



Sutter Medical Center, Sacramento

Draft Environmental Impact Report (EIR)

for the

Sutter Medical Center, Sacramento (SMCS) Project and the Trinity Cathedral Project

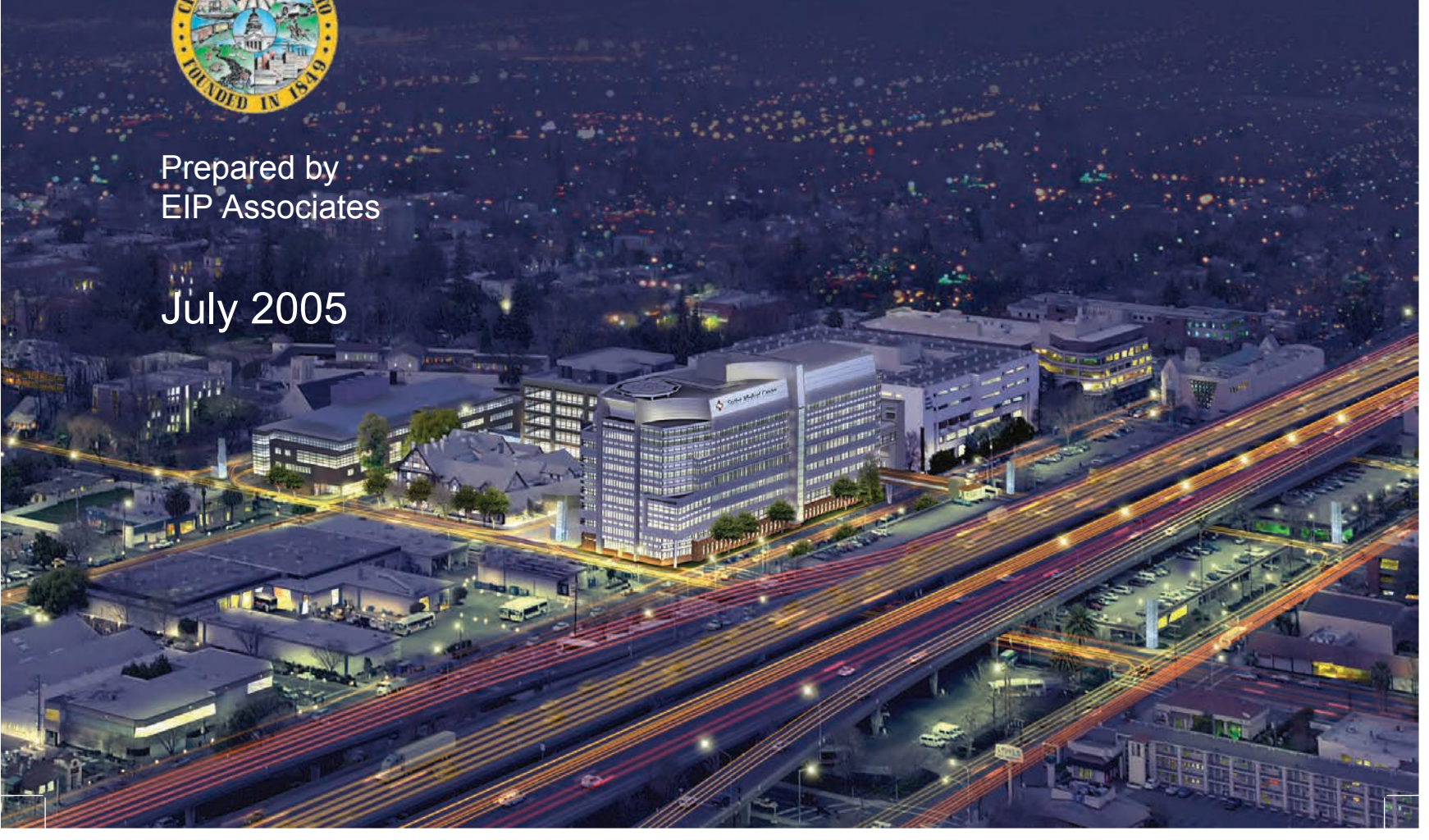
Volume I

Prepared for
City of Sacramento



Prepared by
EIP Associates

July 2005





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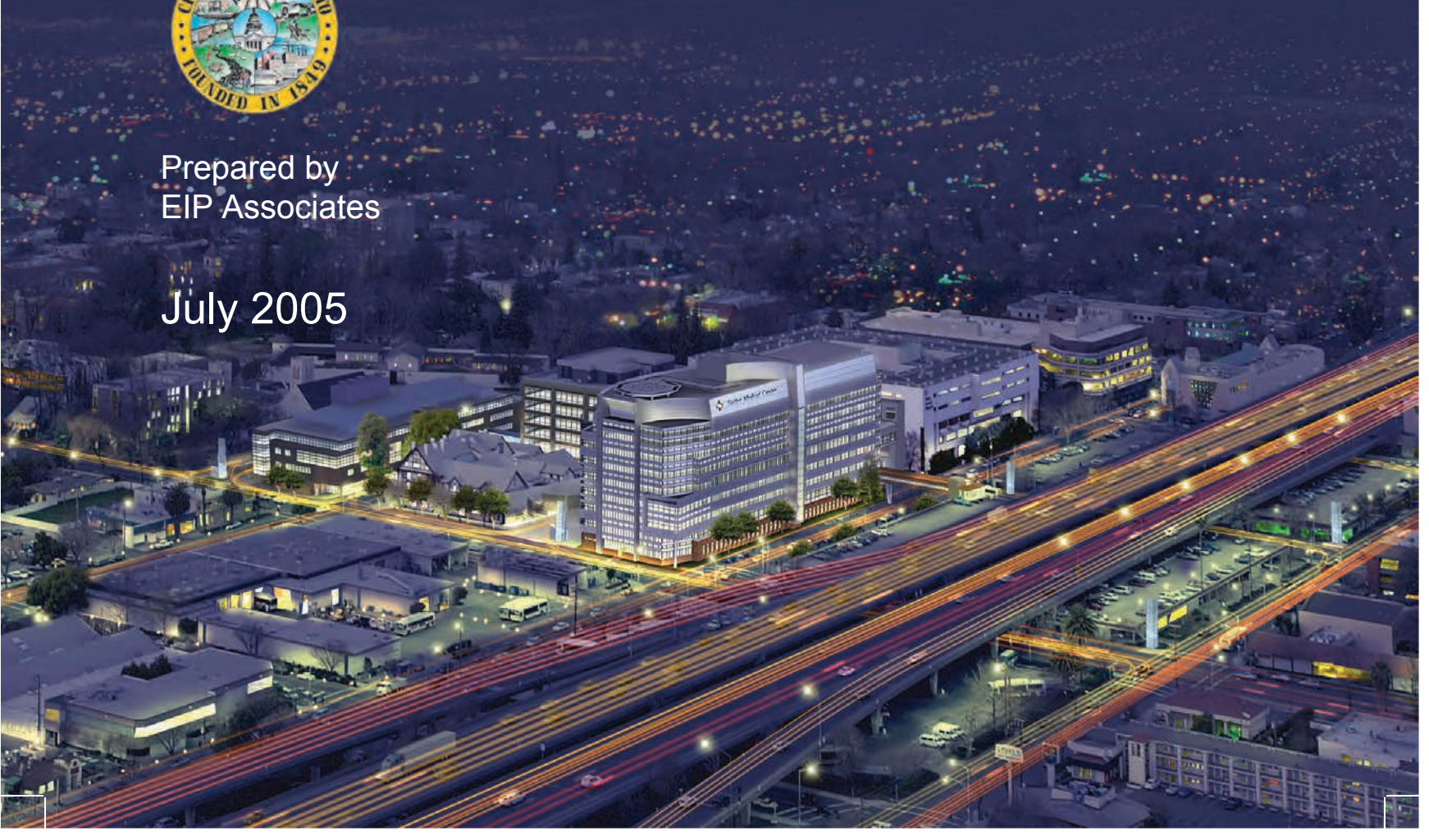
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Chapter 1 Introduction

Chapter 1 Introduction

PROJECT BACKGROUND

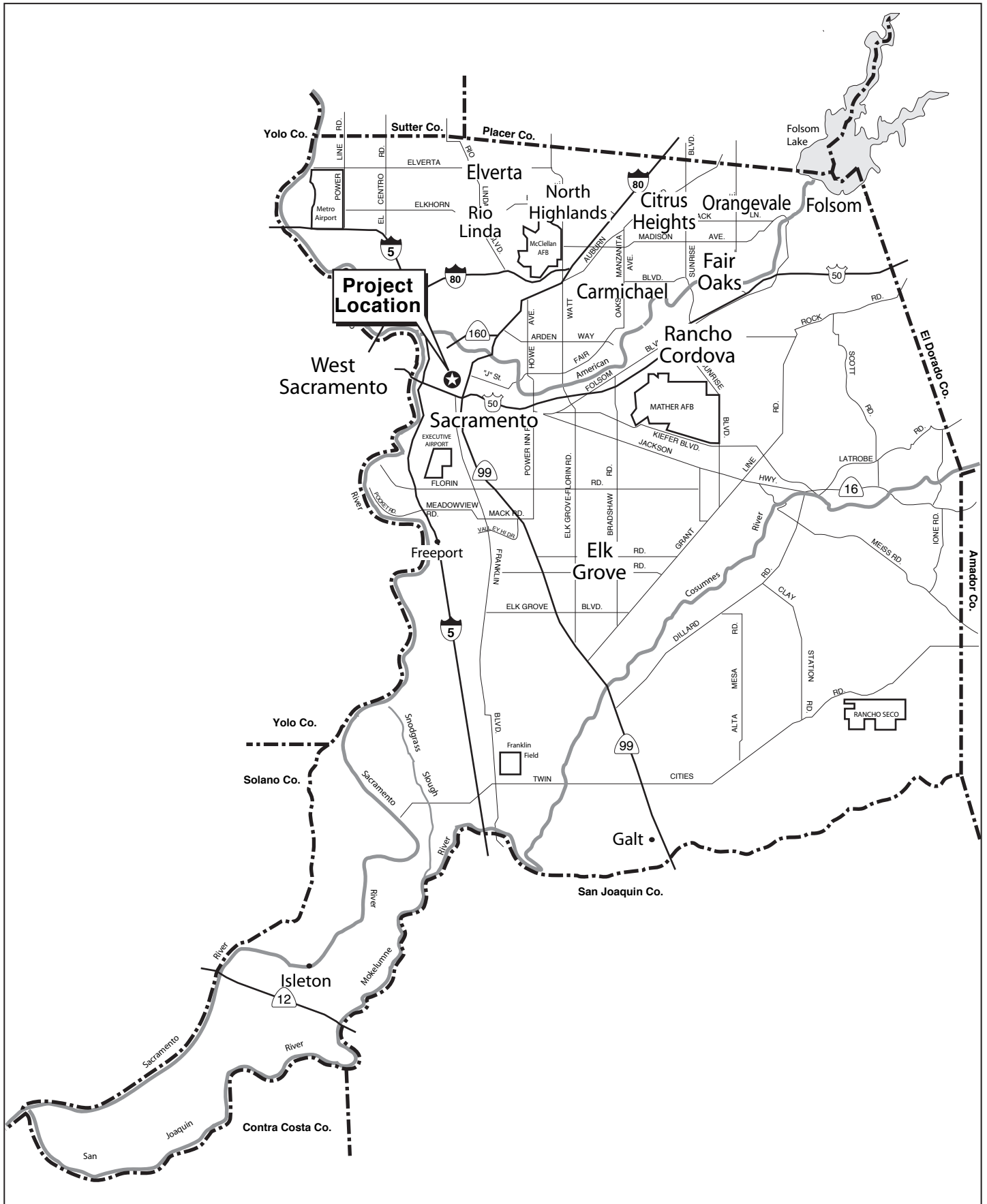
The City of Sacramento, Planning and Building Department is the *Lead Agency* for preparation of the Environmental Impact Report (EIR) for the Sutter Medical Center, Sacramento, project (SMCS project) and the Trinity Cathedral project (Trinity Cathedral project). A revised Notice of Preparation (NOP) was circulated for public review January 7 through February 6, 2004¹ to solicit comments from responsible agencies and the general public on issue areas they would like to see addressed in the EIR (please see Appendices C and D). The impacts associated with both the SMCS project and the Trinity Cathedral project are analyzed in this EIR. Because Trinity Cathedral is located within the area covered by the SMCS project, and the projects are being prepared concurrently, the project applicants (SMCS and Trinity Cathedral) and the City concurred that evaluating both projects in one EIR would provide the public with the most accessible and comprehensive examination of environmental issues for the area. Because two separate project applicants seek development entitlements from the City, the EIR analyzes the potential environmental effects of each project separately (Chapters 6 and 7). The combined effects of both the SMCS project and Trinity Cathedral projects, as well as the effects of other projects, are addressed in the cumulative analysis portions of environmental effects described for each of the projects (Chapters 6 and 7).

Project Summary

This EIR includes an analysis of the impacts of the SMCS project (which includes the Children's Theatre of California project) and the Trinity Cathedral project. The SMCS project area is located in Midtown Sacramento, as shown in Figures 1-1 and 1-2. The SMCS project includes a total of five components: (1) Women's and Children's Center (WCC); (2) Sutter Medical Foundation (SMF) Building which includes the below-grade Energy Center and parking; (3) Community Parking Structure, including first floor commercial/retail; (4) 32 residential units with associated parking; and (5) Future Medical Office Building (Future MOB). In addition, the SMCS project includes associated utility, circulation and other existing building improvements. The EIR also analyzes on a program level the Children's Theatre of California to be located adjacent to the Community Parking Structure.

The Trinity Cathedral project includes construction of a new Cathedral building and a new multi-purpose space on the site of the existing Trinity Cathedral. For a detailed project description, please see Chapter 2, Project Description.

1 The first NOP was circulated for public review in October 2003 prior to the addition of the Trinity Cathedral project.



10828-02

FIGURE 1-1
Regional Location Map

Source: EIP Associates 2004

Not to Scale





FIGURE 1-2
SMCS Project Area

10828-02

Source: GEOCON Consultants, Inc. 2005

Sutter Medical Center, Sacramento



Purpose and Intended Use of this EIR

The City of Sacramento has prepared this EIR for the following purposes:

- To satisfy the requirements of the California Environmental Quality Act (CEQA), the CEQA Guidelines, and the City's procedures for implementing CEQA.
- To inform the general public, the local community, responsible and interested public agencies, and the City's decision-making bodies (e.g., Planning Commission, Design Review Board, and City Council) regarding the potential environmental effects resulting from implementation of the SMCS project and the Trinity Cathedral project and alternatives to the projects, as well as possible measures to mitigate those effects.
- To enable the City to consider environmental consequences when deciding whether to approve the SMCS project or the Trinity Cathedral project.
- To provide a basis for the preparation of subsequent environmental documentation for future development of the Children's Theatre of California.
- To serve as a source document for responsible agencies to issue permits and approvals, as required (e.g., FAA, Caltrans)

In summary, this document is intended to provide decision-makers and the public with information that enables them to consider the environmental consequences of the proposed actions. It identifies significant or potentially significant environmental effects and ways in which those impacts can be reduced to less-than significant levels, either through the imposition of mitigation measures or through the implementation of specific alternatives to the projects as proposed. In a practical sense, EIRs function as a technique for fact-finding, allowing an applicant, the public, and agency staff an opportunity to collectively review and evaluate baseline conditions and project impacts through a process of full disclosure. Additionally, this EIR provides the primary source of environmental information for the lead agency to consider when exercising any permitting authority or approval power directly related to implementation of the SMCS project or the Trinity Cathedral project.

Type of EIR

This EIR provides a project-level analysis for the SMCS project and the Trinity Cathedral project and a programmatic analysis of the Children's Theatre of California, as further described below.

In contrast to a "program EIR" or "first tier EIR," which are typically followed by later, site-specific EIRs or negative declarations focusing on more detailed issues than those addressed in the program or first tier EIR, a "project EIR" is intended to fully address the environmental effects associated with full construction and implementation of a proposed project. Should it turn out that, as the SMCS project or the Trinity Cathedral project builds out over time and the City Council or Planning Commission face individual discretionary development applications that will involve significant new or increased environmental effects due either to project modifications or changed circumstances, the City will be required to prepare either addenda, supplemental EIRs, or subsequent EIRs in connection with such applications. (See CEQA Guidelines, §§ 15162-15164.)

The CEQA Guidelines (set forth in Title 14 of the California Code of Regulations [CCR]) define a project EIR as “focusing primarily on the changes in the environment that would result from project development.” As stated in section 15161 of the CEQA Guidelines, a project-specific EIR is required to “examine all phases of the project including planning, construction, and operation.” A project-specific analysis has been prepared for the SMCS project and the Trinity Cathedral project because the project applicants are seeking development entitlements and approvals from the City at this time.

Conversely, a program EIR, as defined by the CEQA Guidelines section 15168:

...is an EIR which may be prepared on a series of actions that can be characterized as one large project and are related either:

- (1) Geographically,
- (2) As logical parts in the chain of contemplated actions,
- (3) In connection with rules, regulations, plans, or other general criteria to govern the conduct of a continuing program, or
- (4) As individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects which can be mitigated in several different ways.

The Children's Theatre of California would be developed adjacent to the SMCS project area and is geographically related. Although no specific plans for developing the Children's Theatre have been submitted to the City at this time, its development is recognized as the logical progression of growth in the City if the SMCS project and Trinity Cathedral project are approved and developed. The dual-level analysis ensures that the effects of developing these components are not segmented, while recognizing that the two components would occur at different stages of the planning process.

