdivisions, as defined by California Government Code Section 66473.7(a) (1), requires an affirmative written verification of sufficient water supply. Senate Bill 221 is designed as a "fail-safe" mechanism to ensure that collaboration on finding the needed water supplies to serve a new large subdivision occurs early in the planning process. This verification must also include documentation of historical water deliveries for the previous 20 years, as well as a description of reasonably foreseeable impacts of the proposed subdivision on the availability of water resources of the region. As a result of the information contained in the written verification, the city or county may attach conditions to assure there is an adequate water supply available to serve the proposed project as part of the tentative map approval process.

1.2.1. SB 610 Water Supply Assessment

The SB 610 water supply assessment process involves answering the following questions:

- Is the project subject to CEQA?
- Is it a project under SB 610?
- Is there a public water system?
- Is there a current UWMP that accounts for the project demand?
- Is groundwater a component of the supplies for the project?
- Are there sufficient supplies available to serve the project over the next 20 years?

1.2.1.1. "Is the Project Subject to CEQA?"

The first step in the SB 610 process is determining whether the project is subject to CEQA. SB 610 amended Public Resources Code Section 21151.9 to read: "Whenever a city or county determines that a project, as defined in Section 10912 of the Water Code, is subject to this division [i.e., CEQA], it shall comply with part 2.10 (commencing with Section 10910) of Division 6 of the Water Code." The proposed project is currently under environmental review pursuant to the requirements of CEQA; therefore, the

information contained in this assessment will be used to support the Environmental Impact Report (EIR) at the project-level analysis.

1.2.1.2. "Is It a Project Under SB 610?"

The second step in the SB 610 process is to determine if a project meets the definition of a "Project" under Water Code Section 10912 (a). Under this section, a "Project" is defined as meeting any of the following criteria:

- A proposed residential development of more than 500 dwelling units;
- A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet (ft^2) of floor space;
- A commercial building employing more than 1,000 persons or having more than 250,000 ft^2 of floor space;
- A hotel or motel with more than 500 rooms;
- A proposed industrial, manufacturing, or processing plant, or industrial park, planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 ft^2 of floor area;
- A mixed-use project that includes one or more of these elements; or
- A project creating the equivalent demand of 500 residential units.

Alternately, if a public water system has less than 5,000 service connections, the definition of a "Project" also includes any proposed residential, business, commercial, hotel or motel, or industrial development that would account for an increase of 10 percent or more in the number of service connections for the public water system. Because the proposed project is a mixed-use facility that includes one or more of the elements from the list, it meets the requirements as a "Project" under the Water Code.

1.2.1.3. "Is There a Public Water System?"

The third step in the SB 610 process is determining if there is a "public water system" to serve the project. Section 10912 (c) of the California Water Code (Water Code) states: "[A] public water system means a system for the provision of piped water to the public for human consumption that has 3,000 or more service connections."

The proposed project site is served by the City's Utilities Department, which is a public water agency that served 131,745 connections in June 2004. The City operates two water treatment plants (WTP). The

Sacramento River WTP is located on the east bank of the Sacramento River, about a half mile downstream of the confluence of the Sacramento and American Rivers. The E. A. Fairbairn WTP (formally American River WTP) is located adjacent to the American River between the H Street and Howe Avenue bridges, approximately 7 miles upstream of the confluence. The City also has 32 municipal drinking water wells; of these 23 are currently active, and 9 are on standby[3].

1.2.1.4. "Is There a Current UWMP That Accounts for the Project Demand?"

Step four in the SB 610 process involves determining if there is a current UWMP that considers the projected water demand for the project area. The Water Code requires that all public water systems providing water for municipal purposes to more than 3,000 customers, or supplying more than 3,000 ac-ft per year (AFY), must prepare an UWMP, and this plan must be updated at least every five years on or before December 31, in years ending in five and zero.

Water Code Section 10910 (c)(2) states, "If the projected water demand associated with the proposed project was accounted for in the most recently adopted urban water management plan, the public water system may incorporate the requested information from the urban water management plan in preparing the elements of the assessment required to comply with subdivisions (d), (e), (f), and (g) [i.e., the WSA]." The City's most recent UWMP was released in 2000. Although the proposed project was not included in the City's 2000 UWMP, the existing facility on the project site was considered. The proposed project is larger and water use is expected to be substantially greater. Presently, the City is working on an UWMP for release in 2006.

1.2.1.5. "Is Groundwater a Component of the Supplies for the Project?"

This section addresses the requirements of Water Code Section 10910 (f), paragraphs 1 through 5, which apply if groundwater is a source of supply for a proposed project. The City maintains 32 wells for potable and non-potable use, 23 wells are actively used to supply drinking water[4]. The current system can supply 24 mgd and produce up to 26,800 AFY.

The City is located in the 548-square mile North American (Subbasin) as described by the Department of Water Resources. The Subbasin's boundaries are the Feather and Sacramento Rivers on the west, the Bear River to the north, south to the American River and east to the Sierra Nevada. The underlying geology or hydrostratigraphy of the basin consists of a variety of geologic formations that make up the

[3] Dan Sherry, City of Sacramento, Utilities Department, Comment on Towers WSA, June 23, 2005
[4] Dan Sherry, City of Sacramento, Utilities Department, Comment on Towers WSA, June 23, 2005

water bearing units. There are two aquifer systems: an upper unconfined system consisting of the Victor, Fair Oaks, and Laguna Formations, and a lower, semi-confined system in the Mehrten Formation. These geologic formations are composed of lenses and layers of inter-bedded sand, silt and clay with coarse-grained stream channel deposits.[5] The groundwater contained in the upper aquifer system of the Victor, Fair Oaks and Laguna Formations is of superior quality compared to that in the lower semi-confined system, mainly because the water in the Mehrten Formation is higher in iron and manganese, and requires more treatment. The upper unconfined system only requires chlorination treatment to be potable.

The City is a member of the Sacramento Groundwater Authority. The Sacramento Groundwater Authority (SGA) is a joint powers authority created in 1998 by a coordinated effort between the Sacramento Metropolitan Water Authority and the Water Forum Agreement to manage the region's North Area Groundwater Basin, a sub-region of the North American Subbasin. The signatory participants are managing the basin in a cooperative fashion by allowing representatives from the local water purveyors, the agricultural community and other groundwater pumpers to serve on the Board of the SGA. The goal of the SGA is the responsible management of the groundwater basin through a commitment to not exceed the sustainable yield of the basin, which is approximately 131,000 AFY according to the WFA. The SGA developed a Groundwater Management Plan (GMP) to ensure a safe, reliable water supply for the rapidly growing northern Sacramento County area[6]. Within this program the SGA will continually assess the status of the groundwater basin and make appropriate management decisions to sustain the basin.

The City and other SGA members, in accordance with the WFA, have implemented a conjunctive use program to responsibly manage and use the groundwater systems. This conjunctive use program is part of the WFA thirty-year agenda. The program accounts for the annual climatic variability of the region, whereby in normal or wet years of precipitation the water providers will divert more surface water and reduce or eliminate groundwater use, allowing the system to recharge. In dry years when the Lower American River flows must be maintained, groundwater will again be pumped and used to supplement the reduced diversions from the river systems.

> "In general, the intent of the WFA is to increase the use of groundwater in dry years and reduce surface water diversions. The decrease in available dry year diversions is a consequence of the WFA objective to provide instream flows in the lower American River for environmental purposes. In wet years, when more surface water is available,

[5] Sacramento Groundwater Authority, *Groundwater Management Plan*, 2003, page 7. http://www.sgah2o.org/sga/programs/groundwater/.

[6] Sacramento Groundwater Authority, *Groundwater Management Plan*, 2003, page 1.

diversion will be increase and groundwater extraction will be reduced, thereby promoting recharge of the basin."[7]

1.2.1.6. "Are There Sufficient Supplies to Serve the Project Over the Next Twenty Years?"

The next step in the SB 610 process is to prepare the actual assessment of the available water supplies, including the availability of these supplies in all water-year conditions over a 20-year planning horizon, and an assessment of how these supplies relate to project-specific and cumulative demands over that same 20-year period. In this case, the period covers the years 2005 to 2025.

Water Code Section 10910 (c)(4) states: "If the city or county is required to comply with this part pursuant to subdivision (b), the water assessment for the project shall include a discussion with regard to whether the total projected water supplies, determined to be available by the city or county for the project during normal, single dry and multiple dry water years during a 20-year projection, will meet the projected water demand associated with the proposed project, in addition to existing and planned future uses, including agricultural and manufacturing uses."

There are three primary areas to be addressed in a water supply assessment:

- relevant water supply entitlements, water rights, and water contracts;
- a description of the available water supplies;
- analysis of the demand placed on those supplies, both by the project and on cumulative basis.

Water entitlements are addressed in Section 2 and the analysis of the demand is discussed in Section 3. Section 4 contains results and conclusions.

[7] Sacramento Groundwater Authority, *Groundwater Management Plan*, 2003, page 24.

2.0 WATER SUPPLY

This section reviews the City's water supply entitlements and water rights.

Water Code Section 10910 (d)(1) states: "The assessment required by this section shall include an identification of any existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the proposed project, and a description of the quantities of water received in prior years by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), under the existing water supply entitlements, water rights or water service contracts."

2.1. Water Rights and Contracts

Water rights are a historically important means of securing water use in California. These rights date back to the Gold Rush days of the 1850's, whereby water claims were made by "first in time, first in rights"; this established a water user's right to divert water from a specific point on a stream for a specific use. Since 1914, the State Water Resources Control Board (SWRCB) has been charged with administrating and regulating all water rights permits in California. Under this process, an application is filed and the SWRCB issues a permit for surface water diversion, including the approved place of use (POU) for that water.

The City claims pre-1914 rights to divert 75 cubic feet per second (cfs) and secured five additional appropriative water rights with various priorities ranging between October 1947 to September 1954. Sacramento River permit 00992 and American River permits 011358 and 011361 authorize the taking of water from the respective sources by direct diversion. The other two permits, 011359 and 011360, authorize re-diversion and consumptive uses of stored and releases from the Upper American River Project. Currently, the City has Application S014834 pending with the SWRCB for additional 50,581 AFY from the Sacramento River. The City's surface water permits require use of the diverted water within the authorized POU. The project falls within the POU of all the permits.

In 1957, the U. S. Bureau of Reclamation (USBR) and the City executed a contract that ensures maximum entitlements through the Central Valley Project (CVP). At build-out in 2030, the USBR contract

provides the city a maximum annual diversion of 326,800 AFY. This contract has no delivery limitations and is included in Appendix A. The City is a signatory of 2000 WFA which explicitly does not impact the USBR annual diversions, but does reduce the diversion in the American River during dry years or if flows are below Hodge flow criteria. The permits and USBR contractual diversions are listed in TABLE 2-1. The 2005 contract amount is 205,000 AFY. The contract amount increases annually to a maximum of 326,800 AFY in 2030 as show in FIGURE 2-1 and TABLE 2-2.

TABLE 2-1

Surface Water Entitlements

Permit	Authorized Diversion	Maximum Permitted Diversion	
		AFY	cfs
1957 USBR 2030 Contractual Maximum [c]	American River	245,000	675
	Sacramento River	81,800	225
	Total Combined Diversion	326,800	900
2000 WFA Maximum	American River	245,000	310[a]
	Sacramento River	81,800	290[b]
	Total Combined Diversion	326,800	900

a. 310 cfs is a maximum withdrawal rate, additional restrictions apply.

b. The Sacramento WTP, below the confluence of the American and Sacramento River, is an allowable withdrawal point for the permitted American River flows, allowing an increase in the diversion from the Sacramento River.

c. Based on permits 00922, 011358, 011359, 011360, and 11361.

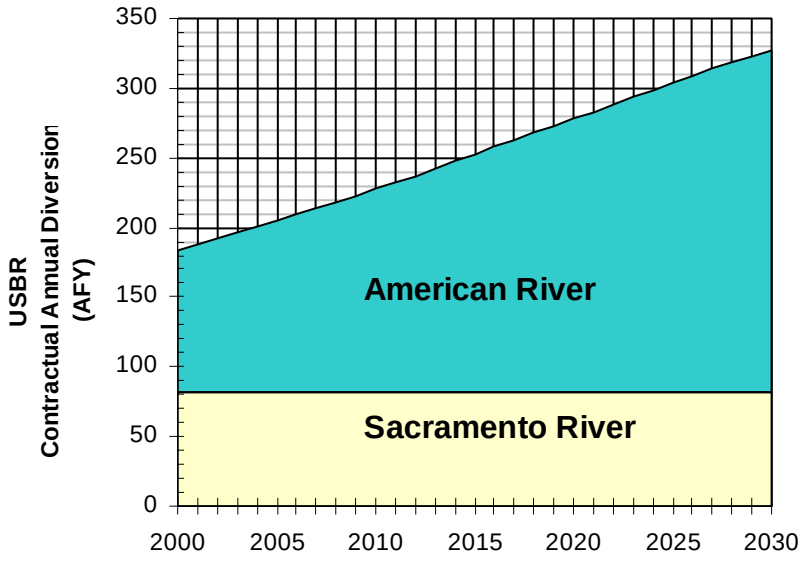

FIGURE 2-1 USBR Maximum Contracted Annual Surface Water Diversion

TABLE 2-2

USBR Maximum Contracted Annual Surface Water Diversion (AFY)

Source	2005	2010	2015	2020	2025	2030
American River	123,200	145,700	170,200	196,200	222,200	245,000
Sacramento River	81,800	81,800	81,800	81,800	81,800	81,800
TOTAL	**205,000**	**227,500**	**252,000**	**278,000**	**304,000**	**326,800**

Source: USBR 1957 Contract with City of Sacramento, Appendix A

2.2. Reliability of Water Supplies

An important aspect when discussing water supplies and reliability within Sacramento region is the Water Forum Agreement; this is an agreement between multiple stakeholders of the Sacramento metropolitan area and lower foothill regions. After seven years of meetings, sub-committee negotiations and small group operations, the Water Forum members established a working agreement that provides water quality and reliability for all participants. The WFA's coequal goals were to (1) provide a reliable and safe water supply for the region's economic health and planned development through to the year 2030, and (2) preserve the fishery, wildlife, recreational and aesthetic values of the Lower American River.[8] From these coequal goals, the Water Forum signatories determined seven major elements that must be implemented during the next thirty years if the agreement is to be successful. The elements specific to water supply reliability include:

- Increased Surface Water Diversions,
- Actions to Meet Customers' Needs While Reducing Diversion Impacts in Drier Years,
- Water Conservation,
- Groundwater Management and the Water Forum Successor Effort.

Each of these elements plays a vital role in the Water Forum's coequal objectives. As a signatory of the WFA, the City's Utilities department is actively participating in all seven elements. Recently, the City increased water treatment capacity at the Sacramento River Water Treatment Plant and the E.A. Fairbairn WTP.

The City is continuing to develop a water supply consistent with the WFA. Public Law 106-554 authorized the Sacramento River Water Reliability Study, which includes a feasibility study for a second Sacramento River diversion. The Sacramento River Water Reliability Study includes development of alternatives, an environmental evaluation, and consultation with federal and state agencies regarding potential impacts.

[8] Water Forum Agreement 2000, page 29.

The USBR is the lead agency for federal review and Placer County Water Agency is the lead agency for local review.

The WFA places flow restrictions on diversions from the American River when flow is below the "Hodge flows" as defined in *Environmental Defense Fund et al. v. East Bay Municipal Utility District*. Parties in the litigation cannot divert water from the American River unless instream flows measure at least 2,000 cfs from October 15 through February; 3,000 cfs from March through June; and 1,750 cfs from July to October 14. The diversion limits change seasonally and are listed in TABLE 2-3. Based on CALSIM II analysis of the 1922 to 1994 climate data, 59 percent of the years will experience Hodge flow conditions during the peak months of June through August.