With respect to future development projects, section 15168(c) of the CEQA Guidelines states that subsequent activities should be examined in light of the Program EIR to determine whether additional environmental documentation must be prepared. If a later activity would have significant effects that were not examined in the Program EIR, subsequent environmental documentation must be prepared, consistent with sections 15162 through 15164 of the CEQA Guidelines; in effect, the subsequent environmental documentation would be “tiered” from the Program EIR. As established by section 21068.5 of the Public Resources Code (PRC), tiering refers to coverage of general matters and environmental effects in an environmental impact report prepared for a policy, plan, program, or ordinance followed by narrower or site-specific environmental documents that (1) incorporate, by reference, the discussion in any prior EIR and (2) concentrate on the environmental effects that are capable of being mitigated or were not analyzed as significant effects on the environment in the prior EIR.

If any subsequent development proposal would not result in new environmental effects or the need for new mitigation measures, the subsequent activity could rely on the environmental analysis provided in the Program EIR, and no additional environmental documentation would be required.

Lead, Responsible, and Trustee Agencies

As required by CEQA and the CEQA Guidelines, this EIR defines lead, responsible, and trustee agencies. The City of Sacramento is the lead agency for the purposes of CEQA because it holds principal responsibility for approving the SMCS project and the Trinity Cathedral project. A responsible agency refers to a public agency, other than the lead agency that has discretionary approval over some aspect of the project. Responsible agencies include, but are not necessarily limited to, the Central Valley Regional Water Quality Control Board (CVRWQCB), the State Water Resources Control Board (SRWRCB), Caltrans Division of Aeronautics, and the Sacramento Metropolitan Air Quality Management District (SMAQMD). A trustee agency is defined as a State agency that has jurisdiction by law over natural resources that are held in trust for the people of the state. The responsibilities of the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Game (CDFG), and U.S. Army Corps of Engineers (Corp) 25 trustee agencies have been considered in regard to the two projects. However, because it is anticipated that neither project would adversely affect any natural resources that are held in trust for the people of the State of California or the United States, no trustee agencies would be involved.

Scope of the EIR

The scope of the EIR includes environmental issues determined to be potentially significant through preparation of the Notice of Preparation (NOP), responses to the NOP, scoping meetings, and discussions among the public, consulting staff, and the City of Sacramento. The first NOP was released in October 2003. Following a determination that the Trinity Cathedral project would be included in the EIR, a second NOP was released in January 2004. Both of the NOPs, along with the comment letters received, are included in Appendices A through D. The NOP(s) identified potentially significant impacts in the following issue areas associated with the construction and/or operation of the SMCS project or the Trinity Cathedral project, which are discussed in detail in this EIR:

- Aesthetics,
- Air Quality,
- Cultural and Historic Resources,
- Hazardous Materials and Public Safety,
- Hydrology and Water Quality,
- Noise,
- Transportation and Circulation, and
- Public Utilities (water, wastewater/storm drainage, solid waste).

This EIR evaluates the direct, indirect, and cumulative impacts resulting from planning, construction and operation of the SMCS project and the Trinity Cathedral project using the most current information available and in accordance with the provisions set forth in the CEQA Guidelines. In addition, the EIR recommends feasible mitigation measures, where available, and project alternatives that would reduce or eliminate adverse environmental effects.

The Alternatives chapter of the EIR (Chapter 8) was prepared in accordance with section 15126.6 of the CEQA Guidelines. A separate alternatives analysis was done for each project. The alternatives analyzed in this EIR for the SMCS project include the following:

1. **No Project/No Action Alternative** assumes that the SMCS project would not be developed but development, could occur on any undeveloped land owned by SMCS within the project area. This alternative assumes uses at Sutter Memorial Hospital (SMH) would not change and the existing Sutter General Hospital (SGH) and Buhler Building would remain the same as all the other existing structures.
2. **Smaller SMF Building Alternative** assumes that the Specialty Care medical office uses (63,400 +/- sf) would not be constructed in the SMF Building, thereby reducing the overall size of the building. The medical uses proposed to relocate into the SMF Building would stay where they are currently located.
3. **Reduced Size Alternative** assumes that the WCC, Energy Center, Housing, and Community Parking Structure would be constructed, but the SMF Building and Future MOB would not be constructed.
4. **Full Parking Supply Alternative** assumes the Community Parking Structure would be expanded and redesigned in order to accommodate the parking demand of the SMCS project, Trinity Cathedral and the Children's Theatre on site.
5. **Off-site Alternative** assumes that the SMCS project would be constructed on an approximately 40-acre parcel of land located in North Natomas. Under this alternative, the Women's and Children's Center, SGH, and the SMF Building would be constructed at this location, creating a new medical complex.

The alternatives analyzed for the Trinity Cathedral project include the following:

1. **No Project/No Development Alternative** assumes that the existing Trinity Cathedral project would not be altered.
2. **Smaller Cathedral Alternative** assumes that the new Trinity Cathedral Building would be reduced in size to approximately 27,750 sf, while the multipurpose space would be reduced to 23,062 square feet.
3. **Off-site Alternative** assumes that the Trinity Cathedral project would be developed on an approximately 15-to 20-acre site located along Capitol City Freeway in the City of Sacramento.

The Alternatives Analysis identifies the "environmentally superior" alternative for each project as required by CEQA.

In preparing the EIR, pertinent City policies and guidelines, existing EIRs, and background documents prepared by the City were evaluated for applicability to the proposed project(s). A complete list of references is provided in Chapter 10 (References) of this EIR.

Environmental Review Process

This EIR has been prepared to meet all of the substantive and procedural requirements of CEQA PRC section 21000 *et seq.* and the CEQA Guidelines, Title 14, CCR Section 15000 *et seq.* As the Lead Agency, the City of Sacramento has primary responsibility for conducting the environmental review and approving or denying either project.

As provided in both CEQA and the CEQA Guidelines, public agencies are charged with the duty to substantially lessen or avoid significant environmental effects where feasible. (See Pub. Resources Code, § 21002; CEQA Guidelines, §§ 15002, subd. (a)(3), 15021, subd. (a)(2)). In discharging this duty, the public agency has an obligation to balance a variety of public objectives, taking into account economic, environmental, and social issues. The EIR is an informational document that informs public agency decision makers and the general public of the significant environmental effects of a proposed project. An EIR must identify feasible means to minimize the significant effects and describe reasonable alternatives to the project.

As a first step in complying with the procedural requirements of CEQA, the City examined whether any aspect of either project, either individually or cumulatively, may cause a significant effect on the environment. For these projects, it was determined that there were potentially significant impacts and the NOP indicated that an EIR would analyze these impacts.

The City filed a NOP with the California Office of Planning and Research (OPR) as an indication that an EIR would be prepared. In October 2003, the first NOP was prepared and circulated for the required 30-day public review period. In January 2004, a revised NOP was prepared to include the Trinity Cathedral project in this EIR; therefore, the NOP was revised and re-released for a 30-day public review period. The revised NOP was distributed to involved public agencies and interested parties for a 30-day public review period, which began on January 7, 2004, and ended on February 6, 2004. The purpose of the public review period was to solicit comments on the scope and content of the environmental analysis to be included in the EIR.

During preparation of the EIR, agencies, organizations, and persons who the City believed might have an interest in this project were specifically contacted. Information, data, and observations from these contacts are included in the EIR. In addition, agencies and interested persons who did not respond will have an opportunity to comment during the public review period for the Draft EIR, as well as at subsequent hearings on the projects.

This EIR or a Notice of Availability (NOA) of this EIR for public review has been distributed to agencies that have commented on the NOP, surrounding cities, counties, and interested parties for a 45-day public review period in accordance with section 15087 of the State CEQA Guidelines.

Interested parties may provide comments on the EIR in written form during the 45-day public comment period. Comments should be addressed to:

City of Sacramento, Environmental Planning Services
Attn: Lezley Buford, AICP
1231 I Street, Room 300
Sacramento, CA 95814

Upon completion of the 45-day public review period, written responses to all significant comments raised with respect to environmental issues discussed in the EIR will be prepared and incorporated into the Final EIR (FEIR). Written responses to comments received from any State or local agencies will be made available to these agencies at least ten days prior to the public hearing during which the certification of the EIR will be considered. These comments and their responses will be included in the FEIR for consideration by the Planning Commission, Design Review Board, and City Council. The process will culminate with City Council hearings to consider certification of the EIR and to consider whether to approve the proposed project.

According to Public Resources Code Section 21081, the Lead Agency must make specific Findings of Fact (Findings) before approving the FEIR when the EIR identifies significant environmental impacts that may result from a project. The purpose of the Findings is to establish the connection between the contents of the EIR and the action of the Lead Agency with regard to approval or rejection of the project. Prior to approval of a project, one of three findings must be made, as follows:

- Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen the significant environmental effects as identified in the EIR.
- Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency.
- Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the FEIR.

Additionally, according to PRC section 21081.6, for projects in which significant impacts will be avoided by mitigation measures, the Lead Agency must include a Mitigation Monitoring Program (MMP). The purpose of the MMP is to ensure compliance with required mitigation during implementation of the project.

Environmental impacts may not always be mitigated to a less-than-significant level. When this occurs, impacts are considered significant and unavoidable. If a public agency approves a project that has significant and unavoidable impacts, the agency shall state in writing the specific reasons for approving the project based on the FEIR and any other information in the public record. This is termed a "Statement of Overriding Considerations" and is used to explain the specific reasons why the benefits of a proposed project make its unavoidable environmental effects acceptable. The statement, if required, is prepared after the FEIR has been completed and before action to approve the project and certification of the EIR has been taken.

REQUIRED DISCRETIONARY ACTIONS

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

- A. Environmental Determination: Environmental Impact Report;

- B. Mitigation Monitoring Plan;
- C. General Plan Amendment;
- D. Community Plan Amendment;
- E. Rezone parcels zoned R-3-A to C-2 and parcels zoned RO to C-2;
- F. Special Permit to allow height and setback;
- G. Special Permit for a Major Project ;
- H. Special Permit to allow tandem parking;
- I. Special Permit for a helistop;
- J. Lot Line Adjustment/Partial Mergers or Tentative Subdivision map;
- K. Public Right-of-Way Abandonment/Vacations;
- L. Alley and Utility Abandonments/Vacations.

In order to develop the Trinity Cathedral project the following discretionary actions are required:

- A. Environmental Determination: Environmental Impact Report;
- B. Mitigation Monitoring Plan;
- C. Special Permit to permit this use in the RO-SPD zone;
- D. Special Permit to permit off-site parking;
- E. Special Permit for building height;
- F. Encroachment Permit;
- G. Sign Variance.

Document Organization

This EIR has been designed for easy use and reference. To help the reader locate information of particular interest, a brief summary of the contents of each section of the EIR is provided.

Chapter 1 Introduction—Provides a brief project background and a description of the EIR, including its purpose, intended use, type, scope, and standards for adequacy; an identification of lead, responsible, and trustee agencies; a description of the environmental review process; and a summary of how the document is organized.

Chapter 2 Project Description—Includes a discussion of the location of the project site; a statement of project objectives for each project; a general description of the each project's technical and environmental characteristics, including proposed plans for development of the affected area; and an identification of required governmental approvals.

Chapter 3 Summary of Environmental Effects—Presents an overview of the results and conclusions of the environmental evaluation. This section identifies project impacts and available mitigation measures for use by the City in reviewing the project and establishing conditions under which the project may be implemented. It also identifies the level of significance of project-related impacts both before and after the imposition of mitigation

measures. A separate Summary of Impacts and Mitigation Measures table has been prepared for each project, SMCS project and Trinity Cathedral project.

Chapter 4 Land Use and Planning Analysis —Describes the existing and planned land uses both in the project vicinity, including the current land uses, land use designations, and zoning and describes potential inconsistencies between the two projects (SMCS project and Trinity Cathedral project) and the City of Sacramento General Plan, the Central City Community Plan, and the City's Comprehensive Zoning Ordinance.

Chapter 5 Introduction to the Analysis—Provides an introduction to the technical chapters and describes technical section format.

Chapters 6 and 7 Environmental Analysis—Includes a topic-by-topic analysis of baseline environmental conditions and project-specific and cumulative impacts that would or could result from implementation of the SMCS project including future development of the Children's Theatre of California and the Trinity Cathedral project. It also identifies mitigation measures that would reduce the level of significance of environmental impacts. The results of field visits, data collection and review, and agency contacts are included in that analysis.

Chapter 8 Alternatives—Includes an assessment of alternative methods for accomplishing the basic objectives of the proposed project. A separate alternatives analysis is included for each project. This assessment, required by CEQA, must provide adequate information for decision-makers to make a reasoned choice among alternatives based on the environmental impacts of the proposed projects and project alternatives.

Chapter 9 CEQA Considerations—Includes a discussion of issues required by CEQA to be addressed in an EIR: significant unavoidable adverse impacts, irreversible environmental changes, growth inducement, and cumulative impacts.

Appendices—Contain a number of reference items providing support and documentation of the analysis performed for this report.

Chapter 2 Project Description

Chapter 2 Project Description

INTRODUCTION

This EIR considers the environmental effects of the Sutter Medical Center, Sacramento project (SMCS project) and the Trinity Cathedral project. The project applicant for the SMCS project is SMCS. The project applicant for the Trinity Cathedral project is the Very Reverend Dr. Donald G. Brown, Dean of the Cathedral (Episcopal Diocese of Northern California). This EIR addresses two separate projects, the SMCS project and the Trinity Cathedral project, proposed by two separate applicants. Separate development and entitlement approvals are being sought for each project. The EIR analyzes each project in separate technical sections, as described in detail in Chapter 1, Introduction. The project description is organized to describe each component of each project, SMCS project and Trinity Cathedral project, separately. The SMCS project, which includes both project-specific and programmatic components, is described first, followed by the Trinity Cathedral project.

SMCS PROJECT

The SMCS project analyzed at a project-specific level includes a total of six components: (1) Women's and Children's Center (WCC); (2) Sutter Medical Foundation Building (SMF Building), including the below-grade Energy Center and parking; (3) Community Parking Structure, including first floor commercial/retail space; (4) 32 residential units (with associated parking); (5) St. Luke's Medical Office Building (Future MOB); and (6) associated utility, circulation and other improvements to existing SMCS buildings. The SMCS project component analyzed on a program level includes the Children's Theatre of California/B Street Theatre. A summary of the SMCS project background, a detailed description of the SMCS project components addressed at the project-specific level and a general discussion of the project component addressed at the programmatic level are included below.

SMCS Project Background

SMCS is an affiliate of the Sutter Health System, a not-for-profit community-based health care system that serves Northern California. The proposed new medical center renovations and expansions would consolidate all acute care facilities currently run by SMCS, adding new and expanded health and healing technologies, services and buildings.

Acute care facilities presently at Sutter Memorial Hospital (SMH) and Sutter General Hospital (SGH) will be consolidated and expanded into a single, fully integrated medical complex. A spanning structure will allow SGH and the new Anderson-Lucchetti Women's and Children's Center to function as one hospital building. Also included in the project are two medical office buildings: the Sutter Medical Foundation Building and a new medical office building to replace St. Luke's medical office building. The new facility at the St. Luke's site will be approximately half the size of the current building (35,000 square feet (sf) versus 70,000 sf). Also included in the SMCS project is a Community Parking Structure with connected neighborhood-serving retail

and small-scale commercial office space, a community theatre (B Street Theatre/Children's Theatre of California), and 32 residential units.

SMCS Project Location

The project site (SMCS project area) includes elements on a total of seven blocks roughly bounded by 26th Street to the west, N Street to the south, K Street to the north, and 30th Street to the east, as shown in Figure 2-1, SMCS Project Area Boundaries. The entire project area includes development on a total of 6 acres. The project area, which includes all of the SMCS project components, as well as the Children's Theatre of California and the Trinity Cathedral project, is located in the Midtown area of the City of Sacramento within the City's Central City District and the Winn Park-Capitol Avenue Neighborhood. The Central City District includes the area bounded by the American River to the north, Broadway to the south, the Sacramento River to the west, and Alhambra Boulevard to the east. The Capital City Freeway, which runs parallel to and between 29th Street and 30th Street, is elevated above the parking lots located along the eastern boundary of the project area.

Existing Uses within the Project Area

The seven-block project site (see Figure 2-2) includes:

- the existing SGH bounded by K Street to the north, L Street to the south, 29th Street to the east, and 28th Street to the west;
- the block bounded by L Street to the north, 29th Street to the east, Capitol Avenue to the south, and 28th Street to the west, which includes the existing Buhler Building, the Old Tavern Building, Sutter's Energy Center, and a surface parking lot (proposed WCC project site);
- the approximately half block located west of 28th Street between L Street and Capitol Avenue, which contains the House of Furs building, senior housing, Pioneer Church, MTI office buildings, and vacant lots (proposed SMF Building site);
- the block bounded by Capitol Avenue to the north, 28th Street to the east, N Street to the south and 27th Street to the west, which contains the Trinity Apartments, surface parking, EAP Building, vacant lot, and a large surface parking lot (proposed Community Parking Structure and commercial/retail site). On northeast corner of the block is Café Bernardo's, Monkey Bar, and a physical therapy business. These uses will remain;
- the approximately half block bounded by Capitol Avenue to the north, N Street to the south, and 26th and 27th Streets to the east and west, which contains St. Luke's Medical Office Building and parking garage (proposed new residential development, currently St. Luke's parking garage);
- and the two blocks containing existing parking lots leased from Caltrans located under the Capital City Freeway between K Street and Capitol Avenue, 29th and 30th Streets.

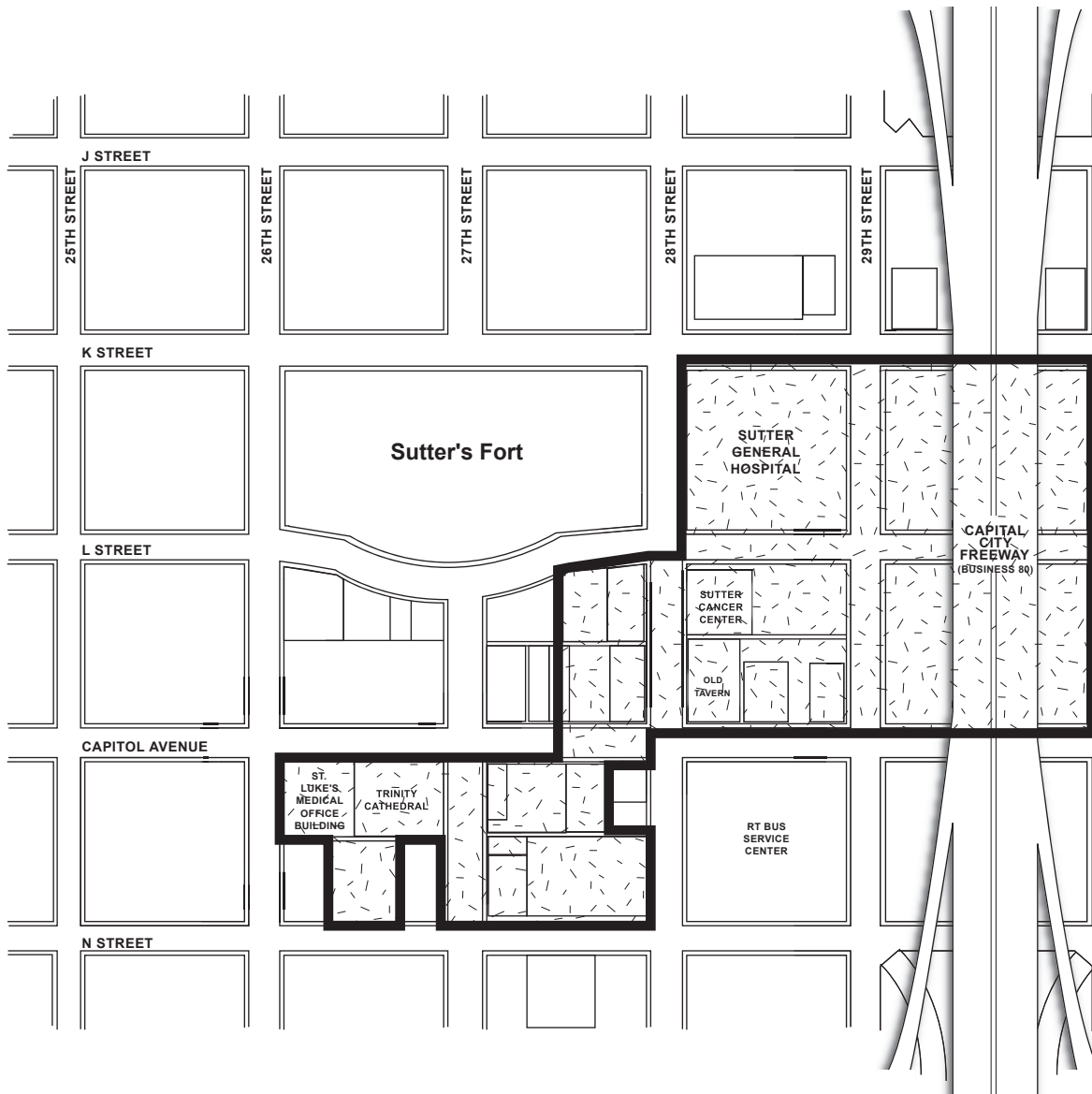


FIGURE 2-1
SMCS Project Area Boundaries

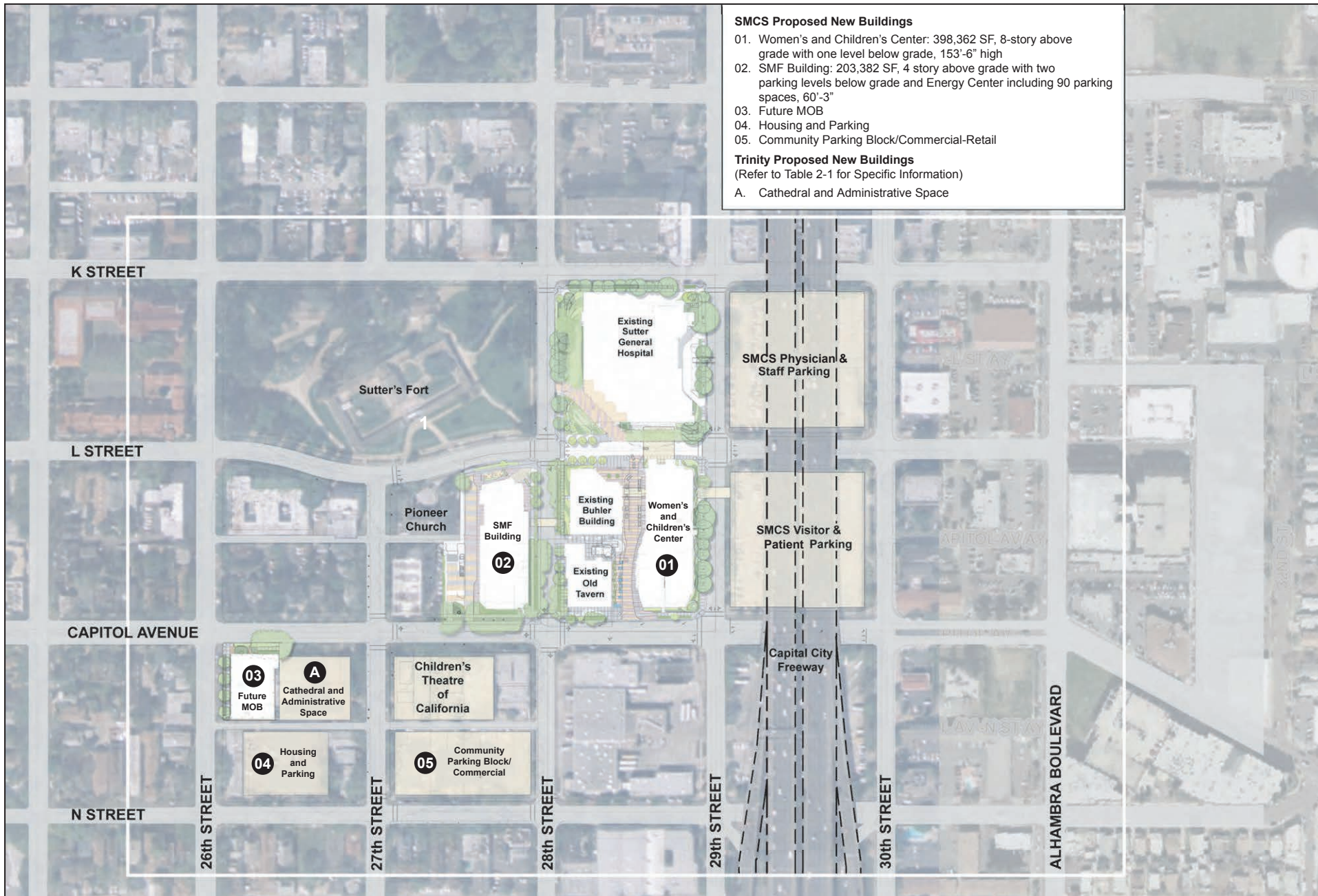
Source: EIP Associates 2004

Not to Scale



10828-02

Sutter Medical Center, Sacramento



- SMCS Proposed New Buildings**
- 01. Women's and Children's Center: 398,362 SF, 8-story above grade with one level below grade, 153'-6" high
 - 02. SMF Building: 203,382 SF, 4 story above grade with two parking levels below grade and Energy Center including 90 parking spaces, 60'-3"
 - 03. Future MOB
 - 04. Housing and Parking
 - 05. Community Parking Block/Commercial-Retail
- Trinity Proposed New Buildings**
(Refer to Table 2-1 for Specific Information)
- A. Cathedral and Administrative Space

FIGURE 2-2
SMCS Site Plan

Not to Scale



10828-02

Source: KMD Architects 2005

Sutter Medical Center, Sacramento



Existing Uses on Adjacent Blocks

Existing uses generally to the north of the project site include medical office buildings across K Street from SGH and Sutter's Fort, north of L Street, between 26th and 28th Streets, as shown in Figure 2-3, Existing Adjacent Uses. On the block bounded by 26th and 27th Streets and L Street and Capitol Avenue, there are residential uses and office uses, and on the block between Capitol Avenue and N Street west of 26th are residential uses. South of the project area, south of N Street, there are residential uses and some offices, some of which are vacant, and restaurant uses at the corner of N Street and 28th Street. The Regional Transit maintenance facility is on the east side of 28th Street, between N Street and Capitol Avenue.

Existing General Plan Land Use Designation/Zoning

Land owned by SMCS within the project area is currently designated in the City's General Plan for Regional Commercial and Office (RCO), Public/Quasi-Public Miscellaneous (PQPM), Community and Neighborhood Commercial (CNC), and High Density Residential (HDR), as shown in Figure 2-4, General Plan Land Use Designations.

Zoning classifications within the project area include General Commercial (C-2-SPD), General Commercial – Review (C-2-R-SPD-W/C), Hospital Zone (H-SPD), Multi-Family Zone (R-3A-SPD), Office Building Zone (OB-SPD), Residential-Office Zone (RO-SPD), and Transportation Corridor Zone (TC-SPD) (see Figure 2-5, Zoning Designations).

Land owned by Trinity Cathedral is currently designated in the City's General Plan for High Density Residential (HDR) and is zoned Residential Office Special Planning District (RO-SPD), (see Figures 2-4 and 2-5).

SMCS Project Objectives

The vision of the SMCS project seeks to inspire health and healing through the creation of an environment based on compassion, excellence and advanced technologies. The project is planned as an accessible and innovative healing arts facility for the citizens of Sacramento, as well as the region, within an urban setting.

The SMCS project recognizes that the region's growing population will require specialized and accessible health facilities and both of these objectives are addressed at the proposed Midtown location. Additionally, the SMCS project is envisioned as the hub of an "urban village" in Midtown's Sutter District. It is designed to complement neighborhood features including places of worship, historic and cultural sites, a new live theater, residential development and commercial activity, including restaurant's, retail and office uses.

The proposed new medical facilities and renovation of the existing buildings (SGH and the Buhler Building) will offer both acute and non-acute health care services, including out-patient care and hospital services at one innovative and fully integrated medical center. SMCS has established the following objectives for the project which includes two medical office buildings; two acute care hospital buildings (joined by a spanning structure); the Buhler Building; a