TABLE 2-3

Restricted American River Diversion Rates

Month	Diversion Limit[a]	
	cfs	AF
January	120	7,400
February	120	6,700
March	120	7,400
April	120	7,100
May	120	7,400
June	155	9,200
July	155	9,500
August	155	9,500
September	120	7,100
October	100	6,100
November	100	6,000
December	100	6,100

a. Restriction occurs when the flow passing the WTP is below the Hodge flow condition.

The Sacramento River WTP has a capacity of 160 mgd (250 cfs). Fairbairn WTP has a treatment capacity of 200 mgd (310 cfs), equal to the maximum diversion rate allowed in the WFA. If both plants operated at their maximum production, the combined theoretical output would be approximately 360 mgd.

One of the alternatives being evaluated in the Sacramento River Water Reliability Study is for a 145 mgd (225 cfs) WTP on the Sacramento River near Elverta Road, north of the Sacramento International Airport. The potential completion date of a new Sacramento WTP is within the next six to ten years. With the addition of the new Sacramento River WTP, the combined maximum production will be 505 mgd and the

low flow production will be 405 mgd. Maximum day production before and after completion of a 145 mgd Sacramento WTP is shown in TABLE 2-4.

TABLE 2-4
MAXIMUM DAY PRODUCTION

Source	Capacity Above Hodge Flows (mgd)	Capacity Below Hodge Flows (mgd)
Fairbairn WTP	200	100
Sacramento WTP	160	160
Groundwater	24	24
TOTAL without new WTP	**384**	**284**
no groundwater	**360**	**260**
New Sacramento WTP	145	145
TOTAL with new WTP	**529**	**429**
no groundwater	**505**	**405**

Source: EIP Associates, June 2005 adapted from City of Sacramento Water Forum Agreement, 2000

During years when the projected unimpaired inflow to Folsom Reservoir is less than 400,000 acre-feet, the WFA limits diversion from the American River to 50,000 AFY. The WFA has labeled the extremely low flow conditions as a “conference year” where signatories will meet to discuss water management strategies. A conference year scenario has a 1.8 percent probability of occurring and did occur in 1924 and 1977. The WFA does not restrict diversion of the American River entitlements from a Sacramento River diversion point; therefore, normal year and dry year supplies are identical for the City as shown in TABLE 2-5. However, annual surface water diversions below the USBR contracted amounts are limited by the diversion capacity from the Sacramento River.

Assuming 50,000 AFY from the Fairbairn WTP and a maximum production from the Sacramento WTP of 180,000 AFY, the current drought limiting scenario still allows for a theoretical maximum production of 230,000 AFY. (The additional 145 mgd Sacramento River WTP would increase the total annual production to 311,800 AFY.) The theoretical maximum “conference year” production of 230,000 AFY over estimates the current drought year production, because the Sacramento WTP can not operate at maximum capacity of 160 mgd when the maximum demand is below maximum treatment capacity, as is the case in winter months. Average day demand is not expected to exceed 160 mgd until after 2015; therefore, the Sacramento WTP will operate below annual maximum production capacity until after 2015. The most appropriate approach to addressing the diversion limitations is by analyzing maximum day

demand; consequently, reference to total annual production capacity is for discussion purposes and does not appropriately reflect daily system operations.

TABLE 2-5
2005 Annual Surface Water Supply (AFY)

Source	2006 USBR Contracted Supply	2006 to 2008 Dry Year Supply[a]		
		First Dry Year 2006	Second Dry Year 2007	Third Dry Year 2008
American River	127.7	50,000	50,000	50,000
American River diverted from the Sacramento River	--	77,700	82,200	86,700
Sacramento River	81,800	81,800	81,800	81,800
TOTAL[b]	**209,500**	**209,500**	**214,000**	**218,500**

a. Current diversion capacity from the Sacramento River is 180,000 AFY, allowing a drought year production of 230,000 AFY.
b. Total increases during multiple years according to USBR contract.

3.0 WATER DEMAND ANALYSIS

This section shows the calculated water demand for the proposed project as well as projected demand for the entire system and then compares the demand to the supply.

3.1. Proposed Project Water Demand

The expected water use of the proposed project was determined by analyzing each use of the building and assigning a demand factor for each use. To determine the water demand factors of the proposed project, water use demand factors were formulated based on data from the *1994 Proposed Water Demand/Wastewater Generation Factors Report by* Nolte Engineering and West Yost and Associates*,* as well as current and historical uses at similar facilities, and personal communications with the State Department of Water Resources, Southern Nevada Water Agency, Placer County Water Agency, Irvine Ranch Water District, and the City of Sacramento, Department of Utilities. As shown in TABLE 3-1, the proposed project will potentially use 20.78 AFY or an annual average demand of 0.018 mgd (18,561gpd). The calculated demand represents the upper range of the potential demand.

TABLE 3-1

Proposed Project Water Demand

Building/Facility	Space Used (ft^2)	demand factor/unit	Average Annual Demand (gpd)	Total Annual Demand (AFY)
Office	406,384	0.0375 gpd/ft^2 [a]	15,239	17.06
Bar/Restaurant/Retail	27,124	0.35 gpd/ft^2 [b]	3,322	3.72
Parking Garage	534,900	0	0	0.00
TOTALS	**1,818,335**		**18,561**	**20.78**

a. Office 400 square feet per employee and 15 gallons per day per employee (American Water Works Association, 1996)

b. Restaurant/Retail based on actual use water service demand from Water Supply Assessment for Palo Alto Medical Foundation Draft EIR, 2005.

The existing facility has an estimated annual demand of 5.2 AFY as shown in TABLE 3-2, resulting in a net increase of in water demand of 15.58 AFY or an annual average demand increase of 0.011 mgd.

TABLE 3-2
Historical Water Use at the Proposed Project Site

Building/Facility	Space Used (ft^2)	demand factor/unit	Average Annual Demand (gpd)	Total Annual Demand (AFY)
Office Building	155,180	0.041 gpd/ft^2 [a]	6,395.0	5.2

a. Nolte Engineering with West Yost & Associates, *Proposed Water Demand/Wastewater Generation Factors Report 1994.*

3.2. System Demand

The Sacramento historical demand over the last five years is shown in TABLE 3-3. The total water supplied by the City from June 2003 to July 2004 was 143,784 acre-ft. Over the last 7 years, 17 percent of the delivered water has been met with groundwater.

TABLE 3-3
Historical Water Deliveries

	Surface Water				Groundwater	Total Water Delivered		
Year	Population	Annual Surface Water Delivered (AFY)	Maximum Day Water Delivered (mgd)	Maximum Day to Average Day Ratio	Annual Groundwater Delivered (AFY)	Total Annual Water Delivery (AFY)	Average (mgd)	Percent Increase
1997/98	392,800	92,031	140.40	1.71	7,186	99,216	88.58	
1998/99	396,200	102,180	143.60	1.58	24,630	126,810	113.22	21.8%
1999/00	405,963	112,547	161.60	1.61	24,146	136,693	122.04	7.2%
2000/01	418,711	114,172	214.00	2.10	23,578	137,750	122.98	0.8%
2001/02	426,013	113,979	159.80	1.57	24,271	138,250	123.43	0.4%
2002/03	433,400	111,539	278.90	2.35	23,997	135,537	121.01	-2.0%
2003/04	441,000	128,412	318.40	2.33	15,372	143,784	128.37	5.7%
2004/05	452,959	116,305	176.4	1.70	19,271	135,576	120.7	-5.97
Average	**420,881**	**111,396**	**199.14**	**1.87**	**20,306**	**131,702**	**117.09**	**00.0%**

Source: City of Sacramento, Department of Utilities: Operational Statistics 2004/2005.

The City of Sacramento recently completed a 2030 demand analysis for the USBR Sacramento River Water Reliability Study (March, 2005) including transfers within the designated point of use and demand through annexation. The City of Sacramento's demand was calculated as 156,766 AFY with a maximum day demand of 251 mgd. The total demand for the City's permitted Sacramento and American River diversions were calculated as 239,804 AFY with a peak demand of 402 mgd. The demand is summarized in TABLE 3-4. The projected demands are from the Water Forum Agreement and modified to reflect a 25.9 percent conservation factor. Supporting calculations, including population projections, are included in Appendix B.

TABLE 3-4

Projected Annual and Maximum Day Demand for Sacramento 2030a

Area	Annual Demand (AFY)	Maximum Day Demand[b] (mgd)
City of Sacramento	156,766	251
Area "D"	30,222	50
Cal-American (Rosemont)	12,129	20
Cal-American (Parkway)	10,551	17
Florin County Water District	2,296	4
Unincorporated Area (Zone 40)	10,644	19
Fruitridge Vista Water Company	4,734	8
Tokay Park Water District	119	1
Pending Annexation	5,208	8
Sacramento Wastewater Treatment Plant	520	1
Wheeling Demand	6,616	23
TOTAL	**239,805**	**402**

a. Demand based on estimates in USBR Sacramento River Water Reliability Study (March, 2005).

b. Maximum Day Demand based on a peaking factor of 1.8 except for wheeling demand.

The projected demand does not include the increased demand from the proposed project, which would result in potential net increase of 15.58 AFY. The maximum day demand may increase by 0.032 mgd, based on a peaking factor of 1.8 or 0.1 percent. The anticipated increase from the project results in an annual demand of 240,000 AFY and peak day demand of 402 mgd. Future projects altering the land uses from those included in the original analysis of 2030 demand have not been included.

3.3. Comparison of Available Water Supplies versus Demand

Section 10910 (c)(3) of the Water Code states, "the water supply assessment for the project shall include a discussion with regard to whether the public water system's total projected water supplies available for normal, dry and multiple dry water years during a 20-year projection will meet the projected water demand associated with the proposed project, in addition to the public water system's existing and planned future uses, including agricultural and manufacturing uses."

3.3.1. Annual Supply and Demand

The 2004 demand of 143,764 AFY was well below the current USBR contracted limit of 200,500 AFY for that year. The projected annual demand remains approximately 70% of the USBR contracted annual diversion when using a constant 2.0 percent per year growth rate to achieve the 2030 projected demand of 240,080 AFY as shown in TABLE 3-5. For the purposes of a cumulative analysis, the net increase in demand from the project was added to the 2030 projected demand and was assumed to be part of a constant 2.0 percent annual growth over the next 25 years.

TABLE 3-5
Supply and Demand Comparison during Normal Years (AFY)

	2005	2010	2015	2020	2025	2030
Surface Water Supply						
American River	123,200	145,700	170,200	196,200	222,200	245,000
Sacramento River	81,800	81,800	81,800	81,800	81,800	81,800
TOTAL SURFACE WATER SUPPLY[a]	**205,000**	**227,500**	**252,000**	**278,000**	**304,000**	**326,800**
Demand	146,647	161,567	178,336	196,842	217,265	239,805
Net Project Demand	--	15.52	15.52	15.52	15.52	15.52
TOTAL DEMAND	**146,647**	**161,583**	**178,352**	**196,858**	**217,281**	**239,821**
SURPLUS	**58,353**	**65,917**	**73,648**	**81,142**	**86,719**	**86,979**

a. Total Surface water supply is based on USBR contracted delivery.

The WFA limits the driest year diversion to 50,000 AFY from the American River, but does not limit the diversion of the American River entitlement from the Sacramento River, resulting in no reduction in contracted delivery for single or multiple dry years. The annual supply becomes limited by diversion and treatment capacity of Sacramento River water. Current theoretical maximum production during the “conference years” is approximately 230,000 AFY. As stated in Section 2.3, the “conference year” production estimate of 230,000 AFY over estimates the current drought production, because the Sacramento WTP can not operate at maximum capacity of 160 mgd when the maximum demand is below maximum treatment capacity, as is the case in winter months. In other words, production is directly related to customer water demands. The most appropriate approach to addressing the diversion limitations is by analyzing maximum day demand.

TABLE 3-6 shows annual surface water supply and demand for "conference years". Total annual contracted diversion, total annual production, "conference year" production capacity, and projected demand are also included in FIGURE 3-1. The figure does show a potential surface water deficit occurring in 2028 if a new diversion and WTP is not constructed on the Sacramento River. The deficit grows to 10,000 AFY in 2030. The anticipated deficit could be met with a combination of existing groundwater infrastructure, by curtailing wheeling agreements, or conservation measures.

TABLE 3-6

Supply and Demand Comparison during "Conference Years"[a]

	2005	2010	2015	2020	2025	2030
Surface Water Supply						
American River	50,000	50,000	50,000	50,000	50,000	50,000
American River diverted from the Sacramento River	73,200	95,700	120,200	146,200	172,200	195,000
Sacramento River	81,800	81,800	81,800	81,800	81,800	81,800
TOTAL SURFACE WATER SUPPLY[b]	**205,000**	**227,500**	**252,000**	**278,000**	**304,000**	**326,800**
Demand	146,647	161,567	178,336	196,842	217,265	239,805
Net Project Demand	--	15.58	15.58	15.58	15.58	15.58
TOTAL DEMAND	**146,647**	**161,583**	**178,352**	**196,858**	**217,281**	**239,821**
SURPLUS	**58,353**	**65,917**	**73,648**	**81,142**	**86,719**	**86,979**

a. "Conference Year", defined by the WFA, when the projected unimpaired inflow to Folsom Reservoir is less than 400,000 acre-feet.
b. Total Surface water supply is based on USBR contracted delivery and not based on the maximum dry year treatment and diversion capacity of 230,00 AFY.
c. Exceeds current dry year diversion capacity of 230,000 AFY.

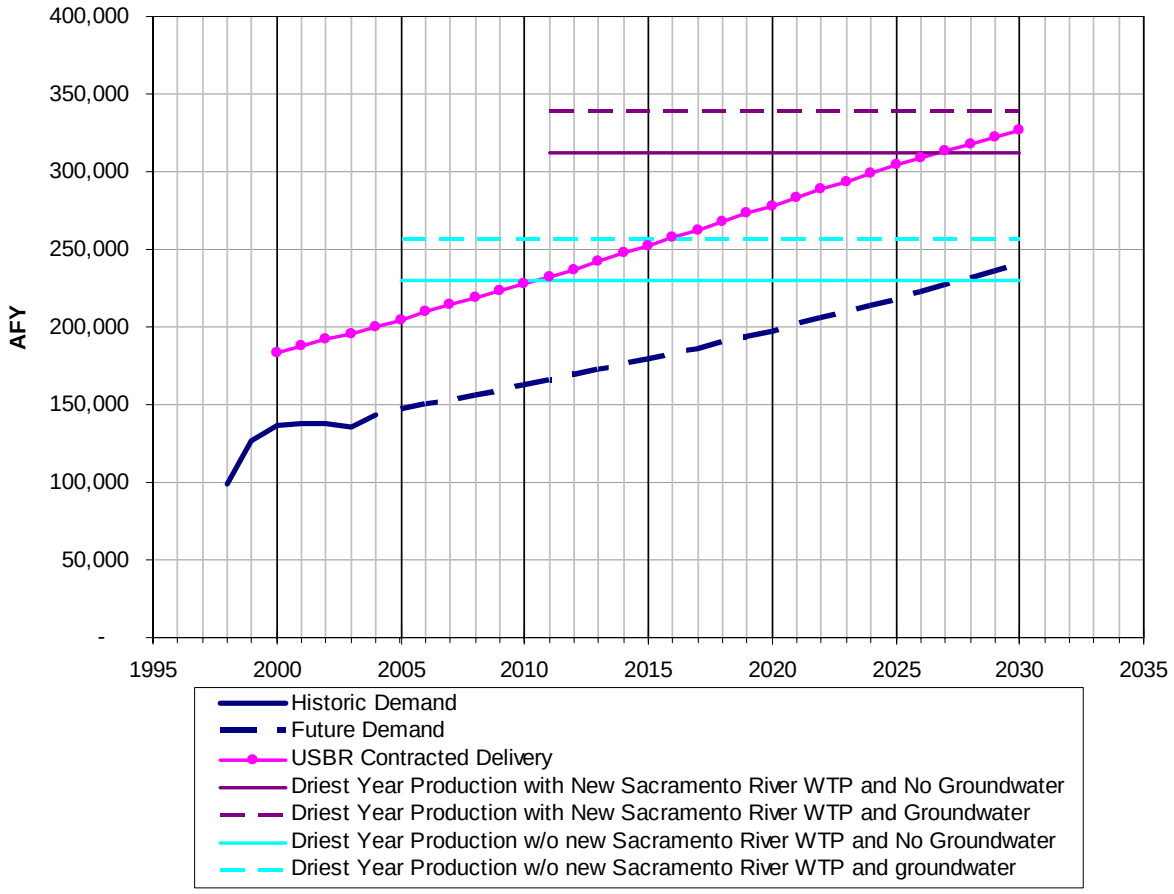

FIGURE 3-1 Annual Surface Water Supply and Demand

3.3.2. Maximum Day Supply and Demand

Because of diversion limitations during Hodge flow conditions, the maximum peak day demand should also be considered during the supply and demand analysis. TABLE 3-7 shows the maximum day surface water supply and demand under normal flow conditions. TABLE 3-8 shows a reduction of the Fairbairn WTP capacity from 200 mgd to 100 mgd during Hodge flow conditions, resulting in a total treatment capacity of 260 mgd. Assuming a 2.2 percent growth rate of the maximum day demand, a deficit of surface water production will occur in 2010 without a new Sacramento River diversion and WTP as shown during Hodge flow conditions in FIGURE 3-2. In 2014, the deficit exceeds Hodge flow-limited surface supply combined with the current groundwater supply of 24 mgd. In 2030, the projected deficit is 142 mgd. A new 145 mgd Sacramento River diversion WTP would meet the anticipated peak day deficit in 2030 under all conditions.

TABLE 3-7

Peak Day Surface Water Supply and Demand Comparison during Normal Flow Conditions (mgd)

	2005	2010	2015	2020	2025	2030
American River[a]	200	200	200	200	200	200
Sacramento River[a]	160	160	160	160	160	160
TOTAL SURFACE WATER SUPPLY	**360**	**360**	**360**	**360**	**360**	**360**
Demand[b]	235.7	261.9	291.5	324.5	361.2	402.0
Net Project Demand	--	0.011	0.011	0.011	0.011	0.011
TOTAL DEMAND		**261.9**	**291.5**	**324.5**	**361.2**	**402.0**
SURPLUS	**124.3**	**98.1**	**68.5**	**35.5**	**-1.2**	**-42.0**

a. Surface supply is based on nominal plant capacity.
b. Based on 2.2 percent annual growth rate between 2004 and 2030 demand.

TABLE 3-8

Peak Day Surface Water Supply and Demand Comparison during Hodge Flow Conditions (mgd)

	2005	2010	2015	2020	2025	2030
American River[a]	100	100	100	100	100	100
Sacramento River[b]	160	160	160	160	160	160
TOTAL SURFACE WATER SUPPLY	**260**	**260**	**260**	**260**	**260**	**260**
Demand[c]	235.7	261.9	291.5	324.5	361.2	402.0
Net Project Demand	--	0.011	0.011	0.011	0.011	0.011
TOTAL DEMAND		**261.9**	**291.5**	**324.5**	**361.2**	**402.0**
SURPLUS	**24.3**	**-1.9**	**-31.5**	**-64.5**	**-101.2**	**-142.0**

a. American River diversion is limited 100 mgd during Hodge flow conditions.
b. Sacramento WTP peak day supply is based on the nominal capacity of the plant.
c. Based on 2.2 percent annual growth rate between 2004 and 2030 demand.

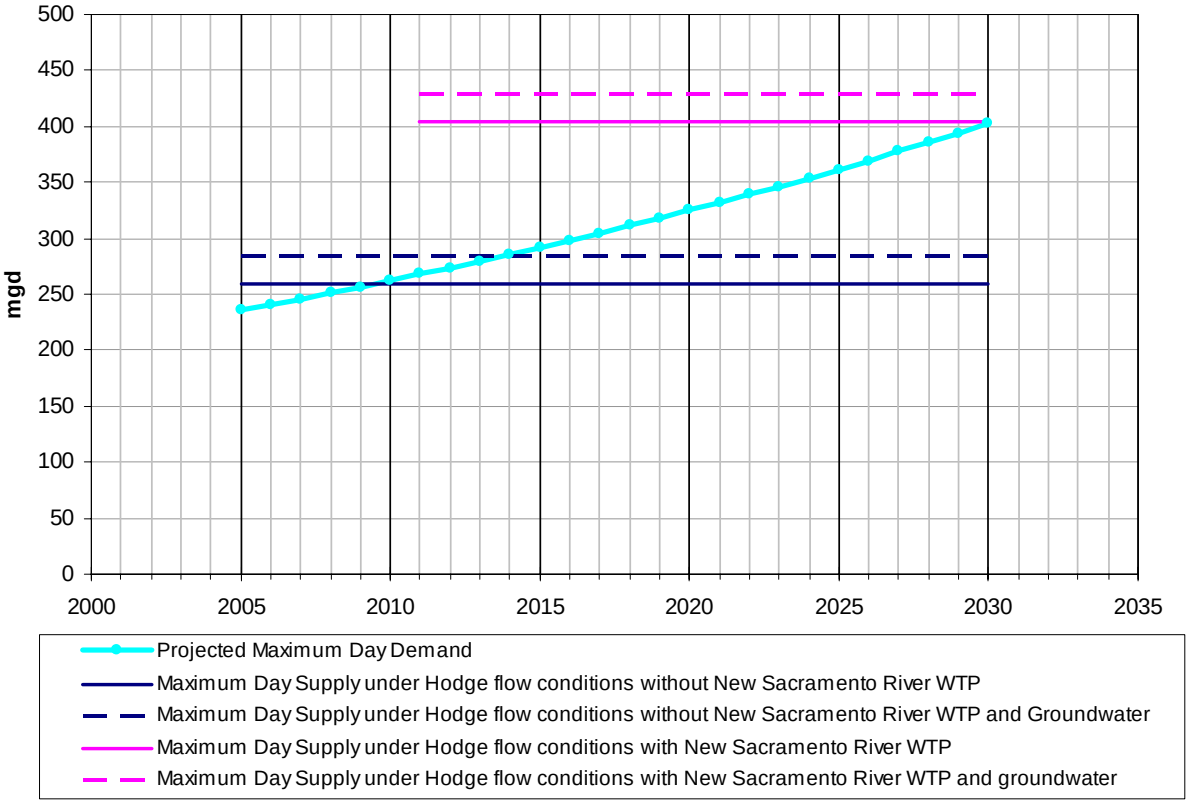

FIGURE 3-2 Maximum Day Surface Water Production and Demand

4.0 CONCLUSION

According to the requirements of Water Code Section 10910(c)(3) the water supply assessment shall include a discussion of "whether the public water system's total projected water supplies available … will meet the projected water demand associated with proposed project, in addition to the public water system's existing and planned future uses." Due to the limitations occurring during peak day demand, the supply will not meet the projected demand. According to the requirements of Water Code Section 10911(a), if the results of the assessment conclude that the water supplies are, or will be, insufficient, the water supply assessment shall include plans for acquiring additional water supplies. Those plans may include, but are not limited to, information on costs and financing, permits, and timeframes.

The City is already a partner on the Sacramento River Water Reliability Study, which is investigating alternatives for an additional diversion on the Sacramento River. The environmental documents for the alternatives analysis is scheduled to be completed in 2007[9], providing seven years for the design and construction of a selected project before any potential peak demand shortfall would occur. The alternative of a 145 mgd diversion and WTP included in the Sacramento River Water Reliability Study would ensure the delivery of the entitled water for the City, as well as all wholesale and wheeling agreements past 2030.

This assessment finds that the City of Sacramento has sufficient water allocation secured from their 1957 contracts with the USBR and other related permits to serve the proposed project and projected future demand over the next 20 years. Annual and peak day demands are summarized in TABLE 4-1. However, based on a WFA limitation of 50,000 AFY from the American River, during a dry year, a surface water limitation does occur by 2030, but the full demand can be met with the groundwater infrastructure. Due to limitations agreed to in the WFA and current infrastructure capabilities, an additional diversion and WTP on the Sacramento River will be required to meet the peak day demand by as early as 2014.

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[9] Initial Alternatives Report. Final diversion, March 2005. Sacramento River Reliability Study. Updated: Personal Communication with David Stevens of MWH, April 18, 2006

TABLE 4-1

Projected Annual and Maximum-Day Supply and Demand Comparison

Year	USBR contracted delivery (AFY)	Projected Annual Demand (AFY)[a]	Annual Surplus (AFY)	Peak Day Surface Water Supply under Hodge Flow conditions (mgd)[c]	Maximum Day Demand (mgd)[d]	Peak Day Surplus (mgd)
2005	205,000	146,647	58,353	260	236	24
2010	227,500	161,842	65,658	260	262	-2
2015	252,000	178,336	73,664	260	292	-32
2020	278,000	197,117	80,883	260	325	-65
2025	304,000	217,540	86,460	260	362	-102
2030	326,800	240,080[b]	86,720	260	402	-142

a. Demand based on estimates in Sacramento River Water Reliability Study (March, 2005) plus the net demand from project.

b. Exceeds "conference year" theoretical maximum production of 230,000 AFY, see TABLE 3-6.

c. Based on Hodge flow limitations of 100 mgd at Fairbarn WTP and nominal capacity of 160 mgd at Sacramento WTP.

d. Maximum-day demand based on a peaking factor of 1.8, except for wheeling demand.

Indicates demand exceeds supply due to infrastructure limitations.

Appendix H

TRANSPORTATION AND CIRCULATION TECHNICAL DATA

Downtown Sacramento Traffic Study
Trip Generation for Proposed Projects

Trip Generation Land Use Category	Amount	Source	Trips Generated							Distribution			
			Weekday	AM Peak Hour			PM Peak Hour			AM Peak		PM Peak	
				In	Out	Total	In	Out	Total	In	Out	In	Out
500 Capitol Mall													
Office (General Office Building)	467.942 KSF	ITE (710)	4,377	568	77	645	103	500	603	88%	12%	17%	83%
Retail (Shopping Center)	27.124 KSF	ITE (820)	2,908	44	28	72	127	138	265	61%	39%	48%	52%
Restaurant	0.0 KSF	ITE (932)	0	0	0	0	0	0	0	52%	48%	61%	39%
Total Project Trips			7,285	612	105	717	230	638	868				
Transit Adjustments													
Office (-11.1%)			-486	-63	-9	-72	-11	-56	-67				
Retail/Restaurant (-2.2%)			-64	-1	-1	-2	-3	-3	-6				
Total Transit Adjustments			-550	-64	-10	-74	-14	-59	-73				
Walk, Bike & Other Non-Auto Travel Adjustments													
Office (-2.8%)			-123	-16	-2	-18	-3	-14	-17				
Retail/Restaurant (-11.6%)			-337	-5	-3	-8	-15	-16	-31				
Total Walk, Bike & Other Non-Auto Travel Adjustments			-460	-21	-5	-26	-18	-30	-48				
Internal Trips Within This Project			-176	-1	-1	-3	-6	-6	-12				
Trips To-From Other Proposed Projects			-943	-18	-18	-36	-43	-43	-87				
New External Trips													
Office (General Office Building)				471	52	523	66	394	460				
Retail (Shopping Center)				36	18	54	83	106	189				
Total			5,156	507	70	578	149	500	649				
New External Trips Percent of Total Project Trips			71%	83%	67%	81%	65%	78%	75%				
Transit Trips													
Office (12.5%)			547	71	10	81	13	62	75				
Retail/Restaurant (2.6%)			76	1	1	2	3	4	7				
Total Transit Trips			623	72	11	83	16	66	82				

Analyst: DKS

Date: 4/14/2006

MULTI-USE DEVELOPMENT
TRIP GENERATION
AND INTERNAL CAPTURE SUMMARY
500 Capitol Mall

Name of Development: Downtown Study

Time Period: AM Peak Hour

Land Use B: Retail/Restaurant

ITE LU Code	ITE (820), & ITE (932)		
Size	27.1 KSF		
	Total	Internal	External
Enter	38	1	37
Exit	24	1	23
Total	62	1	61
%	100	2%	98%

Exit to External: 23

Enter from External: 37

Note: PM peak hour internal capture rates were used for the AM peak hour.

Demand 3% 1 — Balanced 1 — Demand 31% 152

Demand 2% 1 — Balanced 1 — Demand 23% 15

Demand 12% 3 — Balanced 0 — Demand 31% 0

Demand 9% 3 — Balanced 0 — Demand 53% 0

Land Use A: Office (General Office Building)

ITE LU Code	ITE (710)		
Size	467.9 KSF		
	Total	Internal	External
Enter	489	1	488
Exit	66	1	65
Total	555	1	554
%	100	0%	100%

Exit to External: 65

Enter from External: 488

Demand 0% 0 — Balanced 0 — Demand 0% 0

Demand 2% 1 — Balanced 0 — Demand 2% 0

Land Use C:

ITE LU Code	0		
Size			
	Total	Internal	External
Enter			
Exit			
Total			
%	100		

Enter from External: 0

Exit to External: 0

Net External Trips for Multi-use Development					
	LAND USE A	*LAND USE B*	*LAND USE C*	*TOTAL*	
Enter	488	37	0	526	
Exit	65	23	0	89	
Total	554	61	0	614	*INTERNAL CAPTURE*
Single-Use Trip	555	62	0	617	0%

Time Period: PM Peak Hour

Land Use B: Retail/Restaurant

ITE LU Code	ITE (820), & ITE (932)		
Size	27.1 KSF		
	Total	Internal	External
Enter	109	2	107
Exit	119	4	115
Total	228	6	222
%	100	3%	97%

Exit to External: 115

Enter from External: 107

Demand 3% 4 — Balanced 4 — Demand 31% 28

Demand 2% 2 — Balanced 2 — Demand 23% 99

Demand 12% 14 — Balanced 0 — Demand 31% 0

Demand 9% 10 — Balanced 0 — Demand 53% 0

Land Use A: Office (General Office Building)

ITE LU Code	ITE (710)		
Size	467.9 KSF		
	Total	Internal	External
Enter	89	4	85
Exit	430	2	428
Total	519	6	513
%	100	1%	99%

Exit to External: 428

Enter from External: 85

Demand 0% 0 — Balanced 0 — Demand 0% 0

Demand 2% 9 — Balanced 0 — Demand 2% 0

Land Use C: 0

ITE LU Code	0		
Size	0.0		0
	Total	Internal	External
Enter	0	0	0
Exit	0	0	0
Total	0	0	0
%	100		

Enter from External: 0

Exit to External: 0

Net External Trips for Multi-use Development					
	LAND USE A	*LAND USE B*	*LAND USE C*	*TOTAL*	
Enter	85	107	0	192	
Exit	428	115	0	543	
Total	513	222	0	736	*INTERNAL CAPTURE*
Single-Use Trip	519	228	0	747	2%

Analyst: DKS

Date: 4/14/2006

MULTI-USE DEVELOPMENT
TRIP GENERATION
AND INTERNAL CAPTURE SUMMARY
500 Capitol Mall

Name of Development: Downtown Study

Time Period: Daily

Land Use B: Retail/Restaurant

ITE LU Code ITE (820), & ITE (932)

Size 27.1 KSF

	Total	Internal	External
Enter	1254	50	1204
Exit	1254	38	1216
Total	2508	88	2420
%	100	4%	97%

Exit to External: 1216

Enter from External: 1204

Demand 3% 38

Balanced 38

Demand 15% 283

Demand 4% 50

Balanced 50

Demand 22% 414

Demand 11% 138

Balanced 0

Demand 33% 0

Demand 9% 113

Balanced 0

Demand 38% 0

Land Use A: Office (General Office Building)