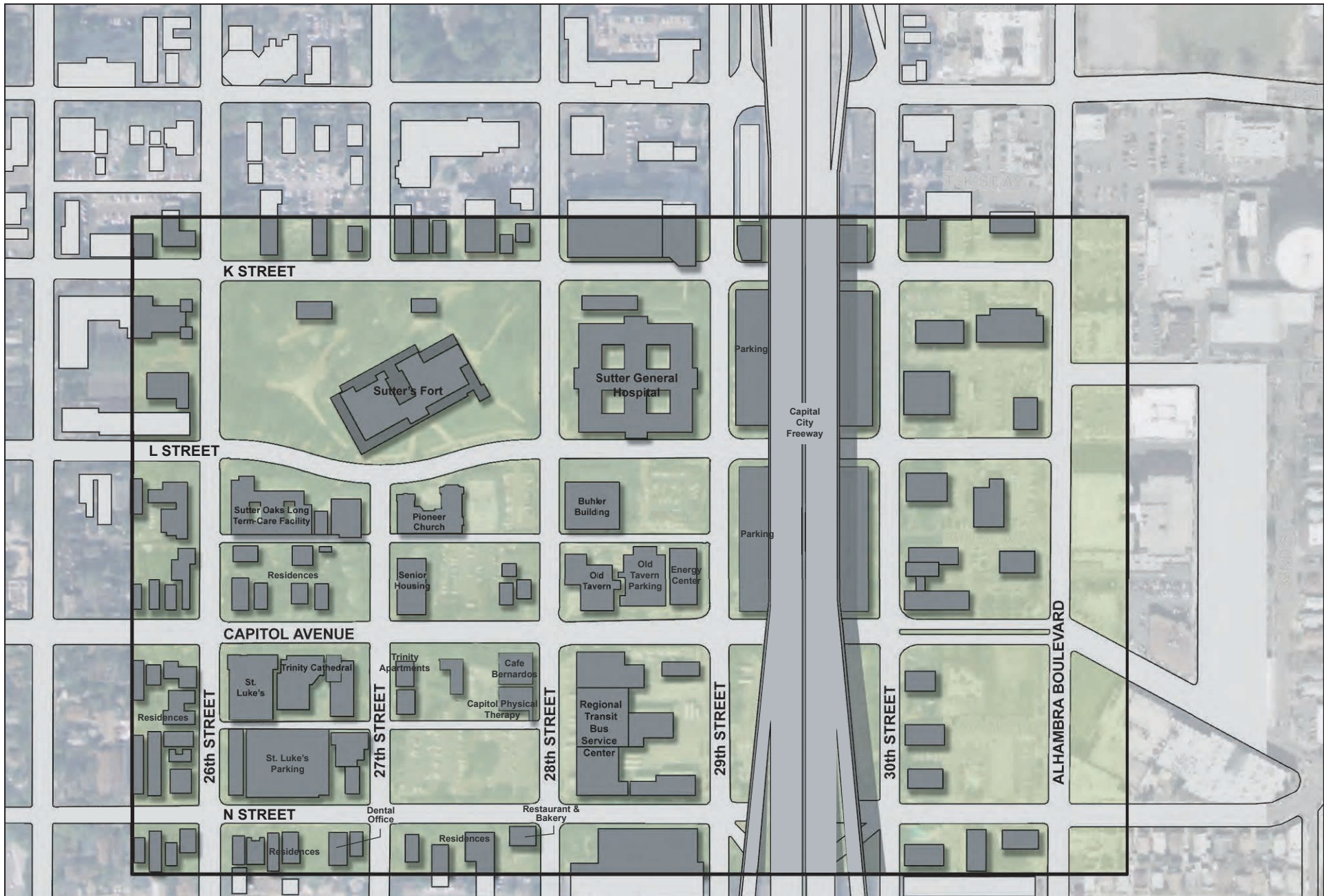


FIGURE 2-3
Existing Adjacent Uses



10828-02

Source: KMD Architects 2005

Not to Scale



Sutter Medical Center, Sacramento

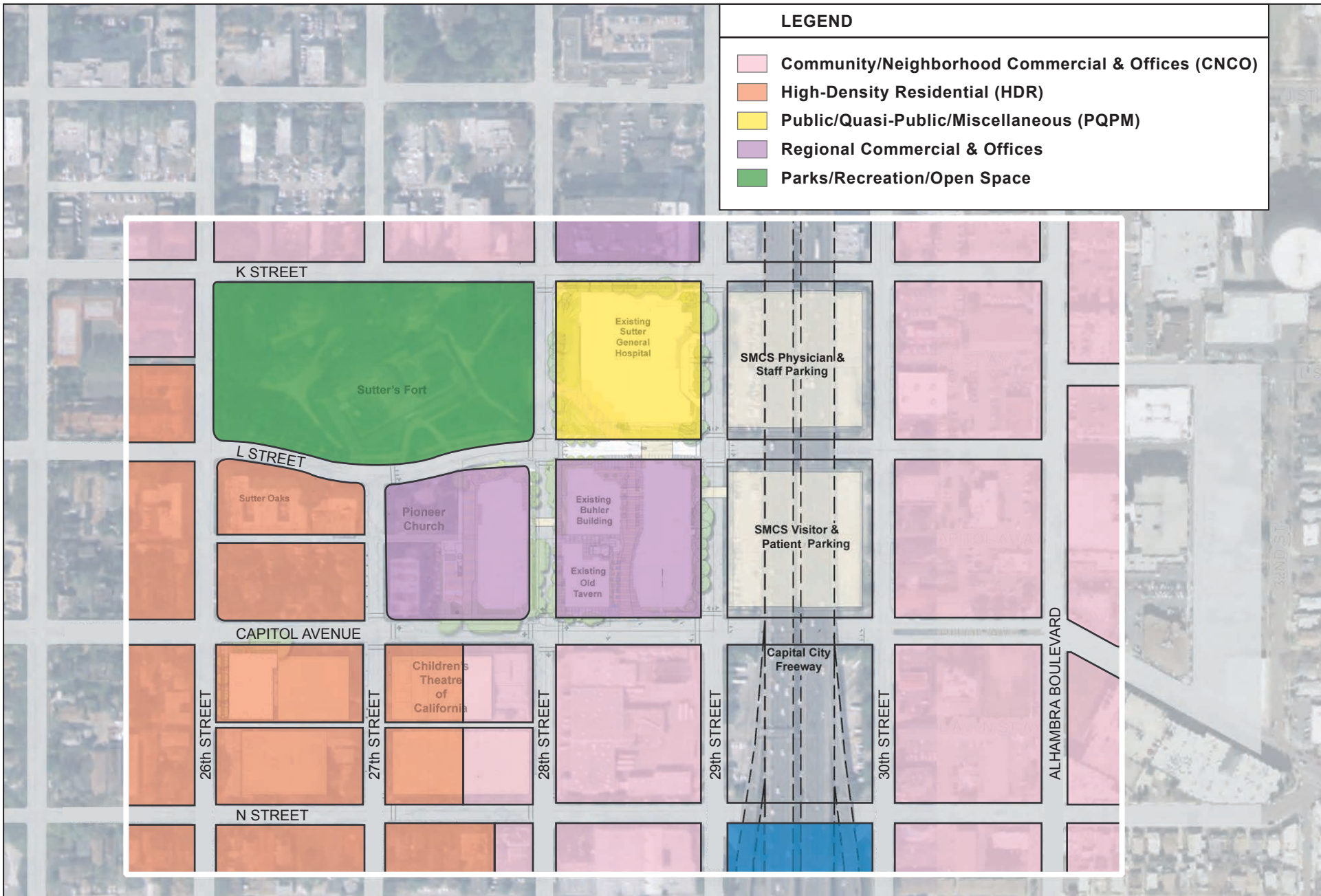


FIGURE 2-4
General Plan Land Use Designations



10828-02

Source: City of Sacramento, GIS, 2003

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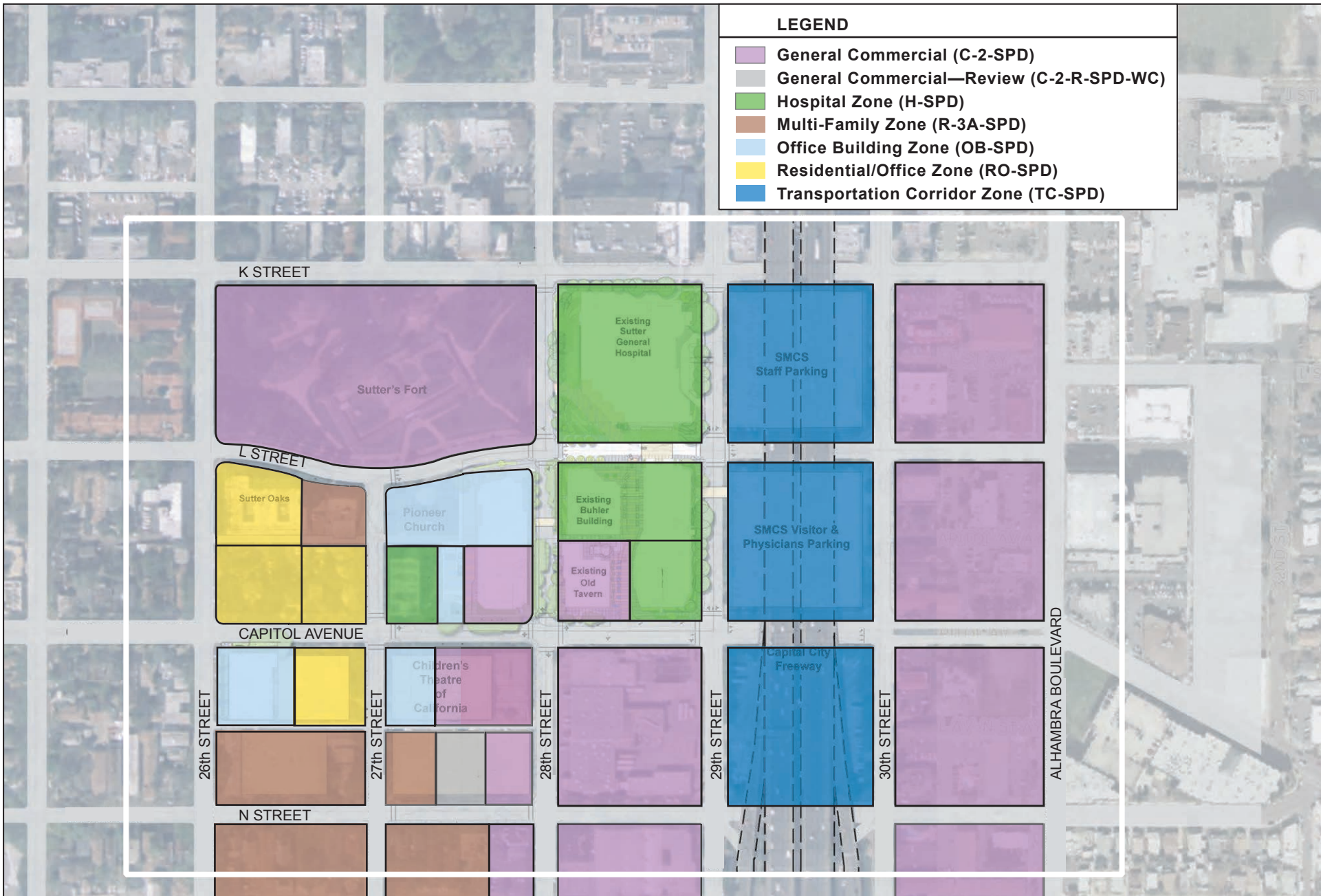


FIGURE 2-5
Zoning Designations

Source: City of Sacramento, GIS, 2003

Not to Scale



Community Parking Structure which incorporates neighborhood-serving businesses; a residential element; restaurants and offices, and a community theatre.

The project applicant has identified the following project objectives for the SMCS project.

- Consolidate all acute care facilities presently at SMH and SGH into one health care complex that will offer high quality care for patients; promote new, highly accessible and innovative care models; and provide efficient, cost-effective delivery of health care treatment for all its patients;
- Ensure that the hospital redevelopment is part of a master planned medical complex which complements cultural, business, residential, historic, and religious aspects of the surrounding neighborhood;
- Complement and add to existing SMCS employee, community and environmental programs including TSM (ride-share, public transit subsidies, etc.) environmentally-sensitive and energy-conservation design, and practices;
- Promote community involvement and neighborhood-building by including community theatre, housing, neighborhood-serving retail, and other institutions that reflect and enhance the character of the neighborhood and by placing the most intense project uses away from residential portions of the neighborhood;
- Redesign SGH to offer the latest treatment for adult cardiovascular, orthopedic, spine, neuroscience, cancer, transplant, medical/surgical and outpatient surgery services;
- Expand cardiovascular facilities at SGH to enhance a growing array of leading medical procedures and new treatment technologies on one floor of the hospital, thereby improving patient accessibility and physician deployment;
- Build a new Anderson-Lucchetti Women's and Children's Center to deliver both high tech and "high touch" care in a unique environment. The Women's and Children's Center will feature the highest level of neonatal and pediatric intensive care services, pediatric cardiac care, pediatric neurosurgery services, pediatric cancer services, and high risk and conventional maternity services. A life-saving "helistop" atop the hospital building will serve critically sick patients from across Northern California and will be used only occasionally, principally in the treatment of high-risk pediatric patients;
- Bridge the Women's and Children's Center with SGH via a unique, three-story spanning structure that will enable the two buildings to function as a single unified hospital building;
- Provide additional capacity for quality specialized care at both SGH and the Women's and Children's Center to increase capacity and complement SMCS' twice recognized status as one of America's "Top 100 Hospitals";
- Plan, stage and construct the project in a manner that provides minimal disruption of the surrounding neighborhood and which is compatible with the preservation of the historic character of the area and cultural attractions, including the Old Tavern Building, Pioneer Church and Sutter's Fort;

- Complement the existing neighborhood and environment by providing clear way-finding to reduce traffic in the surrounding neighborhood and enhance pedestrian safety alongside new housing, retail and cultural amenities to the extent feasible;
- Provide a Community Parking Structure that will provide parking for staff and patients of the new medical center complex and offer parking for neighborhood churches, businesses and cultural attractions; and
- Comply with the requirements set forth in California law (Senate Bill 1953) that seeks to ensure the highest level of structural safety for hospital buildings.

SMCS Medical Center Addressed at a Project-Specific Level

The SMCS project includes specific development initiatives for which SMCS seeks City approval. The following is a detailed description of the SMCS project addressed at a project-specific level in the EIR. Table 2-1 identifies each project parcel, assessor's parcel number, date of construction of existing structures, underlying zoning, and existing and proposed use for each SMCS parcel.

SMCS Project Components

The following project components, collectively, are referred to as the proposed SMCS project (also listed in Table 2-2, below). These specific project components are analyzed at a project-specific level in the EIR:

- Women's and Children's Center (WCC);
- Sutter Medical Foundation Building (SMF Building);
- Community Parking Structure and Commercial/Retail;
- St. Luke's Medical Office Building (Future MOB);
- 32 Residential units and parking;
- All associated utility improvements;
- Circulation and Parking; and
- Construction of below-grade tunnels.

The following sections describe each project-specific component of the SMCS project separately, followed by a program level description of the Children's Theatre of California/B Street Theatre component.

**Table 2-1
SMCS Existing Building Uses and Disposition by Block**

APN / Existing Use	Date Constructed	Height	Size	Disposition	Current Zoning	Proposed Project Component
Women's and Children's Center – Block bounded by Capitol Ave, 28th, 29th, and L Streets						
007-0114-003 1. SGH	1983-1987	5 floors, plus basement	351,000	Building to remain	H - SPD	Renovation and expansion of some uses within Sutter General
007-0173-001 2. Buhler Building (administrative/medical office space)		7 floors, plus basement, plus penthouse area	180,000 sf	Building to remain		Approx. 50,000 sf of Buhler Building to be renovated
3. Surface Parking lot	1989		28 spaces	To be removed	H - SPD	Parking lot to be future site of new hospital
007-0173-002 4. Energy Center	1983 -1987	2 floors, plus basement	18,490 sf	Building to be demolished	H - SPD	New Energy Center to be constructed below the SMF Building
007-0173-003 5. Old Tavern Parking	Late 1970s/1980	3 levels	137 spaces	Building to be demolished		Women's and Children's Center
6. Old Tavern (former RAS medical office; currently vacant space)	Same	1 floor, plus basement	12,921 sf	Building to be demolished	H - SPD	Women's and Children's Center
007-0173-004 7. Old Tavern building (office, restaurant)	1849/1922	2-4 floors	26,248 sf	Building to remain	C-2 - SPD	No changes, except lot line adjustment (connected to parcel – 003, above)
Sutter Medical Foundation (SMF) Building and Energy Center – Block bounded by Capitol Ave, 27th, 28th and L Streets						
007-0171-002 8. Vacant lot	Former Tuesday Club - Demolished in 2002	n/a	n/a	n/a	OB - SPD	New SMF and Energy Center

Table 2-1
SMCS Existing Building Uses and Disposition by Block

APN / Existing Use	Date Constructed	Height	Size	Disposition	Current Zoning	Proposed Project Component
007-0171-003 9. Vacant lot	n/a	n/a	n/a	n/a	OB - SPD	New SMF and Energy Center
007-0171-004 10. MTI Office Building C (office)	1970s	2 floors	2,529 sf	Building to be demolished	C-2 - SPD	New SMF and Energy Center
007-0171-005 11. MTI Office Building B (office)	1970s	1 floor	1,152 sf	Building to be demolished	C-2 - SPD	New SMF and Energy Center
007-0171-006 12. MTI Office Building A (office)	1970s	2 floors	4,671 sf	Building to be demolished	C-2 - SPD	New SMF and Energy Center
007-0171-007 13. House of Furs	Early 1948	3 floors plus basement		Building to be demolished or relocated	C-2 - SPD	New SMF and Energy Center
007-0171-008 14. Medical Office	Rebuilt in the early 1980s	1 story	1,300 sf	Building to be demolished or relocated	C-2 - SPD	New SMF and Energy Center
007-0171-017 15. Surface parking lot	n/a	n/a	32 spaces	To be removed	OB - SPD	New SMF and Energy Center
Community Parking Structure and Commercial/Retail and Theatre – Block bounded by Capitol Ave, 27th, 28th and N Streets						
007-0172-001 16. Vacant lot	n/a	n/a	n/a	n/a	OB - SPD	Future Theatre location
007-0172-002 17. Trinity Apartments	n/a	2 floors	5 units	Building to be demolished	OB - SPD	Future Theatre location

Table 2-1
SMCS Existing Building Uses and Disposition by Block

APN / Existing Use	Date Constructed	Height	Size	Disposition	Current Zoning	Proposed Project Component
007-0172-003 18. Surface Parking ¹	n/a	n/a	n/a	To be removed	OB - SPD	Future Theatre location
007-0172-004 19. EAP Building (former medical office space; currently vacant space)	late 1950s	1 floor	3,888 sf	Building to be demolished	C-2 - SPD	Future Theatre location
007-0172-005 20. Vacant lot	1955 Former Medical Arts Bldg. Demolished in 2002	n/a	n/a	n/a	C-2 - SPD	Future Theatre location
007-0172-010 21. Surface Parking ¹	n/a	n/a	n/a	To be removed	C-2 - SPD	Parking structure retail/commercial
007-0172-013 22. Surface Parking ¹	n/a	n/a	n/a	To be removed	C-2 (R-SPD W/C)	Parking structure retail/commercial
007-0172-014 23. Surface Parking ¹	n/a	n/a	n/a	To be removed	C-2 (R-SPD W/C)	Parking structure retail/commercial
007-0172-016 24. Surface Parking ¹	n/a	n/a	n/a	To be removed	R3A - SPD	Parking structure retail/commercial
007-0172-017 25. Surface Parking ¹	n/a	n/a	n/a	To be removed	C-2 (R-SPD W/C)	Parking structure retail/commercial
007-0172-018 26. Surface Parking ¹	n/a	n/a	n/a	To be removed	R3A - SPD	Parking structure retail/commercial

**Table 2-1
SMCS Existing Building Uses and Disposition by Block**

APN / Existing Use	Date Constructed	Height	Size	Disposition	Current Zoning	Proposed Project Component
007-0172-019 27. Surface Parking ¹	n/a	n/a	n/a	To be removed	C-2 (R-SPD W/C)	Parking structure retail/commercial
Future Medical Office Building and Residential – Block bounded by Capitol Ave, 26th, 27th and N Streets						
007-0166-016 28. St. Luke's Building (majority of the building is vacant)	Late 1950s	4 floors, plus basement	69,969 sf	Building to be demolished and rebuilt	OB-SPD	Medical office space
007-0166-017 29. St. Luke's parking structure (only 2 levels used for parking)	Late 1950s	3 levels	249 spaces	To be demolished	R3A-SPD	Residential and associated parking
Existing North/South Parking Lots – Block bounded by Capitol Ave, 29th, 30th, and K Streets						
007-0177-001 30. South parking lot (under freeway) leased from Caltrans	n/a	2 levels	686 spaces	No change	n/a	Parking
007-0118-001 31. North parking lot (under freeway) leased from Caltrans	n/a	2 levels	681 spaces	No change	n/a	Parking

Notes:

1. A total of 142 spaces are included within all those specific parcels.
 2. See Figure 2-1 for the project site plan and Table 2-2 for a specific building location description.
- H = Hospital.
 C-2 = General Commercial.
 R3A = Multi-family.
 OB = Office Building.
 SPD = Special Planning District.
 Source: City of Sacramento; SMCS, 2005.

**Table 2-2
SMCS Proposed New Buildings**

Building	Location	Proposed Square Footage/ Parking Spaces	Proposed Building Height	Proposed Zoning
Women's and Children's Center	1/2 block immediately east of the existing Buhler Building and Old Tavern, bounded by L Street to the north, Capitol Avenue to the south, 28 th Street to the west and 29 th Street to the east.	398,362 sf	153'-6" to Mechanical Level 2 roof and 167'6" to top of east stair roof. 8-story above grade plus one level below grade	H-SPD
SMF Building (which includes the Energy Center)	Eastern 1/2 of a block south of Sutter's Fort, bounded by L Street to the north, Capitol Avenue to the south, 28 th Street to the east, and 27 th Street to the west.	203,382 sf 90 parking spaces	60' top of roof/86' top of cooling tower 4-story above grade plus two levels below grade	C2-SPD OB-SPD
Community Parking Structure Commercial/Retail	Southern 1/2 of a block south of Capitol Avenue, between 28 th and 27 th Streets.	Square footage to be determined 1,100 spaces	73 to 83 feet 7-stories above grade plus one level below grade	C2-S-RPD C2-SPD R-3A-SPD
Future MOB	Western 1/4 of the block along 26 th Street between Capitol Avenue and N Street.	35,000 sf 35 parking spaces	To be Determined	n/a
Residential development	A portion of the south side of the block bounded by N Street between 26 th and 27 th Streets.	32 units 40 parking spaces	2-3 stories in height	n/a

Source: KMD Architects, March 2004; SMCS, 2005.

Women's and Children's Center

The proposed WCC would be located on the eastern half of the block located immediately south of SGH, which currently accommodates the valet parking site for the Buhler Building, along with the Energy Center, the Old Tavern parking garage and Radiological Associates of Sacramento (RAS) former medical office. Figure 2-6 shows the proposed site plan for the WCC.

The WCC would be an 8-story above-grade structure plus one level below-grade. The building would be approximately 167-feet (167'- 6" to the highest point of the building) high to the top of the mechanical penthouse and would contain approximately 398,400 square feet (sf) of hospital and medical-related uses, as shown in Figure 2-7. To accommodate the size of the building, the elevators would encroach into the south side of the L Street right-of-way a maximum of approximately 28 feet. To accommodate this, L Street would be narrowed by eliminating the on-street parking between 28th and 29th Streets but the existing bike lanes would remain. The minimum roadway width would be 36-feet, which would allow for two 12-foot wide lanes for vehicles and two 6-foot wide bike lanes. A 7-foot wide sidewalk would be provided along the south side. There would be no changes made to the existing sidewalk along the north side of L Street.

The WCC would provide intensive care and maternal and children's health services. It is anticipated that the WCC would provide the following services: Neonatal Intensive Care beds, Intensive Care, Pediatric Intensive Care, Pediatric Medical/Surgical beds, Labor and Delivery Rooms, Ante-Partum beds, and Post-Partum (birthing recovery) beds, with a total of 197 beds. In addition, the building shell space has been designed to potentially accommodate an additional 75 beds in the future, depending on the growth of specific services. The WCC would also include showers and lockers for staff and employees along with a small library, a cafeteria, and conference and performance space in the building lobby. The conference and performance space would be available for community events and other public events.

The WCC, as shown in Figures 2-7 and 2-8, would be designed as an articulated structure with a multi-planed facade.¹ The variation in planes is intended to minimize the overall scale of the building's mass. The design of the Women's and Children's Center reflects the horizontal proportions of SGH to create one unified medical campus. The 'skin' or exterior of the WCC would be composed of bands of off-white metal panels, combined with transparent and patterned or etched glass, creating an overall sense of scale and detail. The building's base would be sheathed in copper and contains planters to integrate the building mass into the landscape. Air handling units, exhaust fans, and miscellaneous mechanical equipment would all be located on the roof of the new building. Illuminated signage would be included on the east and west sides of the building as shown in Figures 2-7 and 2-8.

1 As shown in Figure 2-7, the façade of the WCC is not flat and includes areas with variation to the building façade.

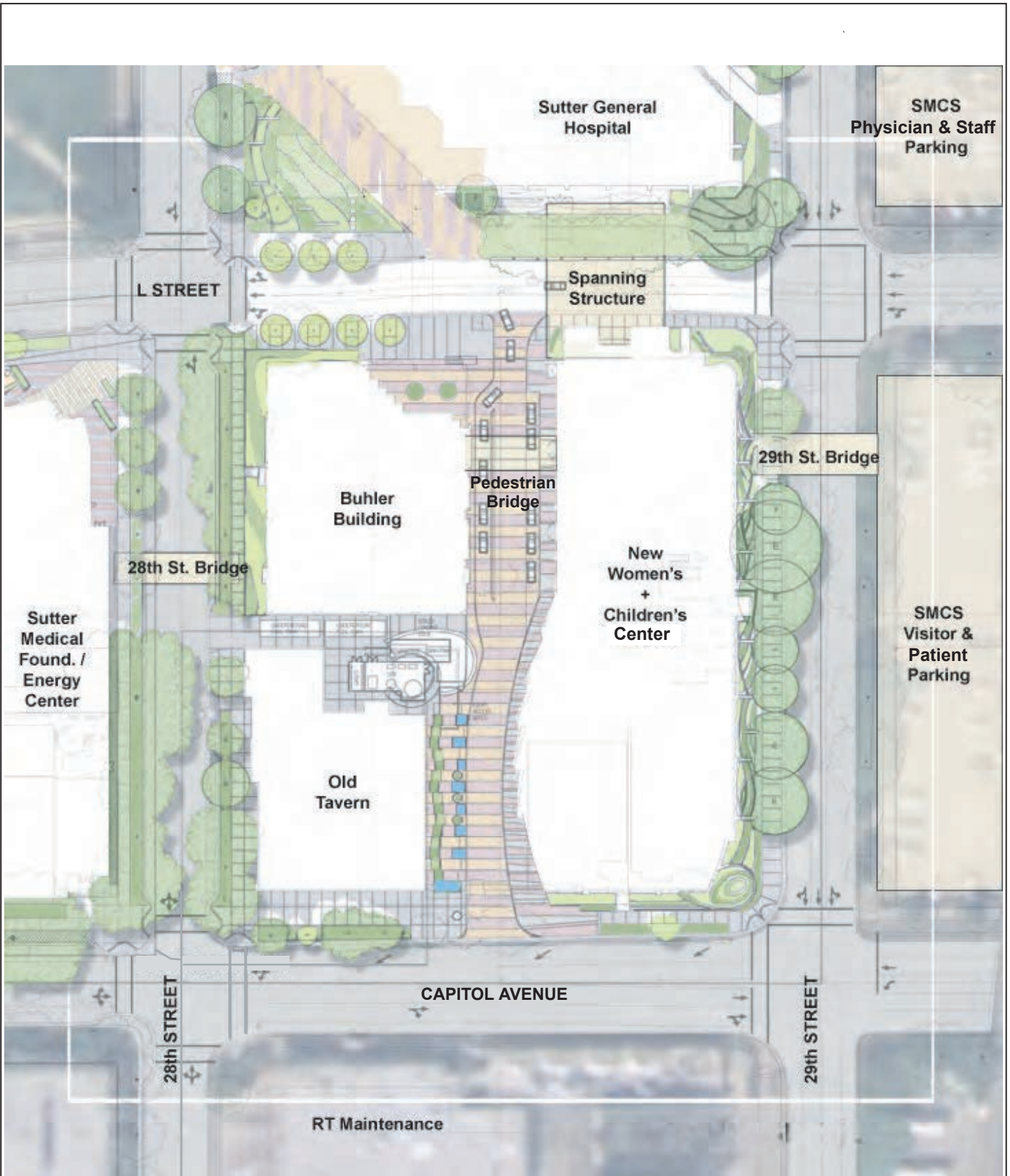


FIGURE 2-6
Women's and Children's Center Site Plan

Source: KMD Architects 2004

Not to Scale



10828-02

Sutter Medical Center, Sacramento



FIGURE 2-7
Women's and Children's Center, East Elevation

10828-02 Source: KMD Architects 2005

Sutter Medical Center, Sacramento





FIGURE 2-8
Women's and Children's Center, West Elevation

Not to Scale

10828-02

Source: KMD Architects 2005

Sutter Medical Center, Sacramento

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Helistop

A helistop is a designated area where helicopters can land to drop-off critically ill patients. A rooftop, non-emergency helistop would be located at the southern section of the roof of the WCC approximately 167 feet above ground. The helistop would be used for periodic scheduled transfers of seriously ill infants, children, and adults from 27 counties in northern California and from western Nevada. The general service area would encompass an area within an approximately 60 to 90 mile radius from downtown Sacramento. SMCS does not operate a life flight emergency operation, and the WCC is not a trauma center, so emergency or unscheduled stops would not occur. Helicopters would not be housed, parked, or fueled at this site, but would only drop off patients and return to a remote base, following a flight path directly above the freeway to reduce noise impacts to the adjacent neighborhoods. It is estimated that the number of annual helicopter patient deliveries would be in the range of 200 trips per year, which averages to between 15 to 20 flights per month.

Spanning Structure

To meet the clinical needs of the medical complex, the WCC would be connected to the existing SGH on levels 2, 3, and 4 by a three-level spanning structure (crossing L Street) integral to the medical functionality of both SGH and the WCC, as shown in Figure 2-9, Spanning Structure across L Street. In effect, the spanning structure allows the two separate buildings to function as a single integrated hospital. The second floor level of the proposed spanning structure would provide both public and staff circulation separated by a translucent glass partition. The third floor level would contain pre-and post-operative pediatric facilities. The fourth floor level would contain family waiting areas and staff/patient circulation. The spanning structure would be designed to accommodate the 17-foot above street-level minimum height requirement in keeping with the requirements set forth by the City of Sacramento.

The existing pedestrian bridge across L Street connecting the Buhler Building and SGH would be removed as part of the project and replaced by the spanning structure.

Pedestrian Connections/Vehicle Access

Access to the proposed WCC would be through a private drive and entryway running north/south, located mid-block, east of the Buhler Building, and west of the proposed WCC, as shown on Figure 2-6. This entryway would have one-way traffic to the north with primary vehicle access from Capitol Avenue (to the south) exiting onto L Street. The proposed WCC would include a main lobby, which would serve as the main entrance for visitors and patients to the entire SMCS medical complex.

A valet parking system for patient drop-off and pick-up at the main entrance would be provided. Patients could be dropped off at the main entrance and their vehicles valet parked in the public parking lot (south lot) under the freeway. However, ambulatory or walk-in patients for emergency room services could also be dropped off at SGH at the modified existing entrance along L Street across from the WCC.

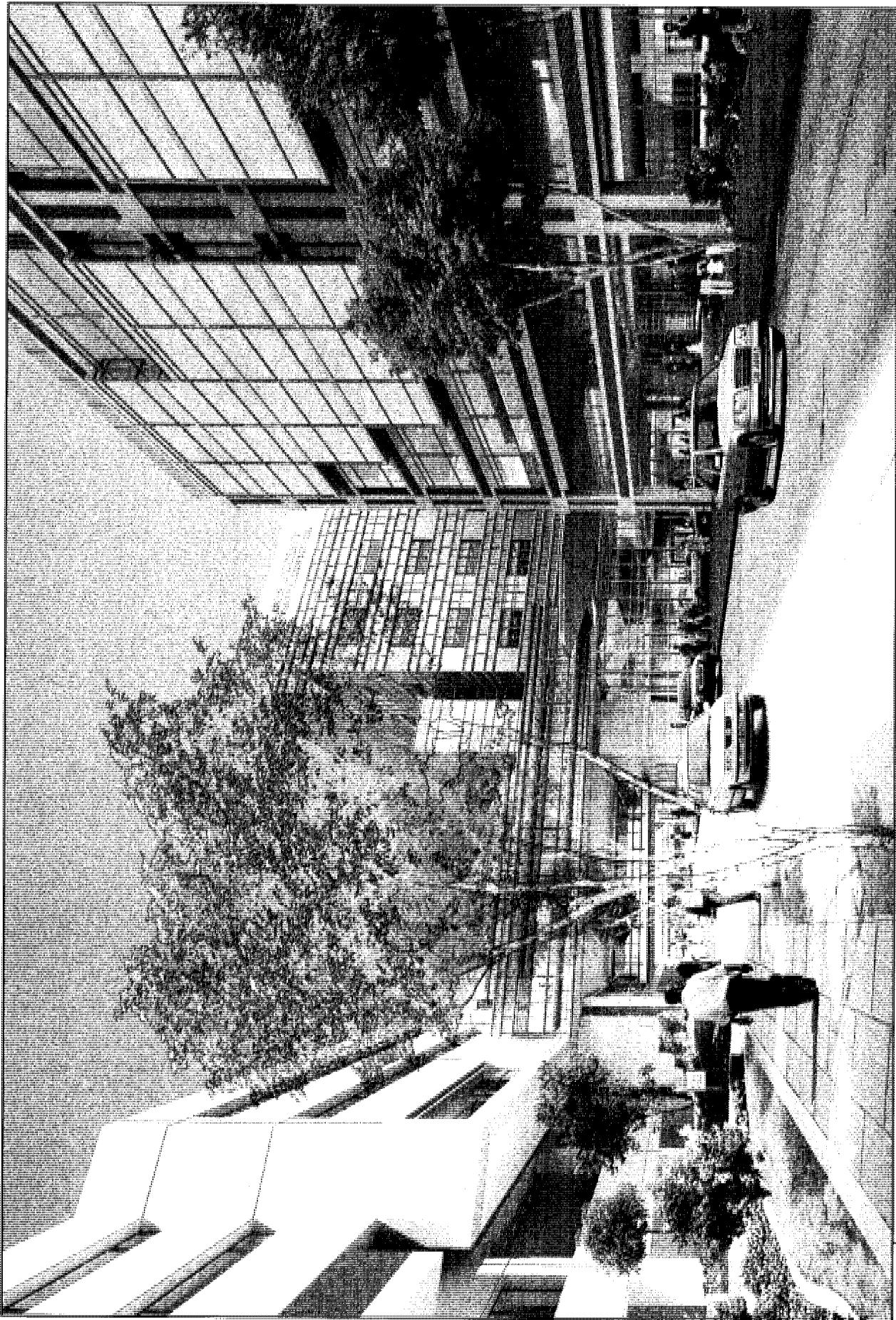


FIGURE 2-8
Spanning Structure Across L Street

Source: KIMD Architects 2015

Sutter Medical Center, Sacramento

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Pedestrian access and access to the WCC are achieved through the use of both spanning structures and pedestrian bridges. Examples include the spanning structure across L Street connecting the WCC to SGH and an enclosed pedestrian bridge spanning 29th Street, south of the intersection of L Street and 29th Street, which connects the WCC with the existing parking structure under the freeway (shown on Figure 2-6). Also, a short pedestrian bridge would connect the existing Buhler Building with the WCC by crossing the new private entryway and a pedestrian bridge would connect the Buhler Building and the SMF Building across 28th Street. These pedestrian bridges would also be designed to accommodate the 17-foot minimum height requirements of the City of Sacramento.

Building Demolition

To accommodate construction of the WCC, the existing Energy Center, the Old Tavern parking structure, the former RAS medical office located on Capitol Avenue, and the surface parking spaces that serve the Buhler Building would be demolished, as described in Table 2-1 and shown in Figure 2-10. A new energy center is proposed under the SMF Building to provide heating and cooling to all the buildings within the SMCS medical complex. To accommodate the loss of the Old Tavern parking structure and the surface parking spaces, parking is proposed in the new Community Parking Structure. The RAS Medical Office has already relocated to a facility on L Street.

Sutter Medical Foundation Building (SMF)

The proposed SMF Building would be located on the eastern half of the block south of Sutter's Fort and west of the Buhler Building, which currently includes office buildings, parking lots, the House of Furs building, and a single-story structure currently used as a private medical office. Figure 2-11 shows the proposed site plan for the new SMF building and Table 2-3 provides a detailed breakdown of space within the building.

Table 2-3

SMF Building – Breakdown of Uses

Type of Office Space	SF
Specialty Care offices	63,366
Ambulatory surgery	34,514
Cardiac rehabilitation	6,130
Imaging	21,557
Laboratory	3,570
Retail	2,600
Energy Center, Parking, Tunnels/Bridges	71,645
Total	203,382

Source: Sutter Master Plan Office, KMD circulation graphic, November 2004; SMCS 2005.