ITE LU Code ITE (710)

Size 467.9 KSF

	Total	Internal	External
Enter	1884	38	1846
Exit	1884	50	1834
Total	3768	88	3680
%	100	2%	98%

Exit to External: 1834

Enter from External: 1846

Demand 0% 0

Balanced 0

Demand 0% 0

Demand 2% 38

Balanced 0

Demand 3% 0

Land Use C: 0

ITE LU Code 0

Size 0.0 0

	Total	Internal	External
Enter	0	0	0
Exit	0	0	0
Total	0	0	0
%	100		

Enter from External: 0

Exit to External: 0

Net External Trips for Multi-use Development

	LAND USE A	*LAND USE B*	*LAND USE C*	*TOTAL*	
Enter	1846	1204	0	3050	
Exit	1834	1216	0	3050	
Total	3680	2420	0	6100	*INTERNAL CAPTURE*
Single-Use Trip	3768	2508	0	6276	3%

Capacity Analysis of Freeway Mainline Segments
2000 Highway Capacity Manual

Capacity based on 2100 vphpl for freeway lanes, 1600 vphpl for auxiliary lanes

Mainline Segment	Dir	Frwy Lanes	Aux Lanes	Exising Conditions Without Project AM	Exising Conditions Without Project PM	Baseline Conditions Without Project AM	Baseline Conditions Without Project PM	Baseline Conditions With Project AM	Baseline Conditions With Project PM
Freeway Traffic Volume									
I-5, South of US 50 on-ramp	NB	3	0	3,417	2,872	3,539	2,959	3,539	2,959
I-5, North of US 50 on-ramp	NB	4	0	7,119	5,235	7,249	5,346	7,249	5,346
I-5, South of L Street on-ramp	NB	3	0	5,279	3,841	5,330	4,960	5,330	4,960
I-5, South of I Street on-ramp	NB	4	0	5,471	4,598	5,522	5,717	5,533	5,792
I-5, South of Richards Blvd off-ramp	NB	4	1	5,806	6,011	5,881	7,196	5,892	7,271
US-50, West of I-5 on-ramp	EB	4	0	3,176	1,434	3,197	1,446	3,197	1,446
US-50, West of 15th Street off-ramp	EB	5	1	8,183	6,334	8,278	6,441	8,286	6,496
US-50, West of 10th Street on-ramp	EB	5	0	7,534	5,658	7,629	5,765	7,637	5,820
US-50, West of 16th Street on-ramp	EB	5	1	8,319	6,403	8,465	6,795	8,479	6,895
Volume to Capacity (V/C)									
I-5, South of US 50 on-ramp	NB	3	0	0.54	0.46	0.56	0.47	0.56	0.47
I-5, North of US 50 on-ramp	NB	4	0	0.85	0.62	0.86	0.64	0.86	0.64
I-5, South of L Street on-ramp	NB	3	0	0.84	0.61	0.85	0.79	0.85	0.79
I-5, South of I Street on-ramp	NB	4	0	0.65	0.55	0.66	0.68	0.66	0.69
I-5, South of Richards Blvd off-ramp	NB	4	1	0.58	0.60	0.59	0.72	0.59	0.73
US-50, West of I-5 on-ramp	EB	4	0	0.38	0.17	0.38	0.17	0.38	0.17
US-50, West of 15th Street off-ramp	EB	5	1	0.68	0.52	0.68	0.53	0.68	0.54
US-50, West of 10th Street on-ramp	EB	5	0	0.72	0.54	0.73	0.55	0.73	0.55
US-50, West of 16th Street on-ramp	EB	5	1	0.69	0.53	0.70	0.56	0.70	0.57
Level of Service:									
I-5, South of US 50 on-ramp	NB			C	B	C	B	C	B
I-5, North of US 50 on-ramp	NB			D	C	D	C	D	C
I-5, South of L Street on-ramp	NB			D	C	D	D	D	D
I-5, South of I Street on-ramp	NB			C	C	C	C	C	C
I-5, South of Richards Blvd off-ramp	NB			C	C	C	C	C	C
US-50, West of I-5 on-ramp	EB			B	A	B	A	B	A
US-50, West of 15th Street off-ramp	EB			C	B	C	C	C	C
US-50, West of 10th Street on-ramp	EB			C	C	C	C	C	C
US-50, West of 16th Street on-ramp	EB			C	B	C	C	C	C

Freeway Capacity Source: 2000 Highway Capacity Manual

		V/C	LOS
Ideal Freeway Capacity =	2400 (p. 23-4)		
Free-Flow Speed =	70 mph	0.32	A
Peak Hour Factor =	0.92	0.53	B
Percent Trucks =	5.0%	0.74	C
Actual Capacity / Ideal Capacity =	88%	0.90	D
Adjusted Freeway Capacity =	2100	1.00	E

Capacity Analysis of Freeway Mainline Segments
2000 Highway Capacity Manual

Capacity based on 2100 vphpl for freeway lanes, 1600 vphpl for auxiliary lanes

Mainline Segment	Dir	Frwy Lanes	Aux Lanes	Exising Conditions Without Project AM	Exising Conditions Without Project PM	Baseline Conditions Without Project AM	Baseline Conditions Without Project PM	Baseline Conditions With Project AM	Baseline Conditions With Project PM
Freeway Traffic Volume									
I-5, North of Richards Blvd on-ramp	SB	4	0	7,628	5,797	8,124	6,086	8,200	6,108
I-5, North of J Street on-ramp	SB	4	0	8,104	6,568	8,600	6,857	8,676	6,879
I-5, North of I Street on-ramp	SB	4	0	6,437	6,295	6,607	6,281	6,607	6,281
I-5, North of US 50 off-ramp	SB	3	2	5,978	6,149	5,846	6,036	5,846	6,036
US-50, East of Hwy 51/US 99 on-ram	WB	4	1	3,637	3,250	4,065	3,447	4,121	3,463
US-50, East of 10th Street off-ramp	WB	5	0	6,483	6,058	6,854	6,281	6,955	6,311
US-50, East of 15th Street on-ramp	WB	5	0	5,555	5,709	5,645	5,857	5,701	5,873
US-50, East of I-5 off-ramp	WB	6	0	6,029	6,375	6,124	6,530	6,180	6,546
Volume to Capacity (V/C)									
I-5, North of Richards Blvd on-ramp	SB	4	0	0.91	0.69	0.97	0.72	0.98	0.73
I-5, North of J Street on-ramp	SB	4	0	0.96	0.78	1.02	0.82	1.03	0.82
I-5, North of I Street on-ramp	SB	4	0	0.77	0.75	0.79	0.75	0.79	0.75
I-5, North of US 50 off-ramp	SB	3	2	0.63	0.65	0.62	0.64	0.62	0.64
US-50, East of Hwy 51/US 99 on-ram	WB	4	1	0.36	0.33	0.41	0.34	0.41	0.35
US-50, East of 10th Street off-ramp	WB	5	0	0.62	0.58	0.65	0.60	0.66	0.60
US-50, East of 15th Street on-ramp	WB	5	0	0.53	0.54	0.54	0.56	0.54	0.56
US-50, East of I-5 off-ramp	WB	6	0	0.48	0.51	0.49	0.52	0.49	0.52
Level of Service:									
I-5, North of Richards Blvd on-ramp	SB			E	C	E	C	E	C
I-5, North of J Street on-ramp	SB			E	D	F	D	F	D
I-5, North of I Street on-ramp	SB			D	D	D	D	D	D
I-5, North of US 50 off-ramp	SB			C	C	C	C	C	C
US-50, East of Hwy 51/US 99 on-ram	WB			B	B	B	B	B	B
US-50, East of 10th Street off-ramp	WB			C	C	C	C	C	C
US-50, East of 15th Street on-ramp	WB			B	C	C	C	C	C
US-50, East of I-5 off-ramp	WB			B	B	B	B	B	B

Freeway Capacity Source: 2000 Highway Capacity Manual

		V/C	LOS
Ideal Freeway Capacity =	2400 (p. 23-4)		
Free-Flow Speed =	70 mph	0.32	A
Peak Hour Factor =	0.92	0.53	B
Percent Trucks =	5.0%	0.74	C
Actual Capacity / Ideal Capacity =	88%	0.90	D
Adjusted Freeway Capacity =	2100	1.00	E

EB US-50 - Weaving from 16th St to Hwy 51 / SR 99

Highway Capacity Manual
2000 Edition
Capacity Analysis of Freeway Ramps

Type	B
Existing Upstrm Frwy Lanes / Aux. Lanes	5
Existing Dnstrm Frwy Lanes / Aux. Lanes	4
Sacramento Factor. [Note: Capacity is fixed hence adjust volume]	1

	Existing Without Project		Baseline Without Project		Baseline With Project	
	AM	PM	AM	PM	AM	PM
PHF (Peak Hour Factor) =	1	1	1	1	1	1
f_{HV} (Adjustment factor for heavy vehicles) =	1	1	1	1	1	1
f_p (Adjustment factor for driver population) =	1	1	1	1	1	1
P_T (Proportioin of trucks/buses in the traffic stream) =	0.01	0.01	0.01	0.01	0.01	0.01
P_R (Proportioin of RVs in the traffic stream) =	0	0	0	0	0	0
E_T (Passenger-car equivalents for trucks/buses in the traffic stream) =	1.5	1.5	1.5	1.5	1.5	1.5
E_R (Passenger-car equivalents for RVs in the traffic stream) =	1.5	1.5	1.5	1.5	1.5	1.5
L - Length of weaving segment (ft)	1000	1000	1000	1000	1000	1000
N, Total number of lanes in the weaving segment	6	6	6	6	6	6
N_w, Number of lanes to be used by weaving vehicles if unconstrained operation is to be achived. note: Type-B, Ex 24-7	3.05491	4.245573	3.139685	4.400099	3.141138	4.397808
$N_{w(max)}$, Maximum number of lanes that can be used by weaving vehicles for a given configuration. note: A:1.4, B:3.5, C:3.0	3.5	3.5	3.5	3.5	3.5	3.5
N_{nw}, Number of lanes used by nonweaving vehicles. note: Nw < Nw(max) implies unconstrained, and Nw >= Nw(max) implies constrained	5	5	5	5	5	5
v, Total flow rate in the weaving segment (pc/h)	8975	6743	9153	7206	9167	7301
v_{o1}, Larger of the two outer, or nonweaving, flow rates in the weaving segment (pc/h)	5645	3135	5669	3236	5677	3286
v_{o2}, Smaller of the two outer, or nonweaving, flow rates in the weaving segment (pc/h)	0	0	0	0	0	0
v_{w1}, Larger of two weaving flow rates in the weaving segment (pc/h)	2674	2983	2796	3265	2802.3	3310
v_{w2}, Smaller of two weaving flow rates in the weaving segment (pc/h)	656	625	688	705	688	705
v_w, Total weaving flow rate in the weaving segment (pc/h) ($v_w = v_{w1} + v_{w2}$)	3330	3608	3484	3970	3490	4015
v_{nw}, Total nonweaving flow rate in the weaving segment (pc/h) ($v_{nw} = v_{o1} + v_{o2}$)	5645	3135	5669	3236	5677	3286
VR, Volume ratio; the ratio of weaving flow rate to total flow rate in the weaving segment ($VR = v_w/v$)	0.371031	0.535085	0.38064	0.550937	0.380746	0.549901
R, Weaving ratio; the ratio of the smaller weaving flow rate to total weaving flow rate (R = vw2/vw)	0.196997	0.173264	0.197474	0.177565	0.197118	0.175574
S_w, Speed of weaving vehicles in the weaving segment (mi/h)	44.80542	44.14186	44.40747	43.19427	44.39052	43.08793
S_{nw}, Speed of nonweaving vehicles in the weaving segment (mi/h)	48.77669	43.4957	47.96909	41.73644	47.94283	41.61083
S, Speed of all vehicles in the weaving segment (mi/h) [Eq 24-5, HCM2000]	47.2237	43.83908	46.54805	42.52721	46.52525	42.41032
D, Density of all vehicles in the weaving segment (pc/mi/ln) [Eq 24-6, HCM2000]	31.67548	25.63606	32.77259	28.23977	32.8388	28.69257
W_w, Weaving intensity factor for prediction of weaving speed	0.845302	0.88732	0.870273	0.950751	0.871352	0.958136
W_{nw}, Weaving intensity factor for prediction of nonweaving speed	0.628342	0.930116	0.668229	1.057118	0.669559	1.066828
S_{min}, Minimum speed expected in a weaving segment (mi/h)	15	15	15	15	15	15
S_{max}, Maximum speed expected in a weaving segment (mi/h)	70	70	70	70	70	70
a (weaving) [Exhibit 24-6, Unconstrainted Case]	0.08	0.08	0.08	0.08	0.08	0.08
b (weaving)	2.2	2.2	2.2	2.2	2.2	2.2
c (weaving)	0.7	0.7	0.7	0.7	0.7	0.7
d (weaving)	0.5	0.5	0.5	0.5	0.5	0.5
a (non-weaving)	0.002	0.002	0.002	0.002	0.002	0.002
b (non-weaving)	6	6	6	6	6	6
c (non-weaving)	1	1	1	1	1	1
d (non-weaving)	0.5	0.5	0.5	0.5	0.5	0.5
LOS	**D**	**C**	**D**	**D**	**D**	**D**

WB US-50 - Weaving from Hwy 51 / SR 99 to 16th St

Highway Capacity Manual
2000 Edition
Capacity Analysis of Freeway Ramps

Type	B
Existing Upstrm Frwy Lanes / Aux. Lanes	4
Existing Dnstrm Frwy Lanes / Aux. Lanes	5
Sacramento Factor. [Note: Capacity is fixed hence adjust volume]	1