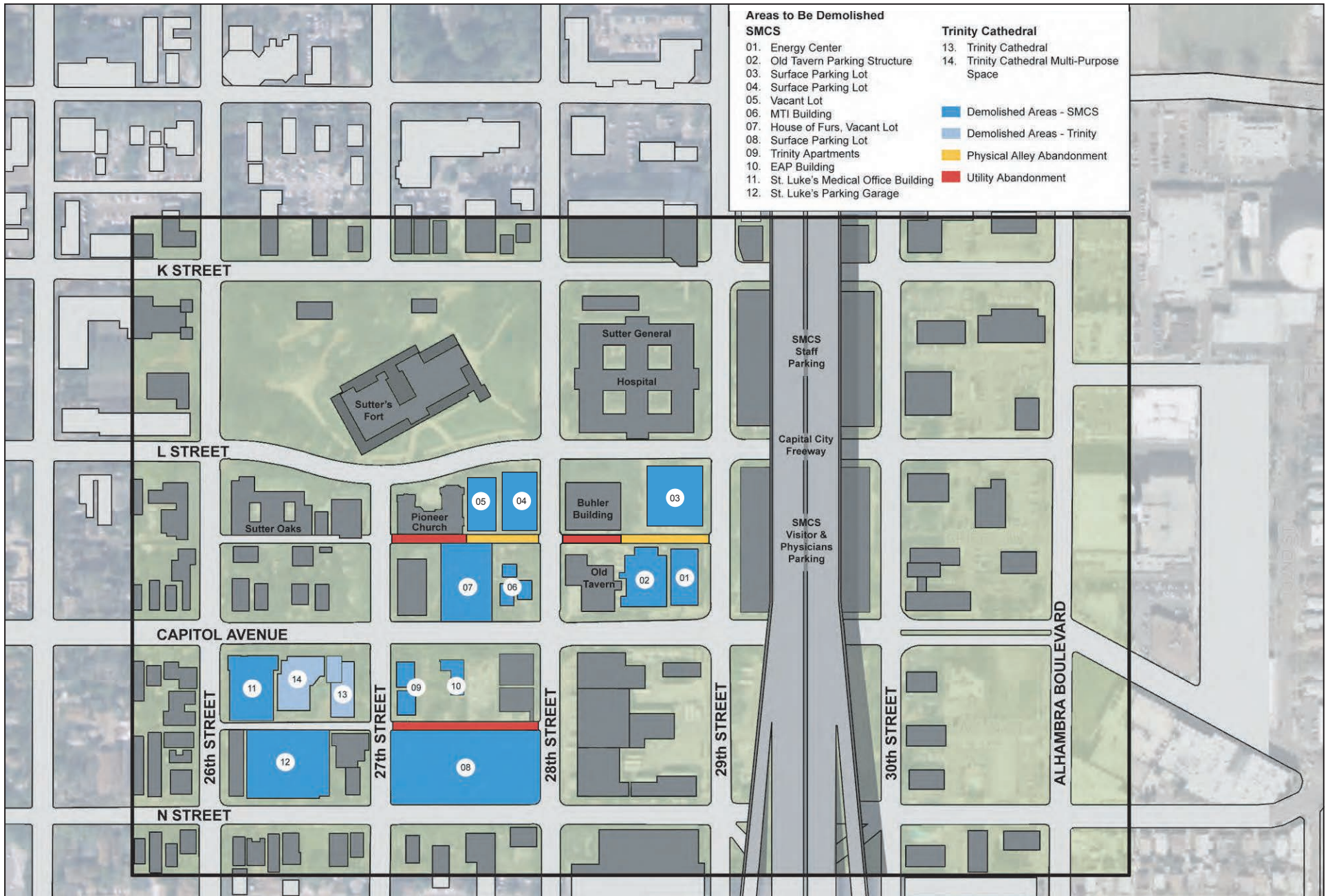


FIGURE 2-10
Buildings to be Demolished

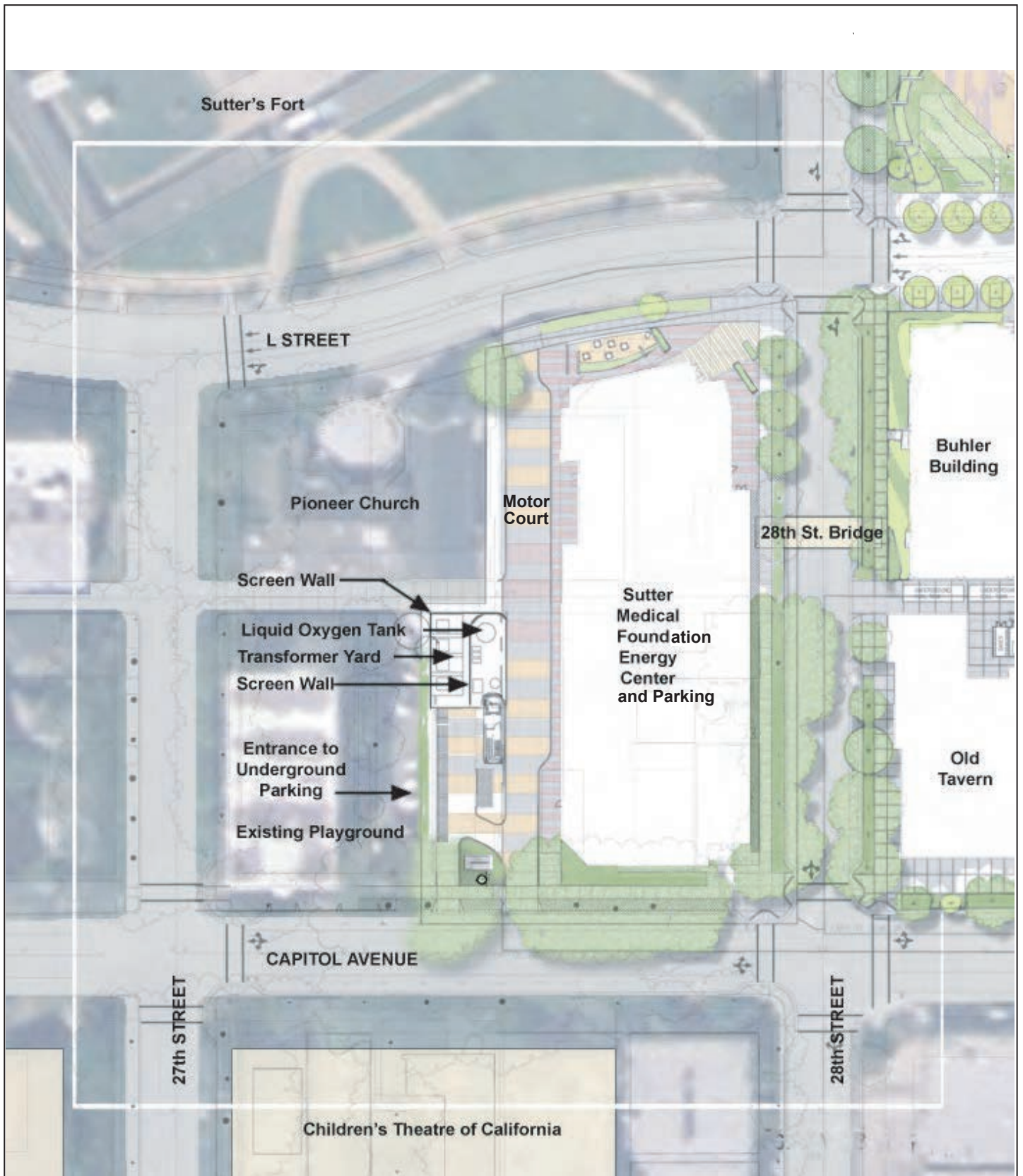


10828-02

Source: KMD Architects 2005

Sutter Medical Center, Sacramento





10828-02

FIGURE 2-11
SMF Building Site Plan

Source: KMD Architects 2005

Not to Scale



Sutter Medical Center, Sacramento

The SMF Building would be a four-story above-grade building with two levels of parking and the Energy Center below grade for a building total of approximately 203,382 sf. A total of 131,737 sf of medical office space would be provided, as well as a total of 90 below grade parking spaces. The building would be clad in a combination of copper and horizontal siding, as shown in Figure 2-12 and Figure 2-13. The building would be stepped back from L Street and Sutter's Fort. The building would have an average 33,000 sf floor plate, and would be approximately 82 feet to the top of the mechanical screen and roof and 86 feet to the top of the roof mounted cooling towers. The SMF Building would house medical offices and outpatient services, and would contain outpatient surgery suites, recovery beds, diagnostic imaging, cardiac rehabilitation and a small retail area (approximately 2,600 sf) on L Street. In addition, showers and lockers would be provided for staff and employees of the facility.

The existing 18,490 sf Energy Center, located at the northwest corner of Capitol Avenue and 29th Street would be removed (see Figure 2-10). The existing Energy Center currently provides all primary and emergency systems, including all heating and cooling, to SGH, the Buhler Building, and the Radiation, Oncology Center (ROC). The Energy Center includes boilers, emergency generators, liquid oxygen, chillers, and electrical transformers for the buildings listed above.

The new Energy Center would be located beneath the SMF Building adjacent to the below grade parking as shown in Figure 2-14. The new 24,644 sf Energy Center would provide power and house emergency generators, chillers, boilers, pumps and associated building systems components for the medical complex.

Air intakes for combustion air and exhaust stacks from the boilers and generators would be located along the west side of the Energy Center and would extend above grade. The new oxygen tanks would reside just north of the air intake protrusion about mid block where the alley exists today (see Figure 2-11). Fuel tanks would be located below grade north of the SMF Building beneath the new plaza area along L Street, as shown in Figure 2-11. The new tanks include an 11,000 gallon tank and a 3,000 gallon reserve tank.

Cooling towers for the new energy plant would be situated on the roof of the new SMF Building. The cooling towers would be approximately 27-feet tall and would be located on the roof of the SMF Building. The cooling towers are designed to minimize the release of steam or vapor.

In compliance with current code requirements, a concrete wall approximately 22-feet tall would be constructed along the north, south and west sides of the oxygen tanks. A 22-foot tall metal, louvered wall would be constructed along the east side of the oxygen tanks while a 10-foot tall concrete wall would be constructed around the transformer yard adjacent to the playground area.

Pedestrian Connections/Vehicle Access

Pedestrian and vehicular access to the SMF Building would be similar to that provided in the WCC, through a private drive and entryway running north/south between Capitol Avenue and L Street. The driveway would be located mid-block immediately to the west of the SMF Building with primary one-way vehicle access heading north off Capitol Avenue, as shown in Figure 2-11.



FIGURE 2-12
SMF Building, North Elevation

10828-02 **Source:** KMD Architects 2005

Sutter Medical Center, Sacramento





FIGURE 2-13
SMF Building, South Elevation

10828-02 **Source:** KMD Architects 2005

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- Relocation of Energy Center to SMF Basement (SOUTH)
- 2 Levels of Parking

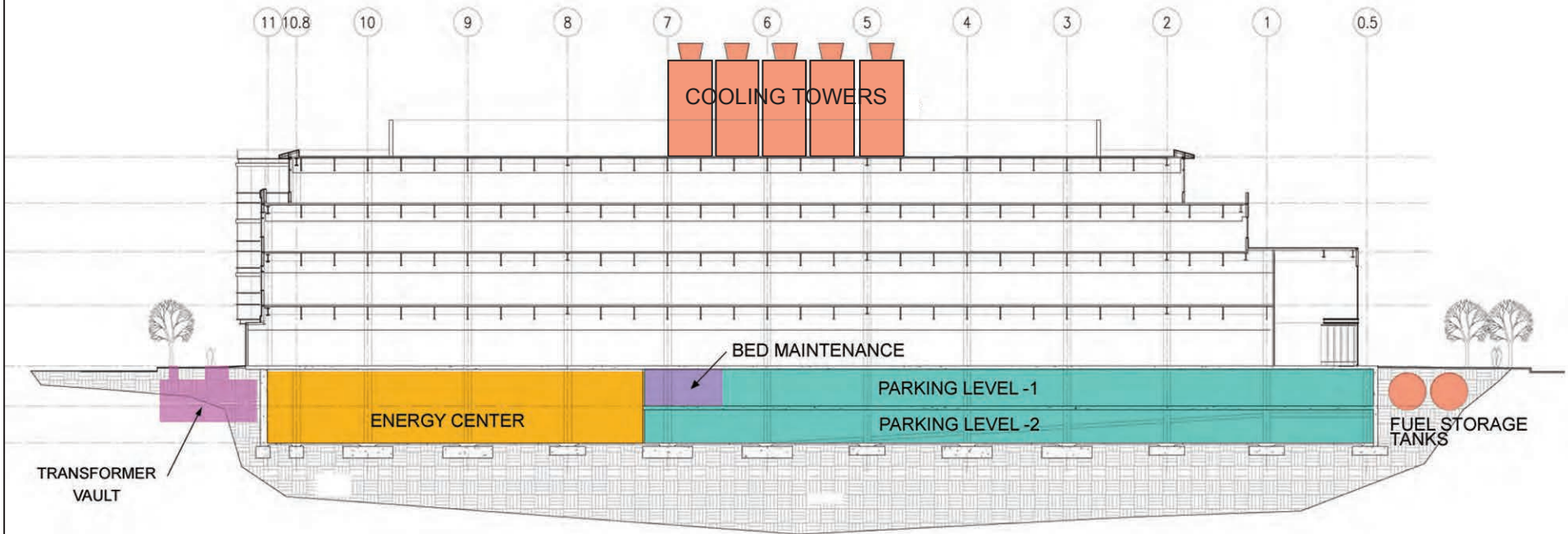


FIGURE 2-14
Cross Section of the SMF Building and Energy Center

Pedestrian access would be at the building's main entrance, located along the private drive or via entrances on 28th Street. A small retail space is proposed at the L Street entrance that could also provide access to the building. There would be an underground service tunnel underneath 28th Street that would connect the SMF Building with the Buhler Building and the WCC. In addition, an overhead pedestrian bridge at the second level of the SMF Building would span across 28th Street connecting the SMF Building with the Buhler Building. The western half of this block is not included within the SMCS project area.

Vehicular access to the SMF Building would be similar to the WCC. However, instead of parking under the freeway, visitors/patients would either be directed south on 28th Street to self-park in the new Community Parking Structure, described below, or be dropped off at the main entrance to the SMF Building where vehicles would be valet parked in the Community Parking Structure, shown in Figure 2-1. A total of 90 parking spaces would be provided in the basement level of the SMF Building.

Building Demolition or Relocation

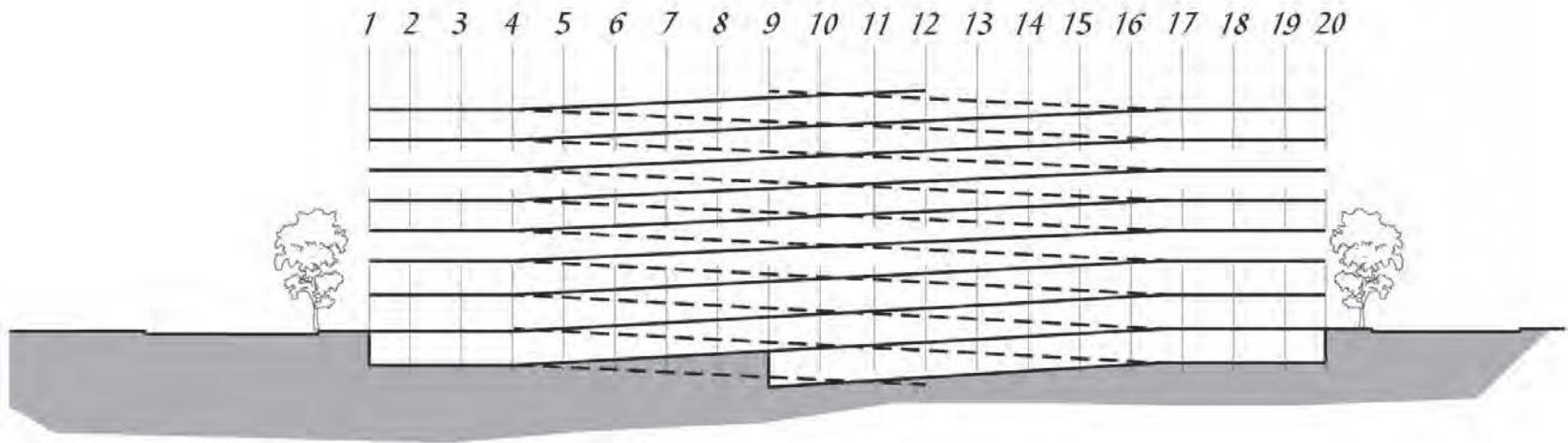
To accommodate construction of the SMF Building, the MTI office buildings located along 28th Street would be demolished. The House of Furs building would also be demolished if it is not relocated. The adjacent single-story office building currently used as a medical office, may be relocated by the tenant. If the structure is not relocated, it would be demolished to accommodate the SMF Building (see Figure 2-10).

Community Parking Structure and Commercial/Retail Space

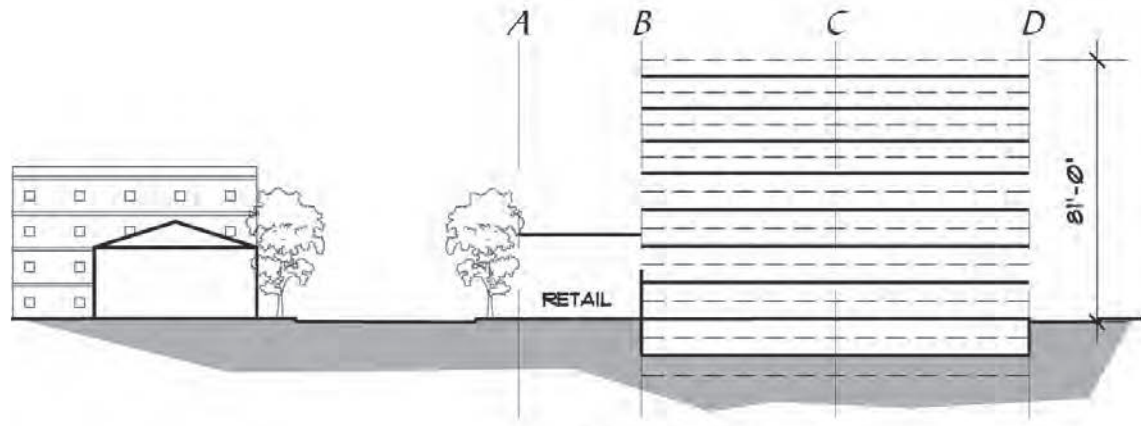
The Community Parking Structure would be located on the block south of the proposed SMF Building that currently contains two restaurants (Café Bernardo's and the Monkey Bar), Capitol Physical Therapy, the EAP Building, surface parking lots, and the Trinity Apartments, as shown in Figure 2-3.

The Community Parking Structure would be a total of 7 stories above-grade plus one level below-grade, as shown in Figure 2-15. The total height of the structure would be approximately 73 to 83 feet high. Figure 2-16 shows the approximate height and mass of the proposed parking structure. Although this illustration only includes a six-story above-grade parking structure, an additional floor would be added for a total of seven stories above grade. The structure would include a maximum of 1,100 parking spaces. The Community Parking Structure would provide parking for multiple uses including: patients and staff, restaurant patrons, retail customers and future patrons of the theatre facilities, as well as other businesses in the neighborhood and persons attending Trinity Cathedral. The Community Parking Structure is intended to replace surface parking currently provided on the site of the SMF Building, WCC, and the Community Parking Structure. In addition, the Community Parking Structure would be sized to accommodate the loss of parking currently located in the Old Tavern Parking Structure and the St. Luke's Parking Structure.

Access into the Parking Structure, as shown in Figure 2-17, would be off 28th Street and along 27th Street.



LONGITUDINAL SECTION
SCALE: 1" = 50'-0"



CROSS SECTION
SCALE: 1" = 50'-0"

FIGURE 2-15
Community Parking Structure, Building Cross Section

Scale 1" = 50'-0"



FIGURE 2-16
Community Parking Structure – Visual Simulation

10828-02 **Source:** McCarthy Construction to SMCS 2005

Sutter Medical Center, Sacramento



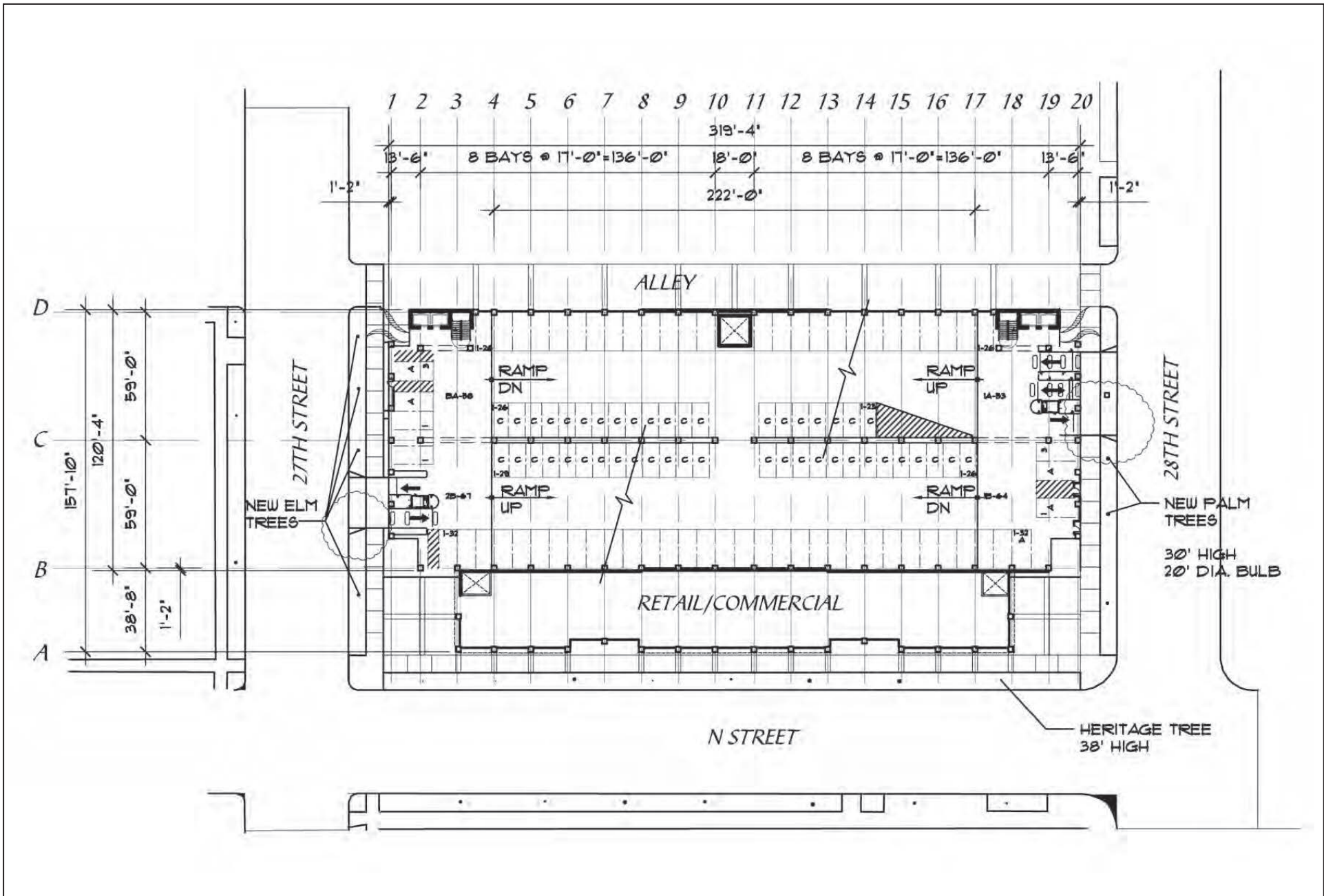


FIGURE 2-17
Community Parking Structure-Site Plan



10828-02

Source: Choate Parking Consultants 2005

Not to Scale



Sutter Medical Center, Sacramento

In addition, approximately 9,000 sf of ground floor commercial and/or neighborhood serving retail space is proposed along N Street, as shown in Figure 2-15.

Building Demolition

To accommodate development of the Community Parking Structure and other development proposed within this block, the existing Trinity Apartments (includes a total of 5 units) and EAP Building located along Capitol Avenue and 27th Street would be demolished and the surface parking areas removed. The restaurants and the physical therapy business would remain (see Figure 2-10).

Residential Development

The proposed residential development would be located on the southern half of the block west of the proposed Community Parking Structure and on the same block as Trinity Cathedral. The proposed residential units would be located where the existing St. Luke's parking structure is located, as shown in Figure 2-1. The proposed residential component would be developed by an entity other than SMCS.

A total of 32 residential units approximately 1,250 sf in size are proposed. Figure 2-18 shows a cross section of the proposed residences. The building would be stepped back to a height of two to three stories. Approximately 40 parking spaces would be provided. Ingress and egress into the units would be provided via the alley and N Street, as shown in Figure 2-19.

Building Demolition

To accommodate development of the residential units, the existing St. Luke's parking structure would be removed. The existing apartment buildings located to the east and west of the site would remain (see Figure 2-10).

St. Luke's Medical Office Building (Future MOB)

SMCS plans to demolish the existing 70,000 sf building and rebuild a smaller structure of approximately 35,000 sf of medical office space. The proposed Future MOB would be developed by an entity other than SMCS. The total square footage of the Future MOB would not increase the overall area from the existing building. A total of approximately 35 parking spaces would be provided below grade depending upon the size of the structure. The 35,000 sf is not inclusive of the proposed below-grade parking. Any remaining parking spaces needed for the Future MOB would be provided in the adjacent Community Parking Structure. It is anticipated an additional 89 spaces would be required in the Community Parking Structure to accommodate the parking needs of the building. The building would accommodate physicians who want to locate near the medical complex, but who do not require space immediately adjacent to SGH or the WCC. Figures 2-20 and 2-21 show the proposed site plan and conceptual building massing.



FIGURE 2-18
Proposed Residential on N Street-Cross Section

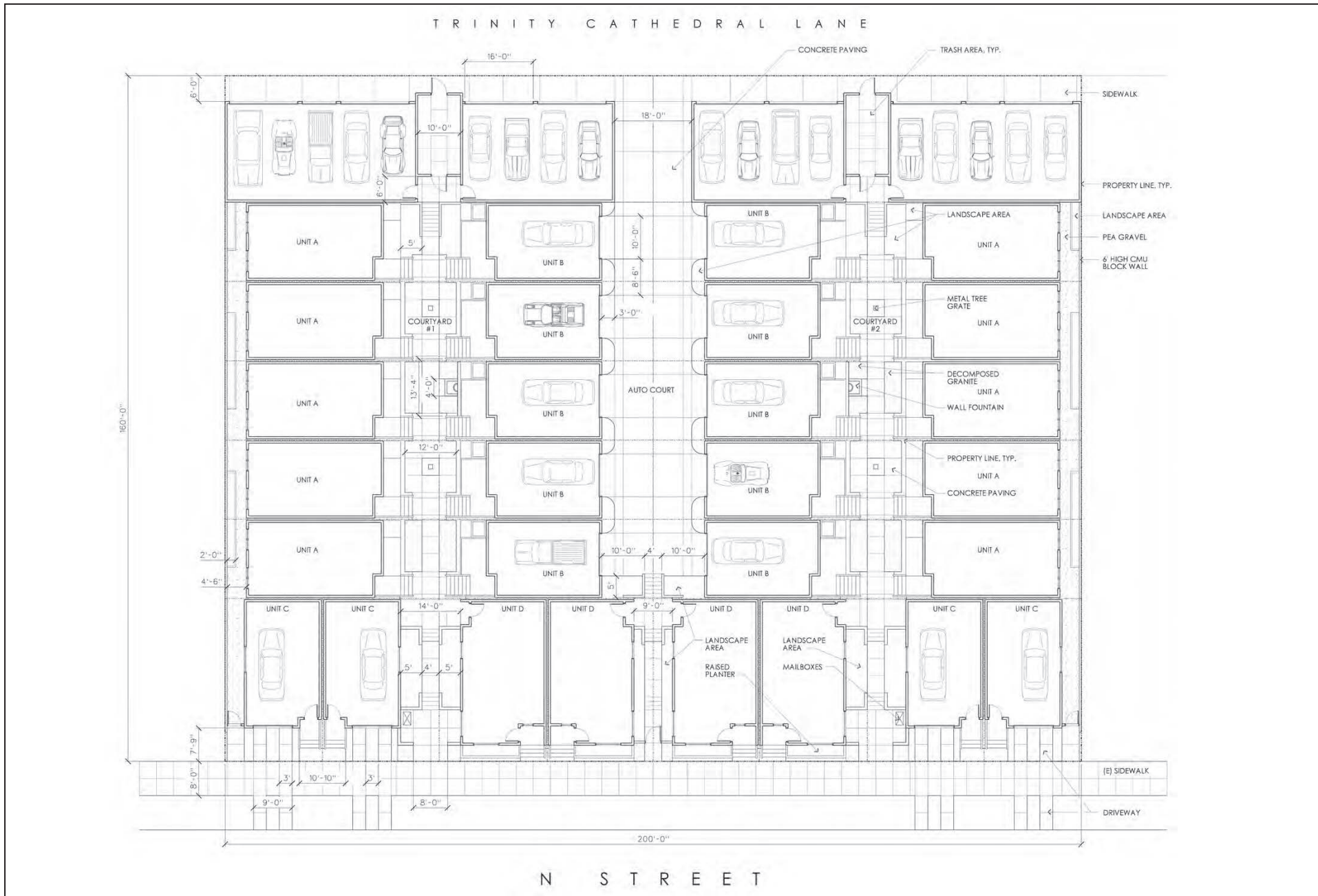


FIGURE 2-19
Residential Site Plan

Source: LPA Sacramento, Inc. 2005

Not to Scale



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10828-02

A total of 32 residential units approximately 1,250 sf in size are proposed. Figure 2-18 shows a cross section of the proposed residences. The building would be stepped back to a height of two to three stories. Approximately 40 parking spaces would be provided. Ingress and egress into the units would be provided via the alley and N Street, as shown in Figure 2-19.

Building Demolition

To accommodate development of the residential units, the existing St. Luke's parking structure would be removed. The existing apartment buildings located to the east and west of the site would remain (see Figure 2-10).

St. Luke's Medical Office Building (Future MOB)

SMCS plans to demolish the existing 70,000 sf building and rebuild a smaller structure of approximately 35,000 sf of medical office space. The proposed Future MOB would be developed by an entity other than SMCS. The total square footage of the Future MOB would not increase the overall area from the existing building. A total of approximately 35 parking spaces would be provided below grade depending upon the size of the structure. The 35,000 sf is not inclusive of the proposed below-grade parking. Any remaining parking spaces needed for the Future MOB would be provided in the adjacent Community Parking Structure. It is anticipated an additional 89 spaces would be required in the Community Parking Structure to accommodate the parking needs of the building. The building would accommodate physicians who want to locate near the medical complex, but who do not require space immediately adjacent to SGH or the WCC. Figures 2-20 and 2-21 show the proposed site plan and conceptual building massing.

Building Demolition

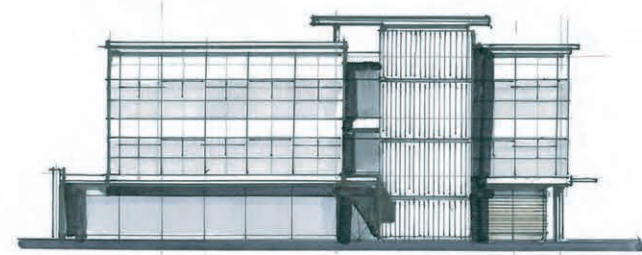
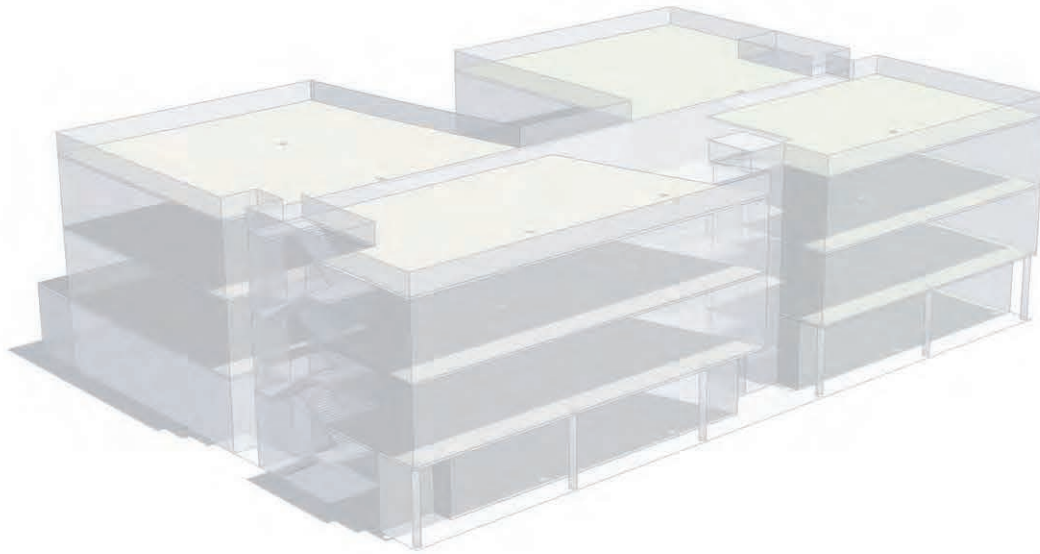
The existing St. Luke's Medical Office Building would need to be demolished to allow for construction of the new facility. The two apartment buildings located on either side of the parking garage would remain (see Figure 2-10).

Utility Improvements and Alley Utility Relocations or Alley Abandonment

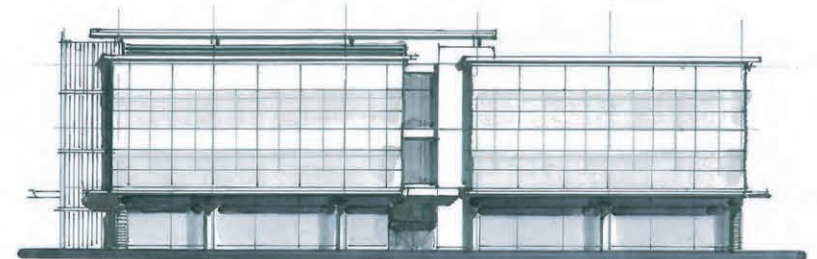
New Water, Sewer, Electrical and Utility Relocation

A number of utility improvements associated with the SMCS project components within the SMCS project area would be required to bring existing sewer, storm drainage, and water infrastructure up to current City code. In addition, upgrades would be made to existing electrical infrastructure.

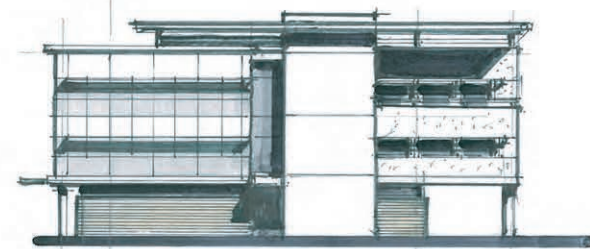
The following is a discussion of proposed utility improvements or relocations to be completed by SMCS as part of the SMCS project.



CAPITOL AVENUE



26TH STREET

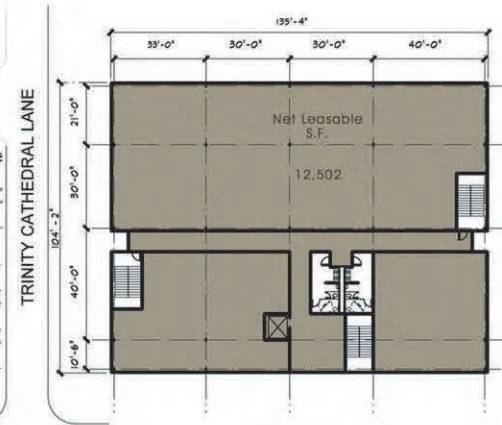


TRINITY CATHEDRAL LANE



26TH STREET
First Floor

Gross S.F. 11,636



Second Floor

Gross S.F. 14,007

FIGURE 2-20

Future Medical Office Building-Site Plan

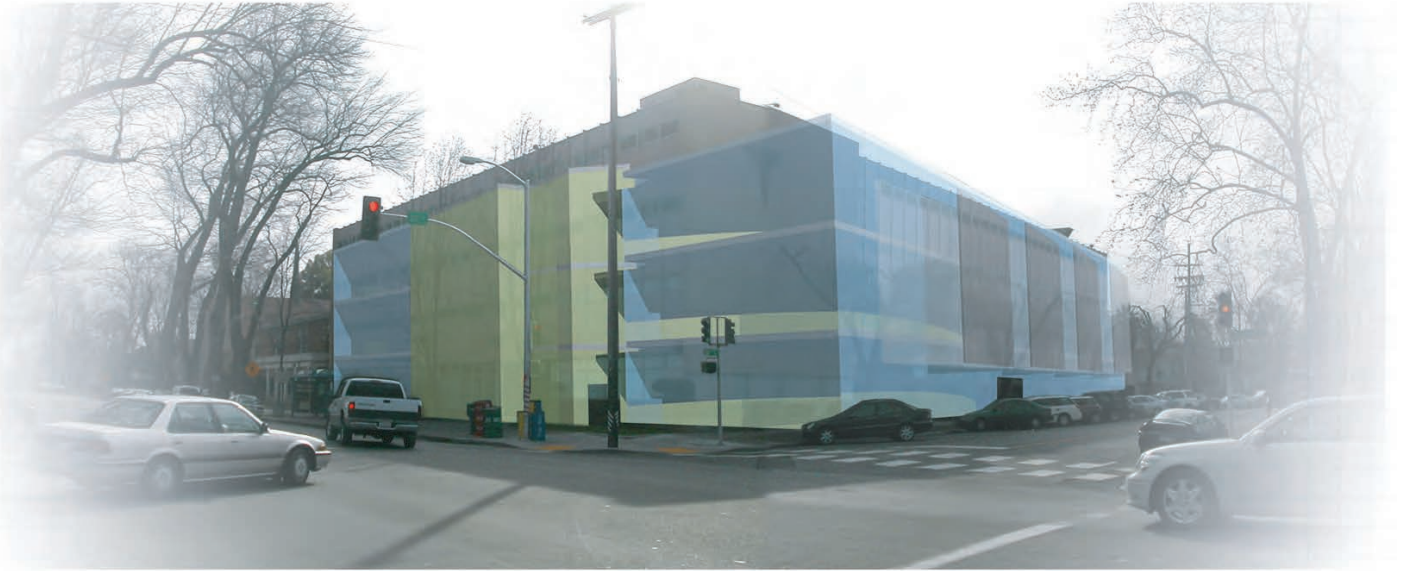
10828-02

Source: Lionakis Beaumont Design Group Inc. 2005

Not to Scale



Sutter Medical Center, Sacramento



3D Massing Concept



Site Context Photos

FIGURE 2-21
Future Medical Office Building, Conceptual Building Massing

Not to Scale

Building Demolition

The existing St. Luke's Medical Office Building would need to be demolished to allow for construction of the new facility. The two apartment buildings located on either side of the parking garage would remain (see Figure 2-10).

Utility Improvements and Alley Utility Relocations or Alley Abandonment

New Water, Sewer, Electrical and Utility Relocation

A number of utility improvements associated with the SMCS project components within the SMCS project area would be required to bring existing sewer, storm drainage, and water infrastructure up to current City code. In addition, upgrades would be made to existing electrical infrastructure.

The following is a discussion of proposed utility improvements or relocations to be completed by SMCS as part of the SMCS project.

Alley Utility Relocations or Abandonment on 28th/29th/L Street

To accommodate construction of the WCC, the eastern half of the alley that adjoins the Buhler Building surface parking lot is proposed for physical abandonment. The western half of the alley that adjoins the Buhler Building is proposed for a utility abandonment (see Figure 2-10).

The western half of the alley would remain as a service corridor for delivery services to adjacent buildings. All existing public utilities located within the alley would be relocated to adjacent streets. New water mains would be installed beneath 28th Street and 29th Street to replace the water main in the alley. The combined sewer system (CSS) would be relocated to 28th Street and Capitol Avenue and would connect to the 78-inch combined sewer proposed by the City in 29th Street. Electrical services would be relocated to Capitol Avenue and 28th Street. Once utility relocations are complete, existing pipes and conduits would be removed or changed to private service laterals, where required, to service existing or proposed development.

27th/28th/Capitol Avenue/N Street Alley

The alley in the Community Block that connects 27th and 28th Streets between Capitol Avenue and N Street is proposed for a utility abandonment (see Figure 2-10). The alley would remain as a service corridor for delivery services to adjacent buildings and to allow parking for Capitol Physical Therapy. All existing public utilities located within the alley would be relocated to adjacent streets. The existing CSS in the alley would be removed. The two buildings to remain along 28th Street (Monkey Bar, and Capitol Physical Therapy) would be connected to the proposed CSS in 28th Street. Electrical services would be relocated to Capitol Avenue and 28th Street. New water mains would be installed in Capitol Avenue, N Street and 27th Street to replace the water main in the alley. Once utility relocations are complete, existing pipes and

conduits would be removed or changed to private service laterals, where required, for existing or proposed development.