	Existing Without Project		Baseline Without Project		Baseline With Project	
	AM	PM	AM	PM	AM	PM
PHF (Peak Hour Factor) =	1	1	1	1	1	1
f_{HV} (Adjustment factor for heavy vehicles) =	1	1	1	1	1	1
f_p (Adjustment factor for driver population) =	1	1	1	1	1	1
P_T (Proportioin of trucks/buses in the traffic stream) =	0.01	0.01	0.01	0.01	0.01	0.01
P_R (Proportioin of RVs in the traffic stream) =	0	0	0	0	0	0
E_T (Passenger-car equivalents for trucks/buses in the traffic stream) =	1.5	1.5	1.5	1.5	1.5	1.5
E_R (Passenger-car equivalents for RVs in the traffic stream) =	1.5	1.5	1.5	1.5	1.5	1.5
L - Length of weaving segment (ft)	1000	1000	1000	1000	1000	1000
N, Total number of lanes in the weaving segment	6	6	6	6	6	6
N_w, Number of lanes to be used by weaving vehicles if unconstrained operation is to be achived. note: Type-B, Ex 24-7	3.344402	3.613636	3.267712	3.608068	3.238338	3.597887
$N_{w(max)}$, Maximum number of lanes that can be used by weaving vehicles for a given configuration. note: A:1.4, B:3.5, C:3.0	3.5	3.5	3.5	3.5	3.5	3.5
N_{nw}, Number of lanes used by nonweaving vehicles. note: Nw < Nw(max) implies unconstrained, and Nw >= Nw(max) implies constrained	5	5	5	5	5	5
v, Total flow rate in the weaving segment (pc/h)	4880	4883	5343	5147	5399	5163
v_{o1}, Larger of the two outer, or nonweaving, flow rates in the weaving segment (pc/h)	2757	2583	3093	2739	3149	2755
v_{o2}, Smaller of the two outer, or nonweaving, flow rates in the weaving segment (pc/h)	0	0	0	0	0	0
v_{w1}, Larger of two weaving flow rates in the weaving segment (pc/h)	1243	1633	1278	1700	1278	1700
v_{w2}, Smaller of two weaving flow rates in the weaving segment (pc/h)	880	667	972	708	972	708
v_w, Total weaving flow rate in the weaving segment (pc/h) ($v_w = v_{w1} + v_{w2}$)	2123	2300	2250	2408	2250	2408
v_{nw}, Total nonweaving flow rate in the weaving segment (pc/h) ($v_{nw} = v_{o1} + v_{o2}$)	2757	2583	3093	2739	3148.77	2755.39
VR, Volume ratio; the ratio of weaving flow rate to total flow rate in the weaving segment ($VR = v_w/v$)	0.435041	0.471022	0.421112	0.467845	0.416762	0.46636
R, Weaving ratio; the ratio of the smaller weaving flow rate to total weaving flow rate (R = vw2/vw)	0.414508	0.29	0.432	0.29402	0.432	0.29402
S_w, Speed of weaving vehicles in the weaving segment (mi/h)	49.16001	48.4447	48.61381	48.02249	48.60696	48.02251
S_{nw}, Speed of nonweaving vehicles in the weaving segment (mi/h)	52.95076	51.1478	52.57063	50.65308	52.66587	50.68936
S, Speed of all vehicles in the weaving segment (mi/h) [Eq 24-5, HCM2000]	51.23212	49.83796	50.82846	49.38739	50.89465	49.40972
D, Density of all vehicles in the weaving segment (pc/mi/ln) [Eq 24-6, HCM2000]	15.87546	16.32959	17.51971	17.36948	17.67956	17.41692
W_w, Weaving intensity factor for prediction of weaving speed	0.61007	0.644506	0.636232	0.665532	0.636566	0.665531
W_{nw}, Weaving intensity factor for prediction of nonweaving speed	0.449246	0.521531	0.46391	0.542644	0.460208	0.541075
S_{min}, Minimum speed expected in a weaving segment (mi/h)	15	15	15	15	15	15
S_{max}, Maximum speed expected in a weaving segment (mi/h)	70	70	70	70	70	70
a (weaving) [Exhibit 24-6, Unconstrainted Case]	0.08	0.08	0.08	0.08	0.08	0.08
b (weaving)	2.2	2.2	2.2	2.2	2.2	2.2
c (weaving)	0.7	0.7	0.7	0.7	0.7	0.7
d (weaving)	0.5	0.5	0.5	0.5	0.5	0.5
a (non-weaving)	0.002	0.002	0.002	0.002	0.002	0.002
b (non-weaving)	6	6	6	6	6	6
c (non-weaving)	1	1	1	1	1	1
d (non-weaving)	0.5	0.5	0.5	0.5	0.5	0.5
LOS	**B**	**B**	**B**	**B**	**B**	**B**

NB I-5 - Weaving from P St to J St

Highway Capacity Manual
2000 Edition
Capacity Analysis of Freeway Ramps

Type	B
Existing Upstrm Frwy Lanes / Aux. Lanes	4
Existing Dnstrm Frwy Lanes / Aux. Lanes	4
Sacramento Factor. [Note: Capacity is fixed hence adjust volume]	1

	Existing Without Project		Baseline Without Project		Baseline With Project	
	AM	PM	AM	PM	AM	PM
PHF (Peak Hour Factor) =	1	1	1	1	1	1
f_{HV} (Adjustment factor for heavy vehicles) =	1	1	1	1	1	1
f_p (Adjustment factor for driver population) =	1	1	1	1	1	1
P_T (Proportioin of trucks/buses in the traffic stream) =	0.01	0.01	0.01	0.01	0.01	0.01
P_R (Proportioin of RVs in the traffic stream) =	0	0	0	0	0	0
E_T (Passenger-car equivalents for trucks/buses in the traffic stream) =	1.5	1.5	1.5	1.5	1.5	1.5
E_R (Passenger-car equivalents for RVs in the traffic stream) =	1.5	1.5	1.5	1.5	1.5	1.5
L - Length of weaving segment (ft)	1000	1000	1000	1000	1000	1000
N, Total number of lanes in the weaving segment	6	6	6	6	6	6
N_w, Number of lanes to be used by weaving vehicles if unconstrained operation is to be achived. note: Type-B, Ex 24-7	2.473536	1.069067	2.60249	1.298211	2.60249	1.298211
$N_{w(max)}$, Maximum number of lanes that can be used by weaving vehicles for a given configuration. note: A:1.4, B:3.5, C:3.0	3.5	3.5	3.5	3.5	3.5	3.5
N_{nw}, Number of lanes used by nonweaving vehicles. note: Nw < Nw(max) implies unconstrained, and Nw >= Nw(max) implies constrained	5	5	5	5	5	5
v, Total flow rate in the weaving segment (pc/h)	7306	5920	7487	6345	7487	6345
v_{o1}, Larger of the two outer, or nonweaving, flow rates in the weaving segment (pc/h)	5092	3960	5092	3961	5092	3961
v_{o2}, Smaller of the two outer, or nonweaving, flow rates in the weaving segment (pc/h)	0	0	0	0	0	0
v_{w1}, Larger of two weaving flow rates in the weaving segment (pc/h)	2027	1275	2157	1385	2157	1385
v_{w2}, Smaller of two weaving flow rates in the weaving segment (pc/h)	187	685	238	999	238	999
v_w, Total weaving flow rate in the weaving segment (pc/h) ($v_w = v_{w1} + v_{w2}$)	2214	1960	2395	2384	2395	2384
v_{nw}, Total nonweaving flow rate in the weaving segment (pc/h) ($v_{nw} = v_{o1} + v_{o2}$)	5092	3960	5092	3961	5092	3961
VR, Volume ratio; the ratio of weaving flow rate to total flow rate in the weaving segment (VR = v_w/v)	0.303039	0.331081	0.319888	0.375729	0.319888	0.375729
R, Weaving ratio; the ratio of the smaller weaving flow rate to total weaving flow rate (R = vw2/vw)	0.084463	0.34949	0.099374	0.419044	0.099374	0.419044
S_w, Speed of weaving vehicles in the weaving segment (mi/h)	48.244	41.06832	47.6443	39.41475	47.6443	39.41475
S_{nw}, Speed of nonweaving vehicles in the weaving segment (mi/h)	54.94289	61.86678	53.80723	59.83524	53.80723	59.83524
S, Speed of all vehicles in the weaving segment (mi/h) [Eq 24-5, HCM2000]	52.72434	52.98305	51.66923	50.08548	51.66923	50.08548
D, Density of all vehicles in the weaving segment (pc/mi/ln) [Eq 24-6, HCM2000]	23.09496	18.62231	24.15041	21.1139	24.15041	21.1139
W_w, Weaving intensity factor for prediction of weaving speed	0.654434	1.10984	0.684827	1.252737	0.684827	1.252737
W_{nw}, Weaving intensity factor for prediction of nonweaving speed	0.376966	0.173539	0.417262	0.226714	0.417262	0.226714
S_{min}, Minimum speed expected in a weaving segment (mi/h)	15	15	15	15	15	15
S_{max}, Maximum speed expected in a weaving segment (mi/h)	70	70	70	70	70	70
a (weaving) [Exhibit 24-6, AM:Unconstrainted, PM:Constrainted]	0.08	0.15	0.08	0.15	0.08	0.15
b (weaving)	2.2	2.2	2.2	2.2	2.2	2.2
c (weaving)	0.7	0.7	0.7	0.7	0.7	0.7
d (weaving)	0.5	0.5	0.5	0.5	0.5	0.5
a (non-weaving)	0.002	0.001	0.002	0.001	0.002	0.001
b (non-weaving)	6	6	6	6	6	6
c (non-weaving)	1	1	1	1	1	1
d (non-weaving)	0.5	0.5	0.5	0.5	0.5	0.5
LOS	**C**	**B**	**C**	**C**	**C**	**C**

SB I-5 - Weaving from I St to Q St

Highway Capacity Manual
2000 Edition
Capacity Analysis of Freeway Ramps

Type	B
Existing Upstrm Frwy Lanes / Aux. Lanes	4
Existing Dnstrm Frwy Lanes / Aux. Lanes	5
Sacramento Factor. [Note: Capacity is fixed hence adjust volume]	1

	Existing Without Project		Baseline Without Project		Baseline With Project	
	AM	PM	AM	PM	AM	PM
PHF (Peak Hour Factor) =	1	1	1	1	1	1
f_{HV} (Adjustment factor for heavy vehicles) =	1	1	1	1	1	1
f_p (Adjustment factor for driver population) =	1	1	1	1	1	1
P_T (Proportioin of trucks/buses in the traffic stream) =	0.01	0.01	0.01	0.01	0.01	0.01
P_R (Proportioin of RVs in the traffic stream) =	0	0	0	0	0	0
E_T (Passenger-car equivalents for trucks/buses in the traffic stream) =	1.5	1.5	1.5	1.5	1.5	1.5
E_R (Passenger-car equivalents for RVs in the traffic stream) =	1.5	1.5	1.5	1.5	1.5	1.5
L - Length of weaving segment (ft)	1000	1000	1000	1000	1000	1000
N, Total number of lanes in the weaving segment	6	6	6	6	6	6
N_w, Number of lanes to be used by weaving vehicles if unconstrained operation is to be achived. note: Type-B, Ex 24-7	1.512992	2.489416	1.755705	2.640769	1.755705	2.640769
$N_{w(max)}$, Maximum number of lanes that can be used by weaving vehicles for a given configuration. note: A:1.4, B:3.5, C:3.0	3.5	3.5	3.5	3.5	3.5	3.5
N_{nw}, Number of lanes used by nonweaving vehicles. note: Nw < Nw(max) implies unconstrained, and Nw >= Nw(max) implies constrained	5	5	5	5	5	5
v, Total flow rate in the weaving segment (pc/h)	6725	7342	6904	7356	6904	7356
v_{o1}, Larger of the two outer, or nonweaving, flow rates in the weaving segment (pc/h)	5690	5102	5549	4961	5549	4961
v_{o2}, Smaller of the two outer, or nonweaving, flow rates in the weaving segment (pc/h)	0	0	0	0	0	0
v_{w1}, Larger of two weaving flow rates in the weaving segment (pc/h)	747	1193	1058	1320	1058	1320
v_{w2}, Smaller of two weaving flow rates in the weaving segment (pc/h)	288	1047	297	1075	297	1075
v_w, Total weaving flow rate in the weaving segment (pc/h) ($v_w = v_{w1} + v_{w2}$)	1035	2240	1355	2395	1355	2395
v_{nw}, Total nonweaving flow rate in the weaving segment (pc/h) ($v_{nw} = v_{o1} + v_{o2}$)	5690	5102	5549	4961	5549	4961
VR, Volume ratio; the ratio of weaving flow rate to total flow rate in the weaving segment ($VR = v_w/v$)	0.153903	0.305094	0.196263	0.325585	0.196263	0.325585
R, Weaving ratio; the ratio of the smaller weaving flow rate to total weaving flow rate (R = vw2/vw)	0.278261	0.467411	0.219188	0.448852	0.219188	0.448852
S_w, Speed of weaving vehicles in the weaving segment (mi/h)	52.34759	48.15309	51.15655	47.68252	51.15655	47.68252
S_{nw}, Speed of nonweaving vehicles in the weaving segment (mi/h)	62.11585	54.78522	60.33186	53.71351	60.33186	53.71351
S, Speed of all vehicles in the weaving segment (mi/h) [Eq 24-5, HCM2000]	60.38175	52.57595	58.28032	51.58904	58.28032	51.58904
D, Density of all vehicles in the weaving segment (pc/mi/ln) [Eq 24-6, HCM2000]	18.56245	23.27427	19.74366	23.76474	19.74366	23.76474
W_w, Weaving intensity factor for prediction of weaving speed	0.472652	0.658971	0.521163	0.682857	0.521163	0.682857
W_{nw}, Weaving intensity factor for prediction of nonweaving speed	0.167335	0.382423	0.213275	0.420693	0.213275	0.420693
S_{min}, Minimum speed expected in a weaving segment (mi/h)	15	15	15	15	15	15
S_{max}, Maximum speed expected in a weaving segment (mi/h)	70	70	70	70	70	70
a (weaving) [Exhibit 24-6, Unconstrainted]	0.08	0.08	0.08	0.08	0.08	0.08
b (weaving)	2.2	2.2	2.2	2.2	2.2	2.2
c (weaving)	0.7	0.7	0.7	0.7	0.7	0.7
d (weaving)	0.5	0.5	0.5	0.5	0.5	0.5
a (non-weaving)	0.002	0.002	0.002	0.002	0.002	0.002
b (non-weaving)	6	6	6	6	6	6
c (non-weaving)	1	1	1	1	1	1
d (non-weaving)	0.5	0.5	0.5	0.5	0.5	0.5
LOS	**B**	**C**	**B**	**C**	**B**	**C**

NB I-5 - US 50 On-Ramp

Highway Capacity Manual
2000 Edition
Capacity Analysis of Freeway Ramps

Ramp Analysis Type: 6 lane freeway, 2 Lane On-Ramp (Pfm=0.555 for 2-lane ramp)

Existing Upstrm Frwy Lanes / Aux. Lanes	3
Existing Dnstrm Frwy Lanes / Aux. Lanes	4

	Existing Without Project		Baseline Without Project		Baseline With Project	
	AM	PM	AM	PM	AM	PM
Freeway Volume (Upstream):	3,417	2,872	3,539	2,959	3,539	2,959
Ramp Volume:	3,269	1,997	3,277	2,021	3,277	2,021
L_{Aeff} (Effective length of the acceleration lane, ft)	1,000	1,000	1,000	1,000	1,000	1,000
Sacto Adjusted Freeway Volume (Upstream):	3,728	3,133	3,861	3,228	3,861	3,228
Sacto Adjusted Ramp Volume:	3,566	2,179	3,575	2,205	3,575	2,205
V_{FO} Capacity (downstream segment capacity)	9,600	9,600	9,600	9,600	9,600	9,600
Downstream Freeway V/C:	0.76	0.55	0.77	0.57	0.77	0.57
V_{12} (Maximum total flow entering the ramp, diverge influence area, two-lane volume):	2,069	1,739	2,143	1,792	2,143	1,792
V_{R12} (Maximum total flow entering the ramp, merge influence area, two-lane volume):	5,635	3,918	5,718	3,997	5,718	3,997
V_{R12} Capacity:	4,600	4,600	4,600	4,600	4,600	4,600
V_{R12} V/C:	1.23	0.85	1.24	0.87	1.24	0.87
D_R (Density of merge influence area (pc/mi/ln))	41.52	28.76	42.16	29.37	42.16	29.37
v_F (Maximum total flow approaching a major diverge area on the freeway) =	3,728	3,133	3,861	3,228	3,861	3,228
v_R (Maximum flow on a ramp) =	3,566	2,179	3,575	2,205	3,575	2,205
V_{FO} (Maximum total departing from a merge or diverge area on the freeway)	7,294	5,312	7,436	5,433	7,436	5,433
Level of Service:	F	D	F	D	F	D

Proportion in lanes 1,2 (P_{FM}):	0.555	HCM pg 25-9
PHF (Peak Hour Factor) =	1	
f_{HV} (Adjustment factor for heavy vehicles) =	1	
f_p (Adjustment factor for driver population) =	1	
P_T (Proportioin of trucks/buses in the traffic stream) =	0.01	
P_R (Proportioin of RVs in the traffic stream) =	0	
E_T (Passenger-car equivalents for trucks/buses in the traffic stream) =	1.5	
E_R (Passenger-car equivalents for RVs in the traffic stream) =	1.5	

I-5 NB On-Ramp from P Street

Highway Capacity Manual
2000 Edition
Capacity Analysis of Freeway Ramps

Ramp Analysis Type: Single Lane On-Ramp, Enters Own Lane

Existing Upstrm Frwy Lanes / Aux. Lanes	4
Existing Dnstrm Frwy Lanes / Aux. Lanes	5

	Existing Without Project		Baseline Without Project		Baseline With Project	
	AM	PM	AM	PM	AM	PM
Ramp Volume:	187	685	238	999	238	999
Ramp Design Speed (mph):	40	40	40	40	40	40
Adjusted Ramp Volume:	204	747	260	1,090	260	1,090
Service Flow Rate @ LOS "A"	0	0	0	0	0	0
Service Flow Rate @ LOS "B"	0	0	0	0	0	0
Service Flow Rate @ LOS "C"	1,400	1,400	1,400	1,400	1,400	1,400
Service Flow Rate @ LOS "D"	1,700	1,700	1,700	1,700	1,700	1,700
Service Flow Rate @ LOS "E"	2,000	2,000	2,000	2,000	2,000	2,000
Level of Service:	C	C	C	C	C	C

I-5 NB off-ramp to J St

Highway Capacity Manual
2000 Edition
Capacity Analysis of Freeway Ramps

Ramp Analysis Type: Major Diverge, 2 Lane Off-Ramp, P_{FD}=0.260

Existing Upstrm Frwy Lanes / Aux. Lanes	5
Existing Dnstrm Frwy Lanes / Aux. Lanes	4

	Existing Without Project		Baseline Without Project		Baseline With Project	
	AM	PM	AM	PM	AM	PM
Freeway Volume (Upstream):	7,306	5,920	7,487	6,345	7,487	6,345
Ramp Volume:	2,027	1,275	2,157	1,385	2,157	1,385
Ramp Design Speed (mph):	40	40	40	40	40	40
Sacto Adjusted Freeway Volume (Upstream):	7,970	6,458	8,168	6,922	8,168	6,922
Sacto Adjusted Ramp Volume:	2,211	1,391	2,353	1,511	2,353	1,511
Sacto Adjusted Freeway Volume (Downstream):	5,759	5,067	5,815	5,411	5,815	5,411
v_F (Maximum total flow approaching a major diverge area on the freeway) =	8,010	6,490	8,209	6,957	8,209	6,957
V_{R12} (Off-ramp demand flow rate (pc/h)) =	2,222	1,398	2,365	1,519	2,365	1,519
Upstream Freeway Capacity:	12,000	12,000	12,000	12,000	12,000	12,000
Upstream Freeway V/C:	0.67	0.54	0.68	0.58	0.68	0.58
Downstream Freeway Capacity:	9,600	9,600	9,600	9,600	9,600	9,600
Downstream Freeway V/C:	0.60	0.53	0.61	0.56	0.61	0.56
Ramp Capacity:	3,800	3,800	3,800	3,800	3,800	3,800
Ramp V/C:	0.58	0.37	0.62	0.40	0.62	0.40
V_{12} (Maximum total flow entering the ramp, diverge influence area, two-lane volume):	3,727	2,722	3,884	2,932	3,884	2,932
Density (pc/mi/ln):	17.46	14.15	17.90	15.17	17.90	15.17
V5	1,602	974	1,642	1,043	1,642	1,043
VF4eff	6,408	5,517	6,567	5,913	6,567	5,913
Level of Service:	B	B	B	B	B	B

Proportion in lanes 1,2 (P_{FD}):	0.260
PHF (Peak Hour Factor) =	1
f_{HV} (Adjustment factor for heavy vehicles) =	1.00
f_p (Adjustment factor for driver population) =	1
P_T (Proportioin of trucks/buses in the traffic stream) =	0.01
P_R (Proportioin of RVs in the traffic stream) =	0
E_T (Passenger-car equivalents for trucks/buses in the traffic stream) =	1.5
E_R (Passenger-car equivalents for RVs in the traffic stream) =	1.5

I-5 NB on-ramp from L Street

Highway Capacity Manual
2000 Edition
Capacity Analysis of Freeway Ramps

Ramp Analysis Type: Single Lane On-Ramp, Enters Own Lane

Existing Upstrm Frwy Lanes / Aux. Lanes	3
Existing Dnstrm Frwy Lanes / Aux. Lanes	4

	Existing Without Project		Baseline Without Project		Baseline With Project	
	AM	PM	AM	PM	AM	PM
Ramp Volume:	192	757	192	757	203	832
Ramp Design Speed (mph):	40	40	40	40	40	40
Adjusted Ramp Volume:	209	826	209	826	221	908
Service Flow Rate @ LOS "A"	0	0	0	0	0	0
Service Flow Rate @ LOS "B"	0	0	0	0	0	0
Service Flow Rate @ LOS "C"	1,400	1,400	1,400	1,400	1,400	1,400
Service Flow Rate @ LOS "D"	1,700	1,700	1,700	1,700	1,700	1,700
Service Flow Rate @ LOS "E"	2,000	2,000	2,000	2,000	2,000	2,000
Level of Service:	C	C	C	C	C	C

I-5 NB On-Ramp from I St

Highway Capacity Manual
2000 Edition
Capacity Analysis of Freeway Ramps

Ramp Analysis Type: 8 lane freeway, 2 Lane On-Ramp (Pfm=0.209 for 2-lane ramp)

Existing Upstrm Frwy Lanes / Aux. Lanes	4
Existing Dnstrm Frwy Lanes / Aux. Lanes	5

	Existing Without Project		Baseline Without Project		Baseline With Project	
	AM	PM	AM	PM	AM	PM
Freeway Volume (Upstream):	5,471	4,598	5,522	5,717	5,533	5,792
Ramp Volume:	335	1,413	359	1,479	359	1,479
L_{Aeff} (Effective length of the acceleration lane, ft)	1,000	1,000	1,000	1,000	1,000	1,000
Sacto Adjusted Freeway Volume (Upstream):	5,968	5,016	6,024	6,237	6,035	6,319
Sacto Adjusted Ramp Volume:	365	1,541	392	1,613	392	1,613
V_{FO} Capacity (downstream segment capacity)	12,000	12,000	12,000	12,000	12,000	12,000
Downstream Freeway V/C:	0.53	0.55	0.53	0.65	0.54	0.66
V_{12} (Maximum total flow entering the ramp, diverge influence area, two-lane volume):	1,247	1,048	1,259	1,304	1,261	1,321
V_{R12} (Maximum total flow entering the ramp, merge influence area, two-lane volume):	1,612	2,589	1,651	2,917	1,653	2,934
V_{R12} Capacity:	4,600	4,600	4,600	4,600	4,600	4,600
V_{R12} V/C:	0.35	0.56	0.36	0.63	0.36	0.64
D_R (Density of merge influence area (pc/mi/ln))	11.61	18.69	11.90	21.22	11.92	21.35
v_F (Maximum total flow approaching a major diverge area on the freeway) =	5,968	5,016	6,024	6,237	6,035	6,319
v_R (Maximum flow on a ramp) =	365	1,541	392	1,613	392	1,613
V_{FO} (Maximum total departing from a merge or diverge area on the freeway)	6,333	6,557	6,416	7,850	6,427	7,932
Level of Service:	B	B	B	C	B	C

Proportion in lanes 1,2 (P_{FM}):	0.209
PHF (Peak Hour Factor) =	1
f_{HV} (Adjustment factor for heavy vehicles) =	1
f_p (Adjustment factor for driver population) =	1
P_T (Proportioin of trucks/buses in the traffic stream) =	0.01
P_R (Proportioin of RVs in the traffic stream) =	0
E_T (Passenger-car equivalents for trucks/buses in the traffic stream) =	1.5
E_R (Passenger-car equivalents for RVs in the traffic stream) =	1.5

I-5 NB Off-ramp to Richards Blvd

Highway Capacity Manual
2000 Edition
Capacity Analysis of Freeway Ramps

Ramp Analysis Type: 10 lane freeway, Single Lane Off-Ramp

Existing Upstrm Frwy Lanes / Aux. Lanes	5
Existing Dnstrm Frwy Lanes / Aux. Lanes	4

	Existing Without Project		Baseline Without Project		Baseline With Project	
	AM	PM	AM	PM	AM	PM
Freeway Volume (Upstream):	5,806	6,011	5,881	7,196	5,892	7,271
Ramp Volume:	659	349	659	349	659	349
L_D	1,000	1,000	1,000	1,000	1,000	1,000
Ramp Design Speed (mph):	40	40	40	40	40	40
Sacto Adjusted Freeway Volume (Upstream):	6,334	6,557	6,416	7,850	6,427	7,932
Sacto Adjusted Ramp Volume:	719	381	719	381	719	381
Sacto Adjusted Freeway Volume (Downstream):	5,615	6,176	5,697	7,469	5,708	7,551
v_F (Maximum total flow approaching a major diverge area on the freeway) =	6,366	6,590	6,448	7,889	6,459	7,972
V_{R12} (Off-ramp demand flow rate (pc/h)) =	723	383	723	383	723	383
Upstream Freeway Capacity:	12,000	12,000	12,000	12,000	12,000	12,000
Upstream Freeway V/C:	0.53	0.55	0.54	0.66	0.54	0.66
Downstream Freeway Capacity:	9,600	9,600	9,600	9,600	9,600	9,600
Downstream Freeway V/C:	0.58	0.64	0.59	0.78	0.59	0.79
Ramp Capacity:	3,800	3,800	3,800	3,800	3,800	3,800
Ramp V/C:	0.19	0.10	0.19	0.10	0.19	0.10
V_{12} (Maximum total flow entering the ramp, diverge influence area, two-lane volume):	2,767	3,089	2,797	3,656	2,801	3,692
Density (pc/mi/ln):	19.05	21.82	19.31	26.69	19.34	27.00
V5	955	988	967	1,578	969	1,594
VF4eff	5,411	5,601	5,481	6,311	5,490	6,377
Level of Service:	B	C	B	C	B	C

Proportion in lanes 1,2 (P_{FD}):	0.436
PHF (Peak Hour Factor) =	1
f_{HV} (Adjustment factor for heavy vehicles) =	1.00
f_p (Adjustment factor for driver population) =	1
P_T (Proportioin of trucks/buses in the traffic stream) =	0.01
P_R (Proportioin of RVs in the traffic stream) =	0
E_T (Passenger-car equivalents for trucks/buses in the traffic stream) =	1.5
E_R (Passenger-car equivalents for RVs in the traffic stream) =	1.5

I-5 NB On-Ramp from Richards Blvd

Highway Capacity Manual
2000 Edition
Capacity Analysis of Freeway Ramps

Ramp Analysis Type: Single Lane On-Ramp, Enters Own Lane

Existing Upstrm Frwy Lanes / Aux. Lanes	4
Existing Dnstrm Frwy Lanes / Aux. Lanes	5

	Existing Without Project		Baseline Without Project		Baseline With Project	
	AM	PM	AM	PM	AM	PM
Ramp Volume:	499	1,458	499	1,458	499	1,458
Ramp Design Speed (mph):	40	40	40	40	40	40
Adjusted Ramp Volume:	544	1,591	544	1,591	544	1,591
Service Flow Rate @ LOS "A"	0	0	0	0	0	0
Service Flow Rate @ LOS "B"	0	0	0	0	0	0
Service Flow Rate @ LOS "C"	1,400	1,400	1,400	1,400	1,400	1,400
Service Flow Rate @ LOS "D"	1,700	1,700	1,700	1,700	1,700	1,700
Service Flow Rate @ LOS "E"	2,000	2,000	2,000	2,000	2,000	2,000
Level of Service:	C	D	C	D	C	D

I-5 SB On-Ramp from Richards Blvd

Highway Capacity Manual
2000 Edition
Capacity Analysis of Freeway Ramps

Ramp Analysis Type: Single Lane On-Ramp, Enters Own Lane

Existing Upstrm Frwy Lanes / Aux. Lanes	4
Existing Dnstrm Frwy Lanes / Aux. Lanes	5

	Existing Without Project		Baseline Without Project		Baseline Without Project	
	AM	PM	AM	PM	AM	PM
Ramp Volume:	476	771	476	771	476	771
Ramp Design Speed (mph):	40	40	40	40	40	40
Adjusted Ramp Volume:	519	841	519	841	519	841
Service Flow Rate @ LOS "A"	0	0	0	0	0	0
Service Flow Rate @ LOS "B"	0	0	0	0	0	0
Service Flow Rate @ LOS "C"	1,400	1,400	1,400	1,400	1,400	1,400
Service Flow Rate @ LOS "D"	1,700	1,700	1,700	1,700	1,700	1,700
Service Flow Rate @ LOS "E"	2,000	2,000	2,000	2,000	2,000	2,000
Level of Service:	C	C	C	C	C	C

I-5 SB off-ramp to J St

Highway Capacity Manual
2000 Edition
Capacity Analysis of Freeway Ramps

Ramp Analysis Type: Major Diverge, 2 Lane Off-Ramp, P_{FD}=0.260

Existing Upstrm Frwy Lanes / Aux. Lanes	5
Existing Dnstrm Frwy Lanes / Aux. Lanes	4

	Existing Without Project		Baseline Without Project		Baseline With Project	
	AM	PM	AM	PM	AM	PM
Freeway Volume (Upstream):	8,104	6,568	8,600	6,857	8,676	6,879
Ramp Volume:	1,667	273	1,993	576	2,069	598
Ramp Design Speed (mph):	40	40	40	40	40	40
Sacto Adjusted Freeway Volume (Upstream):	8,841	7,165	9,382	7,480	9,465	7,505
Sacto Adjusted Ramp Volume:	1,819	298	2,174	628	2,257	653
Sacto Adjusted Freeway Volume (Downstream):	7,022	6,867	7,208	6,852	7,208	6,852
v_F (Maximum total flow approaching a major diverge area on the freeway) =	8,885	7,201	9,429	7,517	9,512	7,543
V_{R12} (Off-ramp demand flow rate (pc/h)) =	1,828	299	2,185	631	2,268	656
Upstream Freeway Capacity:	12,000	12,000	12,000	12,000	12,000	12,000
Upstream Freeway V/C:	0.74	0.60	0.79	0.63	0.79	0.63
Downstream Freeway Capacity:	9,600	9,600	9,600	9,600	9,600	9,600
Downstream Freeway V/C:	0.73	0.72	0.75	0.71	0.75	0.71
Ramp Capacity:	3,800	3,800	3,800	3,800	3,800	3,800
Ramp V/C:	0.48	0.08	0.57	0.17	0.60	0.17
V_{12} (Maximum total flow entering the ramp, diverge influence area, two-lane volume):	3,663	2,094	4,068	2,422	4,152	2,447
Density (pc/mi/ln):	19.37	15.70	20.56	16.39	20.74	16.44
V5	1,777	1,440	1,886	1,503	1,902	1,509
VF4eff	7,108	5,761	7,543	6,014	7,610	6,034
Level of Service:	B	B	C	B	C	B

Proportion in lanes 1,2 (P_{FD}):	0.260
PHF (Peak Hour Factor) =	1
f_{HV} (Adjustment factor for heavy vehicles) =	1.00
f_p (Adjustment factor for driver population) =	1
P_T (Proportioin of trucks/buses in the traffic stream) =	0.01
P_R (Proportioin of RVs in the traffic stream) =	0
E_T (Passenger-car equivalents for trucks/buses in the traffic stream) =	1.5
E_R (Passenger-car equivalents for RVs in the traffic stream) =	1.5

I-5 SB On-Ramp from I Street

Highway Capacity Manual
2000 Edition
Capacity Analysis of Freeway Ramps

Ramp Analysis Type: Single Lane On-Ramp, Enters Own Lane

Existing Upstrm Frwy Lanes / Aux. Lanes	4
Existing Dnstrm Frwy Lanes / Aux. Lanes	5

	Existing Without Project		Baseline Without Project		Baseline With Project	
	AM	PM	AM	PM	AM	PM
Ramp Volume:	288	1,047	297	1,075	297	1,075
Ramp Design Speed (mph):	40	40	40	40	40	40
Adjusted Ramp Volume:	314	1,142	324	1,173	324	1,173
Service Flow Rate @ LOS "A"	0	0	0	0	0	0
Service Flow Rate @ LOS "B"	0	0	0	0	0	0
Service Flow Rate @ LOS "C"	1,400	1,400	1,400	1,400	1,400	1,400
Service Flow Rate @ LOS "D"	1,700	1,700	1,700	1,700	1,700	1,700
Service Flow Rate @ LOS "E"	2,000	2,000	2,000	2,000	2,000	2,000
Level of Service:	C	C	C	C	C	C

I-5 SB Off-ramp to Q Street

Highway Capacity Manual
2000 Edition
Capacity Analysis of Freeway Ramps

Ramp Analysis Type: 10 lane freeway, Single Lane Off-Ramp

Existing Upstrm Frwy Lanes / Aux. Lanes	5
Existing Dnstrm Frwy Lanes / Aux. Lanes	5

	Existing Without Project		Baseline Without Project		Baseline With Project	
	AM	PM	AM	PM	AM	PM
Freeway Volume (Upstream):	6,725	7,342	6,904	7,356	6,904	7,356
Ramp Volume:	747	1,193	1,058	1,320	1,058	1,320
L_D	1,000	1,000	1,000	1,000	1,000	1,000
Ramp Design Speed (mph):	40	40	40	40	40	40
Sacto Adjusted Freeway Volume (Upstream):	7,336	8,009	7,532	8,025	7,532	8,025
Sacto Adjusted Ramp Volume:	815	1,301	1,154	1,440	1,154	1,440
Sacto Adjusted Freeway Volume (Downstream):	6,521	6,708	6,378	6,585	6,378	6,585
v_F (Maximum total flow approaching a major diverge area on the freeway) =	7,373	8,049	7,570	8,065	7,570	8,065
V_{R12} (Off-ramp demand flow rate (pc/h)) =	819	1,308	1,160	1,447	1,160	1,447
Upstream Freeway Capacity:	12,000	12,000	12,000	12,000	12,000	12,000
Upstream Freeway V/C:	0.61	0.67	0.63	0.67	0.63	0.67
Downstream Freeway Capacity:	12,000	12,000	12,000	12,000	12,000	12,000
Downstream Freeway V/C:	0.54	0.56	0.53	0.55	0.53	0.55
Ramp Capacity:	3,800	3,800	3,800	3,800	3,800	3,800
Ramp V/C:	0.22	0.34	0.31	0.38	0.31	0.38
V_{12} (Maximum total flow entering the ramp, diverge influence area, two-lane volume):	3,676	4,247	3,954	4,333	3,954	4,333
Density (pc/mi/ln):	26.87	31.77	29.26	32.51	29.26	32.51
V5	1,475	1,610	1,514	1,613	1,514	1,613
VF4eff	5,898	6,439	6,056	6,452	6,056	6,452
Level of Service:	C	D	D	D	D	D

Proportion in lanes 1,2 (P_{FD}):	0.436
PHF (Peak Hour Factor) =	1
f_{HV} (Adjustment factor for heavy vehicles) =	1.00
f_p (Adjustment factor for driver population) =	1
P_T (Proportioin of trucks/buses in the traffic stream) =	0.01
P_R (Proportioin of RVs in the traffic stream) =	0
E_T (Passenger-car equivalents for trucks/buses in the traffic stream) =	1.5
E_R (Passenger-car equivalents for RVs in the traffic stream) =	1.5

I-5 SB off-ramp to US 50

Highway Capacity Manual
2000 Edition
Capacity Analysis of Freeway Ramps

Ramp Analysis Type: Major Diverge, 2 Lane Off-Ramp

Existing Upstrm Frwy Lanes / Aux. Lanes	5
Existing Dnstrm Frwy Lanes / Aux. Lanes	3

	Existing Without Project		Baseline Without Project		Baseline Without Project	
	AM	PM	AM	PM	AM	PM
Freeway Volume (Upstream):	5,978	6,149	5,846	6,036	5,846	6,036
Ramp Volume:	3,809	4,301	3,809	4,301	3,809	4,301
Ramp Design Speed (mph):	40	40	40	40	40	40
Sacto Adjusted Freeway Volume (Upstream):	6,521	6,708	6,377	6,585	6,377	6,585
Sacto Adjusted Ramp Volume:	4,155	4,692	4,155	4,692	4,155	4,692
Sacto Adjusted Freeway Volume (Downstream):	2,366	2,016	2,222	1,893	2,222	1,893
v_F (Maximum total flow approaching a major diverge area on the freeway) =	6,554	6,742	6,409	6,618	6,409	6,618
V_{R12} (Off-ramp demand flow rate (pc/h)) =	4,176	4,715	4,176	4,715	4,176	4,715
Upstream Freeway Capacity:	12,000	12,000	12,000	12,000	12,000	12,000
Upstream Freeway V/C:	0.55	0.56	0.53	0.55	0.53	0.55
Downstream Freeway Capacity:	7,200	7,200	7,200	7,200	7,200	7,200
Downstream Freeway V/C:	0.33	0.28	0.31	0.26	0.31	0.26
Ramp Capacity:	3,800	3,800	3,800	3,800	3,800	3,800
Ramp V/C:	1.10	1.24	1.10	1.24	1.10	1.24
V_{12} (Maximum total flow entering the ramp, diverge influence area, two-lane volume):	4,794	5,242	4,756	5,210	4,756	5,210
Density (pc/mi/ln):	14.29	14.70	13.97	14.43	13.97	14.43
V5	983	1,011	961	993	961	993
VF4eff	5,571	5,730	5,448	5,625	5,448	5,625
Level of Service:	F	F	F	F	F	F

Proportion in lanes 1,2 (P_{FD}):	0.260
PHF (Peak Hour Factor) =	1
f_{HV} (Adjustment factor for heavy vehicles) =	1.00
f_p (Adjustment factor for driver population) =	1
P_T (Proportioin of trucks/buses in the traffic stream) =	0.01
P_R (Proportioin of RVs in the traffic stream) =	0
E_T (Passenger-car equivalents for trucks/buses in the traffic stream) =	1.5
E_R (Passenger-car equivalents for RVs in the traffic stream) =	1.5

US 50 EB On-Ramp from I-5

Highway Capacity Manual
2000 Edition
Capacity Analysis of Freeway Ramps

Ramp Analysis Type: 12 lane freeway, 3 Lane On-Ramp

Existing Upstrm Frwy Lanes / Aux. Lanes	3
Existing Dnstrm Frwy Lanes / Aux. Lanes	6

	Existing Without Project		Baseline Without Project		Baseline With Project	
	AM	PM	AM	PM	AM	PM
Freeway Volume (Upstream):	3,176	1,434	3,197	1,446	3,197	1,446
Ramp Volume:	5,007	4,900	5,081	4,995	5,089	5,050
L_{Aeff} (Effective length of the acceleration lane, ft)	1,000	1,000	1,000	1,000	1,000	1,000
Sacto Adjusted Freeway Volume (Upstream):	3,465	1,564	3,488	1,577	3,488	1,577
Sacto Adjusted Ramp Volume:	5,462	5,345	5,543	5,449	5,551	5,509
V_{FO} Capacity (downstream segment capacity)	14,400	14,400	14,400	14,400	14,400	14,400
Downstream Freeway V/C:	0.62	0.48	0.63	0.49	0.63	0.49
V_{12} (Maximum total flow entering the ramp, diverge influence area, two-lane volume):	724	327	729	330	729	330
V_{R12} (Maximum total flow entering the ramp, merge influence area, two-lane volume):	6,186	5,672	6,272	5,779	6,280	5,839
V_{R12} Capacity:	4,600	4,600	4,600	4,600	4,600	4,600
V_{R12} V/C:	1.34	1.23	1.36	1.26	1.37	1.27
D_R (Density of merge influence area (pc/mi/ln))	44.94	40.99	45.58	41.77	45.64	42.22
v_F (Maximum total flow approaching a major diverge area on the freeway) =	3,465	1,564	3,488	1,577	3,488	1,577
v_R (Maximum flow on a ramp) =	5,462	5,345	5,543	5,449	5,551	5,509
V_{FO} (Maximum total departing from a merge or diverge area on the freeway)	8,927	6,909	9,031	7,026	9,039	7,086
Level of Service:	F	F	F	F	F	F

Proportion in lanes 1,2 (P_{FM}):	0.209
PHF (Peak Hour Factor) =	1
f_{HV} (Adjustment factor for heavy vehicles) =	1
f_p (Adjustment factor for driver population) =	1
P_T (Proportioin of trucks/buses in the traffic stream) =	0.01
P_R (Proportioin of RVs in the traffic stream) =	0
E_T (Passenger-car equivalents for trucks/buses in the traffic stream) =	1.5
E_R (Passenger-car equivalents for RVs in the traffic stream) =	1.5

US 50 EB Off-ramp to 15th St

Highway Capacity Manual
2000 Edition
Capacity Analysis of Freeway Ramps

Ramp Analysis Type: Major Diverge, 1 Lane Off-Ramp, P_{FD}=0.260

Existing Upstrm Frwy Lanes / Aux. Lanes	6
Existing Dnstrm Frwy Lanes / Aux. Lanes	5

	Existing Without Project		Baseline Without Project		Baseline With Project	
	AM	PM	AM	PM	AM	PM
Freeway Volume (Upstream):	8,183	6,334	8,278	6,441	8,286	6,496
Ramp Volume:	649	676	649	676	649	676
L_D	1,000	1,000	1,000	1,000	1,000	1,000
Ramp Design Speed (mph):	40	40	40	40	40	40
Sacto Adjusted Freeway Volume (Upstream):	8,927	6,910	9,031	7,027	9,039	7,087
Sacto Adjusted Ramp Volume:	708	737	708	737	708	737
Sacto Adjusted Freeway Volume (Downstream):	8,219	6,173	8,323	6,290	8,331	6,350
v_F (Maximum total flow approaching a major diverge area on the freeway) =	8,972	6,945	9,076	7,062	9,084	7,122
V_{R12} (Off-ramp demand flow rate (pc/h)) =	712	741	712	741	712	741
Upstream Freeway Capacity:	14,400	14,400	14,400	14,400	14,400	14,400
Upstream Freeway V/C:	0.62	0.48	0.63	0.49	0.63	0.49
Downstream Freeway Capacity:	12,000	12,000	12,000	12,000	12,000	12,000
Downstream Freeway V/C:	0.68	0.51	0.69	0.52	0.69	0.53
Ramp Capacity:	3,800	3,800	3,800	3,800	3,800	3,800
Ramp V/C:	0.19	0.19	0.19	0.19	0.19	0.19
V_{12} (Maximum total flow entering the ramp, diverge influence area, two-lane volume):	4,313	3,446	4,359	3,497	4,362	3,523
Density (pc/mi/ln):	32.34	24.88	32.74	25.32	32.77	25.55
V5-6	1,495	868	1,513	1,177	1,514	1,187
VF4eff	7,476	6,076	7,563	5,885	7,570	5,935
Level of Service:	D	C	D	C	D	C

Proportion in lanes 1,2 (P_{FD}):	0.436
PHF (Peak Hour Factor) =	1
f_{HV} (Adjustment factor for heavy vehicles) =	1.00
f_p (Adjustment factor for driver population) =	1
P_T (Proportioin of trucks/buses in the traffic stream) =	0.01
P_R (Proportioin of RVs in the traffic stream) =	0
E_T (Passenger-car equivalents for trucks/buses in the traffic stream) =	1.5
E_R (Passenger-car equivalents for RVs in the traffic stream) =	1.5

US 50 EB On-Ramp from 10th St

Highway Capacity Manual
2000 Edition
Capacity Analysis of Freeway Ramps

Ramp Analysis Type: 10 lane freeway, 1 Lane On-Ramp (Exhibit 25-5, Eq4)

Existing Upstrm Frwy Lanes / Aux. Lanes	5
Existing Dnstrm Frwy Lanes / Aux. Lanes	5

	Existing Without Project		Baseline Without Project		Baseline With Project	
	AM	PM	AM	PM	AM	PM
Freeway Volume (Upstream):	7,534	5,658	7,629	5,765	7,637	5,820
Ramp Volume:	785	745	836	1,030	842	1,075
L_{Aeff} (Effective length of the acceleration lane, ft)	1,000	1,000	1,000	1,000	1,000	1,000
Sacto Adjusted Freeway Volume (Upstream):	8,219	6,172	8,323	6,289	8,331	6,349
Sacto Adjusted Ramp Volume:	856	813	912	1,124	919	1,173
V_{FO} Capacity (downstream segment capacity)	12,000	12,000	12,000	12,000	12,000	12,000
Downstream Freeway V/C:	0.49	0.39	0.50	0.40	0.50	0.40
V_{12} (Maximum total flow entering the ramp, diverge influence area, two-lane volume):	1,718	1,290	1,740	1,314	1,741	1,327
V_{R12} (Maximum total flow entering the ramp, merge influence area, two-lane volume):	2,574	2,103	2,652	2,438	2,660	2,500
V_{R12} Capacity:	4,600	4,600	4,600	4,600	4,600	4,600
V_{R12} V/C:	0.56	0.46	0.58	0.53	0.58	0.54
D_R (Density of merge influence area (pc/mi/ln))	18.89	15.23	19.47	17.70	19.53	18.17
v_F (Maximum total flow approaching a major diverge area on the freeway) =	8,219	6,172	8,323	6,289	8,331	6,349
v_R (Maximum flow on a ramp) =	856	813	912	1,124	919	1,173
V_{FO} (Maximum total departing from a merge or diverge area on the freeway)	6,733	6,985	6,863	7,413	6,876	7,522
V5	2,342	1,481	2,372	1,509	2,374	1,524
VF4eff	5,877	4,691	5,951	4,780	5,957	4,825
Level of Service:	B	B	B	B	B	B

Proportion in lanes 1,2 (P_{FM}):	0.209
PHF (Peak Hour Factor) =	1
f_{HV} (Adjustment factor for heavy vehicles) =	1
f_p (Adjustment factor for driver population) =	1
P_T (Proportioin of trucks/buses in the traffic stream) =	0.01
P_R (Proportioin of RVs in the traffic stream) =	0
E_T (Passenger-car equivalents for trucks/buses in the traffic stream) =	1.5
E_R (Passenger-car equivalents for RVs in the traffic stream) =	1.5

US 50 WB off-ramp to 10th St

Highway Capacity Manual
2000 Edition
Capacity Analysis of Freeway Ramps

Ramp Analysis Type: 10 lane freeway, Single Lane Off-Ramp

Existing Upstrm Frwy Lanes / Aux. Lanes	5
Existing Dnstrm Frwy Lanes / Aux. Lanes	5

	Existing Without Project		Baseline Without Project		Baseline With Project	
	AM	PM	AM	PM	AM	PM
Freeway Volume (Upstream):	6,483	6,058	6,854	6,281	6,955	6,311
Ramp Volume:	928	349	1,209	424	1,255	437
L_D	1,000	1,000	1,000	1,000	1,000	1,000
Ramp Design Speed (mph):	40	40	40	40	40	40
Sacto Adjusted Freeway Volume (Upstream):	7,072	6,609	7,477	6,852	7,588	6,885
Sacto Adjusted Ramp Volume:	1,012	381	1,319	463	1,369	477
Sacto Adjusted Freeway Volume (Downstream):	6,060	6,228	6,158	6,389	6,219	6,408
v_F (Maximum total flow approaching a major diverge area on the freeway) =	7,107	6,642	7,514	6,886	7,626	6,919
V_{R12} (Off-ramp demand flow rate (pc/h)) =	1,017	383	1,326	465	1,376	479
Upstream Freeway Capacity:	12,000	12,000	12,000	12,000	12,000	12,000
Upstream Freeway V/C:	0.59	0.55	0.63	0.57	0.64	0.58
Downstream Freeway Capacity:	12,000	12,000	12,000	12,000	12,000	12,000
Downstream Freeway V/C:	0.51	0.52	0.51	0.53	0.52	0.53
Ramp Capacity:	3,800	3,800	3,800	3,800	3,800	3,800
Ramp V/C:	0.27	0.10	0.35	0.12	0.36	0.13
V_{12} (Maximum total flow entering the ramp, diverge influence area, two-lane volume):	3,672	3,112	4,024	3,265	4,101	3,287
Density (pc/mi/ln):	26.83	22.01	29.86	23.33	30.52	23.52
V5	1,421	996	1,503	1,033	1,525	1,038
VF4eff	5,686	5,646	6,012	5,853	6,101	5,882
Level of Service:	C	C	D	C	D	C

Proportion in lanes 1,2 (P_{FD}):	0.436
PHF (Peak Hour Factor) =	1
f_{HV} (Adjustment factor for heavy vehicles) =	1.00
f_p (Adjustment factor for driver population) =	1
P_T (Proportioin of trucks/buses in the traffic stream) =	0.01
P_R (Proportioin of RVs in the traffic stream) =	0
E_T (Passenger-car equivalents for trucks/buses in the traffic stream) =	1.5
E_R (Passenger-car equivalents for RVs in the traffic stream) =	1.5

US50 WB On-Ramp from 15th St

Highway Capacity Manual
2000 Edition
Capacity Analysis of Freeway Ramps

Ramp Analysis Type: 10 lane freeway, 1 Lane On-Ramp

Existing Upstrm Frwy Lanes / Aux. Lanes	5
Existing Dnstrm Frwy Lanes / Aux. Lanes	6

	Existing Without Project		Baseline Without Project		Baseline With Project	
	AM	PM	AM	PM	AM	PM
Freeway Volume (Upstream):	5,555	5,709	5,645	5,857	5,701	5,873
Ramp Volume:	474	666	479	673	479	673
L_{Aeff} (Effective length of the acceleration lane, ft)	1,000	1,000	1,000	1,000	1,000	1,000
Sacto Adjusted Freeway Volume (Upstream):	6,060	6,228	6,158	6,389	6,219	6,407
Sacto Adjusted Ramp Volume:	517	727	523	734	523	734
V_{FO} Capacity (downstream segment capacity)	14,400	14,400	14,400	14,400	14,400	14,400
Downstream Freeway V/C:	0.46	0.48	0.46	0.49	0.47	0.50
V_{12} (Maximum total flow entering the ramp, diverge influence area, two-lane volume):	3,181	3,269	3,232	3,353	3,264	3,363
V_{R12} (Maximum total flow entering the ramp, merge influence area, two-lane volume):	3,698	3,996	3,755	4,087	3,787	4,097
V_{R12} Capacity:	4,600	4,600	4,600	4,600	4,600	4,600
V_{R12} V/C:	0.80	0.87	0.82	0.89	0.82	0.89
D_R (Density of merge influence area (pc/mi/ln))	27.81	30.04	28.25	30.75	28.50	30.82
v_F (Maximum total flow approaching a major diverge area on the freeway) =	6,060	6,228	6,158	6,389	6,219	6,407
v_R (Maximum flow on a ramp) =	517	727	523	734	523	734
V_{FO} (Maximum total departing from a merge or diverge area on the freeway)	6,577	6,955	6,681	7,123	6,742	7,141
V5	1,454	1,495	1,478	1,533	1,493	1,538
VF4eff	4,606	4,733	4,680	4,856	4,726	4,869
Level of Service:	C	D	D	D	D	D

Proportion in lanes 1,2 (P_{FM}):	0.525
PHF (Peak Hour Factor) =	1
f_{HV} (Adjustment factor for heavy vehicles) =	1
f_p (Adjustment factor for driver population) =	1
P_T (Proportioin of trucks/buses in the traffic stream) =	0.01
P_R (Proportioin of RVs in the traffic stream) =	0
E_T (Passenger-car equivalents for trucks/buses in the traffic stream) =	1.5
E_R (Passenger-car equivalents for RVs in the traffic stream) =	1.5
FFS on-ramp (miles/hr)	30

US 50 WB Off-ramp to I-5

Highway Capacity Manual
2000 Edition
Capacity Analysis of Freeway Ramps

Ramp Analysis Type: Major Diverge, 2 Lane Off-Ramp, P_{FD}=0.260

Existing Upstrm Frwy Lanes / Aux. Lanes	6
Existing Dnstrm Frwy Lanes / Aux. Lanes	4

	Existing Without Project		Baseline Without Project		Baseline With Project	
	AM	PM	AM	PM	AM	PM
Freeway Volume (Upstream):	6,029	6,375	6,124	6,530	6,180	6,546
Ramp Volume:	3,853	3,276	3,934	3,404	3,990	3,420
Ramp Design Speed (mph):	40	40	40	40	40	40
Sacto Adjusted Freeway Volume (Upstream):	6,577	6,955	6,681	7,124	6,742	7,142
Sacto Adjusted Ramp Volume:	4,203	3,574	4,292	3,713	4,352	3,731
Sacto Adjusted Freeway Volume (Downstream):	2,374	3,381	2,389	3,411	2,390	3,411
v_F (Maximum total flow approaching a major diverge area on the freeway) =	6,610	6,990	6,714	7,160	6,776	7,178
V_{R12} (Off-ramp demand flow rate (pc/h)) =	4,224	3,592	4,313	3,732	4,374	3,750
Upstream Freeway Capacity:	14,400	14,400	14,400	14,400	14,400	14,400
Upstream Freeway V/C:	0.40	0.42	0.41	0.41	0.41	0.42
Downstream Freeway Capacity:	9,600	9,600	9,600	9,600	9,600	9,600
Downstream Freeway V/C:	0.25	0.35	0.25	0.36	0.25	0.36
Ramp Capacity:	3,800	3,800	3,800	3,800	3,800	3,800
Ramp V/C:	1.11	0.95	1.14	0.98	1.15	0.99
V_{12} (Maximum total flow entering the ramp, diverge influence area, two-lane volume):	5,264	5,073	5,360	5,226	5,421	5,244
Density (pc/mi/ln):	12.01	12.70	12.20	13.01	12.31	13.04
V5-6	826	874	839	1,193	847	1,196
VF4eff	5,784	6,116	5,875	5,966	5,929	5,981
Level of Service:	F	B	F	B	F	B

Proportion in lanes 1,2 (P_{FD}):	0.436
PHF (Peak Hour Factor) =	1
f_{HV} (Adjustment factor for heavy vehicles) =	1.00
f_p (Adjustment factor for driver population) =	1
P_T (Proportioin of trucks/buses in the traffic stream) =	0.01
P_R (Proportioin of RVs in the traffic stream) =	0
E_T (Passenger-car equivalents for trucks/buses in the traffic stream) =	1.5
E_R (Passenger-car equivalents for RVs in the traffic stream) =	1.5

US-50 EB On-Ramp from 16th St

Highway Capacity Manual
2000 Edition
Capacity Analysis of Freeway Ramps

Ramp Analysis Type: Single Lane On-Ramp, Enters Own Lane

Existing Upstrm Frwy Lanes / Aux. Lanes	5
Existing Dnstrm Frwy Lanes / Aux. Lanes	6

	Existing Without Project		Baseline Without Project		Baseline With Project	
	AM	PM	AM	PM	AM	PM
Ramp Volume:	656	682	688	769	688	769
Ramp Design Speed (mph):	40	40	40	40	40	40
Adjusted Ramp Volume:	716	744	751	839	751	839
Service Flow Rate @ LOS "A"	0	0	0	0	0	0
Service Flow Rate @ LOS "B"	0	0	0	0	0	0
Service Flow Rate @ LOS "C"	1,400	1,400	1,400	1,400	1,400	1,400
Service Flow Rate @ LOS "D"	1,700	1,700	1,700	1,700	1,700	1,700
Service Flow Rate @ LOS "E"	2,000	2,000	2,000	2,000	2,000	2,000
Level of Service:	C	C	C	C	C	C

US 50 EB Off-ramp to Hwy 51

Highway Capacity Manual
2000 Edition
Capacity Analysis of Freeway Ramps

Ramp Analysis Type: Major Diverge, 2 Lane Off-Ramp, P_{FD}=0.260

Existing Upstrm Frwy Lanes / Aux. Lanes	6
Existing Dnstrm Frwy Lanes / Aux. Lanes	4

	Existing Without Project		Baseline Without Project		Baseline With Project	
	AM	PM	AM	PM	AM	PM
Freeway Volume (Upstream):	8,975	7,085	9,153	7,564	9,167	7,664
Ramp Volume:	2,674	2,983	2,796	3,265	2,802	3,310
Ramp Design Speed (mph):	40	40	40	40	40	40
Sacto Adjusted Freeway Volume (Upstream):	9,791	7,729	9,985	8,252	10,000	8,361
Sacto Adjusted Ramp Volume:	2,917	3,254	3,050	3,562	3,057	3,611
Sacto Adjusted Freeway Volume (Downstream):	6,874	4,475	6,935	4,690	6,943	4,750
v_F (Maximum total flow approaching a major diverge area on the freeway) =	9,840	7,768	10,035	8,293	10,050	8,403
V_{R12} (Off-ramp demand flow rate (pc/h)) =	2,932	3,270	3,065	3,580	3,072	3,629
Upstream Freeway Capacity:	14,400	14,400	14,400	14,400	14,400	14,400
Upstream Freeway V/C:	0.68	0.54	0.70	0.58	0.70	0.58
Downstream Freeway Capacity:	9,600	9,600	9,600	9,600	9,600	9,600
Downstream Freeway V/C:	0.72	0.47	0.72	0.49	0.72	0.49
Ramp Capacity:	3,800	3,800	3,800	3,800	3,800	3,800
Ramp V/C:	0.77	0.86	0.81	0.94	0.81	0.96
V_{12} (Maximum total flow entering the ramp, diverge influence area, two-lane volume):	5,944	5,231	6,104	5,635	6,115	5,710
Density (pc/mi/ln):	17.88	14.11	18.23	15.07	18.26	15.27
V5-6	1,640	1,295	1,672	1,382	1,675	1,400
VF4eff	8,200	6,473	8,362	6,911	8,375	7,002
Level of Service:	B	B	B	B	B	B

Proportion in lanes 1,2 (P_{FD}):	0.436
PHF (Peak Hour Factor) =	1
f_{HV} (Adjustment factor for heavy vehicles) =	1.00
f_p (Adjustment factor for driver population) =	1
P_T (Proportioin of trucks/buses in the traffic stream) =	0.01
P_R (Proportioin of RVs in the traffic stream) =	0
E_T (Passenger-car equivalents for trucks/buses in the traffic stream) =	1.5
E_R (Passenger-car equivalents for RVs in the traffic stream) =	1.5

US-50 WB On-Ramp from Hwy51

Highway Capacity Manual
2000 Edition
Capacity Analysis of Freeway Ramps

Ramp Analysis Type: 8 lane freeway, 2 Lane On-Ramp (Pfm=0.209 for 2-lane ramp)

Existing Upstrm Frwy Lanes / Aux. Lanes	4
Existing Dnstrm Frwy Lanes / Aux. Lanes	5

	Existing Without Project		Baseline Without Project		Baseline With Project	
	AM	PM	AM	PM	AM	PM
Freeway Volume (Upstream):	3,637	3,250	4,065	3,447	4,121	3,463
Ramp Volume:	1,243	1,633	1,278	1,700	1,278	1,700
L_{Aeff} (Effective length of the acceleration lane, ft)	1,000	1,000	1,000	1,000	1,000	1,000
Sacto Adjusted Freeway Volume (Upstream):	3,968	3,545	4,435	3,760	4,495	3,778
Sacto Adjusted Ramp Volume:	1,356	1,781	1,394	1,855	1,394	1,855
V_{FO} Capacity (downstream segment capacity)	12,000	12,000	12,000	12,000	12,000	12,000
Downstream Freeway V/C:	0.44	0.44	0.49	0.47	0.49	0.47
V_{12} (Maximum total flow entering the ramp, diverge influence area, two-lane volume):	829	741	927	786	939	790
V_{R12} (Maximum total flow entering the ramp, merge influence area, two-lane volume):	2,185	2,522	2,321	2,641	2,333	2,645
V_{R12} Capacity:	4,600	4,600	4,600	4,600	4,600	4,600
V_{R12} V/C:	0.48	0.55	0.50	0.57	0.51	0.58
D_R (Density of merge influence area (pc/mi/ln))	15.62	18.06	16.67	18.95	16.76	18.98
v_F (Maximum total flow approaching a major diverge area on the freeway) =	3,968	3,545	4,435	3,760	4,495	3,778
v_R (Maximum flow on a ramp) =	1,356	1,781	1,394	1,855	1,394	1,855
V_{FO} (Maximum total departing from a merge or diverge area on the freeway)	5,324	5,326	5,829	5,615	5,889	5,633
Level of Service:	B	B	B	B	B	B

Proportion in lanes 1,2 (P_{FM}):	0.209
PHF (Peak Hour Factor) =	1
f_{HV} (Adjustment factor for heavy vehicles) =	1
f_p (Adjustment factor for driver population) =	1
P_T (Proportioin of trucks/buses in the traffic stream) =	0.01
P_R (Proportioin of RVs in the traffic stream) =	0
E_T (Passenger-car equivalents for trucks/buses in the traffic stream) =	1.5
E_R (Passenger-car equivalents for RVs in the traffic stream) =	1.5

US 50 WB off-ramp to 16th St

Highway Capacity Manual
2000 Edition
Capacity Analysis of Freeway Ramps

Ramp Analysis Type: 10 lane freeway, Single Lane Off-Ramp

Existing Upstrm Frwy Lanes / Aux. Lanes	6
Existing Dnstrm Frwy Lanes / Aux. Lanes	5

	Existing Without Project		Baseline Without Project		Baseline With Project	
	AM	PM	AM	PM	AM	PM
Freeway Volume (Upstream):	7,363	6,725	7,826	6,989	7,927	7,019
Ramp Volume:	880	667	972	708	972	708
L_D	1,000	1,000	1,000	1,000	1,000	1,000
Ramp Design Speed (mph):	40	40	40	40	40	40
Sacto Adjusted Freeway Volume (Upstream):	8,032	7,336	8,537	7,624	8,648	7,657
Sacto Adjusted Ramp Volume:	960	728	1,060	772	1,060	772
Sacto Adjusted Freeway Volume (Downstream):	7,072	6,608	7,477	6,852	7,588	6,885
v_F (Maximum total flow approaching a major diverge area on the freeway) =	8,072	7,373	8,580	7,662	8,691	7,695
V_{R12} (Off-ramp demand flow rate (pc/h)) =	965	732	1,065	776	1,065	776
Upstream Freeway Capacity:	14,400	14,400	14,400	14,400	14,400	14,400
Upstream Freeway V/C:	0.56	0.51	0.60	0.53	0.60	0.53
Downstream Freeway Capacity:	12,000	12,000	12,000	12,000	12,000	12,000
Downstream Freeway V/C:	0.59	0.55	0.62	0.57	0.63	0.57
Ramp Capacity:	3,800	3,800	3,800	3,800	3,800	3,800
Ramp V/C:	0.25	0.19	0.28	0.20	0.28	0.20
V_{12} (Maximum total flow entering the ramp, diverge influence area, two-lane volume):	4,064	3,627	4,342	3,778	4,390	3,793
Density (pc/mi/ln):	30.20	26.45	32.59	27.75	33.01	27.87
V5-6	1,345	1,229	1,430	1,277	1,449	1,283
VF4eff	6,727	6,144	7,150	6,385	7,243	6,413
Level of Service:	D	C	D	C	D	C

Proportion in lanes 1,2 (P_{FD}):	0.436
PHF (Peak Hour Factor) =	1
f_{HV} (Adjustment factor for heavy vehicles) =	1.00
f_p (Adjustment factor for driver population) =	1
P_T (Proportioin of trucks/buses in the traffic stream) =	0.01
P_R (Proportioin of RVs in the traffic stream) =	0
E_T (Passenger-car equivalents for trucks/buses in the traffic stream) =	1.5
E_R (Passenger-car equivalents for RVs in the traffic stream) =	1.5