27th/28th/Capitol Avenue/L Street Alley

The eastern portion of the alley between 27th and 28th Street north of Capitol Avenue is proposed for physical abandonment, to accommodate construction of the new SMF Building (see Figure 2-10). The western half of the alley, behind Pioneer Church, would remain. The remaining alley would connect to a new private drive running north-south along the west side of the new SMF Building (see Figure 2-11). All existing public utilities located within the eastern portion of the alley would be relocated to adjacent streets. The City's CSS would be removed where in conflict with the new building. New water mains would be installed in 27th Street, 28th Street and Capitol Avenue to replace the water main in the alley. Electrical services would be relocated to Capitol Avenue. Once utility relocations are complete, existing pipes and conduits would be removed or changed to private service laterals where required for existing or proposed development.

Water

There are existing city water mains in all three alleys proposed for either physical abandonment or a utility abandonment. The SMCS project would include construction of a new 8-inch water main in 27th Street (from L Street to N Street), in 28th Street (from L Street to Capitol Avenue), and in 29th Street (from L Street to the alley between N Street and Capitol Avenue). The SMCS project would also include construction of new 12-inch water mains in Capitol Avenue and N Street from 27th to 28th Streets. All new water lines installed by SMCS would be sized and designed to meet City code requirements. New public fire hydrants would be constructed at the mid-block of every frontage street.

Combined Sewer System (CSS)

The City's CSS located in the alley behind the Buhler Building and the Old Tavern building is currently leaking and presents a potential health and safety issue. To address this issue, SMCS has received ministerial approval from the City to install a new 12-inch lateral from the alley south along 28th Street to Capitol Avenue, then east to 29th Street. This work is separate from the SMCS project in order to correct an existing problem. This relocated combined sewer would connect to the proposed 78-inch combined sewer to be constructed by the City in 29th Street. A new 12-inch combined sewer would be constructed in 28th Street from the alley north of N Street south to N Street. This sewer would serve existing buildings (Monkey Bar, Café Bernardo's and Capitol Physical Therapy).

Dry Utilities

Dry utilities, such as electricity, cable television, and communications, would be relocated as part of the alley/utility abandonments and proposed building construction to accommodate the SMCS project. New utility vaults would be located in 28th Street near the entrance to the alley. The utility vaults would be designed to meet City code requirements. Installation of these utility vaults could require the removal of two trees. The location and designs for the dry utilities would

be approved by the applicable utility company and coordinated with the design/build team. A "Joint Trench" Plan would be submitted to the City for approval. Utilities currently installed overhead in the alleys would be relocated underground in the streets.

Other Enhancements and Street Improvements

As part of the SMCS project, existing street curb, gutters, and sidewalks adjacent to new structures and site parking would be reconstructed to meet current City of Sacramento standards. In general, existing streets and related curbs, gutters, and sidewalks not affected by construction and not damaged during construction, would not be repaired or replaced.

The streetscape within the SMCS project area would also be enhanced. Streetscape features could include decorative paving, landscaping, and lighting upgrades, as well as improved way-finding signage and circulation assistance. Pedestrian street level circulation and other improvements are proposed along 28th Street between Capitol Avenue and L Street. Signage would be designed to meet the requirements set forth in the City's Midtown Signage program.

Landscaping/Lighting/Signage

Landscaping

Landscaping around the WCC would include trees, shrubs, and other plantings. Along L Street, some existing trees would need to be removed to accommodate the new building. Along Capitol Avenue, some trees would need to be removed to accommodate the new building and SMUD utility vaults. Along 29th Street, small trees would need to be removed. As shown in Figure 2-22, new trees would be planted along Capitol Avenue and 29th Street.

To accommodate construction of the SMF Building, two palm trees along 28th Street may need to be relocated within the overall project area subject to approval by the City arborist. New trees would be planted along L Street and 28th Street (see Figure 2-22).

Along the Buhler Building some of the existing Lombardy Poplar trees would be removed along L Street and 28th Street. New trees would be planted along L Street.

At this time, all existing trees adjacent to the Future MOB would be retained.

A total of six City designated Heritage trees are located within the project area. Some of these trees may need to be removed due to the health of the existing trees and/or construction of the SMF Building and Energy Center.

Legend		Notes	
	Trees to remain (67)	H	Heritage tree species: -Coast live oak -Canary Island date palm -English elm
	Trees to be removed (44)		New street tree species: -Manzanita -Coast live oak -Evergreen elm
	New street trees (14)		
H	Heritage trees (6)		

SUTTER'S FORT

SUTTER GENERAL HOSPITAL

PARKING STRUCTURE

BUHLER BUILDING

WOMEN'S AND CHILDREN'S CENTER

PARKING STRUCTURE

TAVERN BUILDING

SUTTER MEDICAL FOUNDATION BUILDING

FIGURE 2-22

Existing and Heritage Trees to be Removed and New Trees

Source: EDAW 2005

Not to Scale



Sutter Medical Center, Sacramento

Lighting

New street lights proposed within the SMCS project area would conform to the City's lighting standards. New street lights are proposed around each of the new project components. The lights would be spaced approximately 70–80 feet apart. At this time it is anticipated streetlights would be the acorn style lights found throughout the city.

Signage

Proposed signage for the SMCS project includes skyline, monument/directional, parking identification and building identification. The skyline signs would be located at the skyline level on the east and west sides of the WCC (see Figures 2-7 and 2-9) and the east side of the existing SGH. The signs would be approximately 5-feet tall by 100-feet long and would be illuminated. The monument signs would identify the SMCS complex buildings and would be located at major street intersections. The signs would be approximately 10-feet tall by 5-feet wide with information displayed on four sides. These signs would also be illuminated. The directional signs would be pole mounted and would be located at driveway entrances. The parking identification signs would identify parking areas for patients, visitors, and staff. Building identification signs are building mounted signs proposed at first floor levels to identify specific buildings. These signs would be approximately 12 to 24 inches tall and would include the specific building name and street address.

Other design elements include decorative paving and other streetscape amenities. Lighting and way finding would be consistent with the City's policies to promote safe vehicle and pedestrian access and egress into and within the SMCS complex.

SMCS Project - Circulation and Parking

SMCS Vehicular Circulation

The main regional vehicular access to the SMCS medical complex would continue to be via Capital City Freeway and 29th Street. Local access to the medical complex and throughout the area is provided via L Street, Capitol Avenue, N Street, K Street, 26th, 27th, 28th, and 29th Streets. Section 6.7, Transportation and Circulation, also addresses the potential conversion of L Street between 16th Street and 29th Street from one-way to two-way traffic, a project currently proposed by the City as part of the City's Two-Way Conversion Project.

To access SGH, Buhler Building, and the WCC, heading south on 29th Street, visitors/patients would have the option to either self-park in the public parking lot (south lot) under the freeway or be dropped off at the main hospital entrance (WCC) and have their vehicle valet parked. Pedestrian access to the WCC would be via a pedestrian bridge over 29th Street connecting the public parking lot (south lot) to the WCC. Once inside the WCC, signs would direct visitors/patients to SGH, Buhler Building or the SMF Building, which would all be connected via pedestrian bridges on the second level. Hospital staff would be directed to park in the north lot under the freeway or the Community Parking Structure. Access to the SMF Building would be similar to the WCC. Vehicles would access the SMF Building via Capitol Avenue. Visitors/patients would either be directed south on 28th Street to self-park in the Community

Parking Structure or be dropped off at the main entrance to the SMF Building where vehicles would be valet parked in the Community Parking Structure.

Ambulance access to SGH would remain on 29th Street, while general (ambulatory) emergency access would be via the modified existing public drop off along the north side of L Street into SGH. No emergency access is planned for the new WCC.

Delivery service access to SGH, the new SMF Building, the new WCC, and the Buhler Building would remain off L Street. SMCS currently receives frequent deliveries into the existing basement loading docks under SGH with a total of ten to fifteen deliveries per day. This existing loading dock has several design limitations that would be corrected to allow for deliveries from smaller trucks that would transfer goods from the recently established off-site warehouse, which receives the majority of deliveries.

Existing bicycle cages and bike racks are located in the north and south parking lots under the freeway and these facilities are proposed to remain. In addition, bike racks would also be provided at the Community Parking Structure. A Transportation Systems Management Plan (TSMP) has been prepared and approved by the City as part of this project (see Section 6.7, Transportation and Circulation for details). In addition, SMCS has recently implemented a free shuttle service for employees and staff from SGH and the Buhler Building to the light rail station located at 29th and R Streets. This shuttle service is also available to the general public. After several months of operation, the shuttle service has gradually been increasing ridership and is becoming more widely known and used by SMCS employees.

SMCS Parking

Current available parking to serve the existing SGH, Buhler Building, and adjacent office buildings is shown below in Table 2-4. Table 2-5 identifies new parking to be provided as part of the SMCS project. Parking for the WCC would be provided at either the north lot under the freeway for hospital staff or in the south lot under the freeway for visitors and patients. A pedestrian bridge would connect the south lot to the WCC. SMCS would also provide valet parking for patients arriving at the WCC. A total of approximately 54 spaces in the SMF Building would be dedicated doctor parking along with approximately 80 spaces in the north lot under the freeway.

Parking for the SMF Building would be provided in the Community Parking Structure. The same as the WCC, SMCS would provide a valet parking program for patients visiting the SMF Building. Under an agreement with Pioneer Church, a total of 36 parking spaces under the SMF Building would be allocated for employees of Pioneer Church for use during the week while all 90 spaces would be available for church patrons during weekend services. The remaining 54 spaces under the SMF Building would be reserved for doctor parking.

Parking to serve the new commercial/retail uses to be constructed adjacent to the Community Parking Structure would be provided in the Community Parking Structure. Under an agreement with Trinity Cathedral, a total of 25 parking spaces would be allocated for employees of Trinity Cathedral for use during the week. Staff of the proposed Children's Theatre of California would also have access to 60 spaces for use during the day once the Theatre is constructed.

Table 2-4
SMCS – Existing Parking

Location	Existing Parking (number of spaces)	Current Users
Under Freeway ¹ – North Lot	681	SGH staff, doctors, visitors, patients
Under Freeway ¹ – South Lot	686	SGH staff, doctors, visitors, patients
SGH	55	Doctors
Old Tavern Garage	137	Tenants, visitors, restaurants
Buhler Bldg surface spaces over ROC	28	Patients
Paragary's (community block) surface lot ²	142	Restaurants, Trinity Cathedral
St. Luke's parking garage	30 ³	Tenants in St. Luke's, Trinity Cathedral
Green Lot	32	Sutter administrative office staff
EAP Building	15	Office staff
MTI Building(s)	5	Office staff
Private medical office	21	Patients, staff
Pioneer Lot	32	Pioneer Church, school
Trinity Apartments	13	Residents
TOTAL	1,877	

Notes:

- As shown in Figure 2-1.
- Parcels where the proposed Community Parking Structure is to be located.
- The upper two floors of the 249-space garage are closed due to safety concerns. The first level is used for tenant parking and church parking on Sundays. Based on a recent parking count a total of approximately 25-30 cars are parked on the first level of the garage during the weekdays; therefore, the full 249 spaces were not included in the existing parking.

Source: The Hoyt Company, July 14, 2003; SMCS 2005.

Table 2-5
SMCS – Proposed Parking Additions

Location	Parking (number of new spaces)	Proposed Users
Under Freeway – North Lot ¹	35	SGH/WCC staff, doctors
Under Freeway – South Lot ¹	70	SGH/WCC visitors, patients
SMF Building ²	90	SMF doctors, Pioneer Church employees
Future MOB	35	Medical office staff, patients
Community Parking Structure ³	1,100	SMCS staff, visitors, patients, restaurant, theater, Trinity Cathedral, Future MOB
Residential	40	Residents
TOTAL	1,370	

Notes:

- These parking facilities currently exist and provide parking for employees, visitors, and staff (see Figure 2-1). Additional parking capacity will be gained by restriping the lot. Approximately 80 spaces in the north lot are reserved for doctor parking.
- A total of 36 spaces would be allocated for Pioneer Church employees with the remaining 54 spaces reserved for doctor parking.
- A total of 25 spaces would be allocated for Trinity Cathedral employees.

Source: Sutter Master Plan Office, KMD circulation graphic, November 2004; SMCS 2005.

Parking to serve the proposed residential units would be provided in the approximately 40 spaces to be provided on-site.

Parking for the Future MOB would be in the 35 spaces proposed below grade as well as in the Community Parking Structure.

Table 2-6 provides an overview of the net difference in parking to be provided by the SMCS project. The existing 249-space St. Luke's parking structure is not counted towards existing parking because a majority of the structure is not available for parking. The upper two floors are closed due to safety concerns and therefore not available. The first level is used for parking during the week where only a small number of cars have been observed. For all practical purposes, the garage is not available for parking and is therefore not considered part of the existing parking supply. As shown in Table 2-6, a total of 890 net new parking spaces would be provided.

Table 2-6

Net Difference between Existing and Proposed Parking

Location	Total Existing Parking	Proposed New Parking	Total Proposed Parking	Net Difference
Under Freeway North Lot	681	35	716	35
Under Freeway South Lot	686	70	756	70
SGH	55	0	0	(55)
Old Tavern Garage	137	0		(137)
Buhler Building	28	0		(28)
Paragary's surface lot	142	0		(142)
St. Luke's parking garage ¹	0	0		0
Green Lot	32	0		(32)
EAP Building	15	0		(15)
MTI Buildings	5	0		(5)
Private medical office	21	0		(21)
Trinity Apartments	13	0		(13)
Pioneer Lot	32	0		(32)
SMF Building	0	90	90	90
Future MOB	0	35	35	35
Community Parking Structure	0	1,100	1,100	1,100
Residential	0	40	40	40
TOTAL	1,847	1,370	2,737	890

Notes:

1. Due to the substandard condition of the garage it was not counted towards the existing parking supply.

Source: SMCS, 2005; EIP Associates, 2005.

The City of Sacramento has established a 35 percent alternative transit mode goal that requires all new development that employs over 25 employees prepare a Transportation Systems Management (TSM) Plan (Ordinance 88-082). The City-required TSM Plan is required to establish specific measures designed to promote alternate commute modes to reduce the total number of vehicle trips associated with commuting. Reducing the number of automobile trips is

an important component to help improve air quality, minimize traffic congestion on area roadways, and reduce parking demand.

As part of the SMCS project, the following TSM and Parking Demand Management program is designed to ensure adequate parking is provided to serve the population of all the SMCS project components including patients, visitors, and employees.

SMCS TSM and Parking Demand Management Program

The SMCS TSM and Parking Demand Management program has an established goal of reducing single occupancy vehicle use. A further goal of the TSM and Parking Demand Management program would ensure that the SMCS parking supply meets project parking demand. The key elements of the TSM and Parking Demand Management program are described below.

Existing and Proposed TSM/Parking Demand Management Measures

Previous Alternative Commute Program Elements

SMCS, which includes Sutter Memorial Hospital, SGH, and the Buhler Building, currently implements an Alternative Commute Program. At the time the SMCS buildings were constructed the City did not have a TSM requirement. The current Alternative Commute Program includes the following program elements:

- Free carpool parking (for SMCS employees who carpool together);
- Free occasional parking for those who are full-time alternative commuters;
- Free Compressed Natural Gas (CNG) shuttle program (connecting with SGH and the 29th Street light rail station and SGH and Sutter Memorial Hospital);
- Multiple transportation kiosks (schedules, maps, resources, commute information);
- Employee orientation presentations;
- SMCS Commute Program web page;
- SMCS Employee Rideshare tri-fold brochure;
- SMCS Commute Program Quick Reference Guide for all departments;
- Monthly articles in Sutter Insights employee newsletter;
- Participate with SMCS Wellness Fair and annual Benefits Program.

City-Required SMCS TSM Plan

In compliance with Ordinance 88-082, SMCS prepared a TSM Plan for the SMCS project. The City approved the most recent version of the SMCS TSM Plan in April 2005. The current TSM Plan is designed to encourage other modes of travel including transit, carpools, bicycling and walking thereby reducing the number of automobile trips. The following commute program elements were designated as TSM measures in the TSM Plan required by the City listed below:

- Half-time designated, on-site Employee Transportation Coordinator (ETC);
- Membership in Sacramento Transportation Management Association (TMA);
- 50% subsidy for transit users (Sacramento Regional Transit, Roseville Transit, Capitol Corridor, Yuba-Sutter Transit, San Joaquin Transit, El Dorado Transit, Yolo Transportation, Fairfield/Suisun Transit, Amador Regional Transit, Galt Transit, etc.);
- On-site Transit pass and vanpool vouchers sales at Cashiers Office;
- 50% subsidy for vanpool participants;
- Class I and II bicycle facilities;
- Showers and clothes lockers;
- Personal Matching Assistance (via www.sacregion511.org and SMCS ETC) for carpool/vanpool and bicycle partner matching;
- Flextime;
- Designated carpool/vanpool parking spaces;
- Preferential carpool/vanpool parking locations;
- Guaranteed Ride Home program; and
- On-site amenities (ATM banking, fitness facilities, cafeteria and food vending services, sundry/gift shop, etc.).

Additional TSM/Parking Demand Management Program Elements Added for the Proposed Project

Additional measures included in the TSM Plan to be implemented after project completion:

- 100% transit subsidy (up to \$60 per month) – increased from 50%;
- Class I bicycle lockers – 24 lockers provided in north lot and 7 lockers in Community Parking Structure;
- Class II bicycle racks – 31 racks at entrances of WCC, SMF Building and Community Parking Structure;

- Showers and lockers – 11 showers and 136 clothes lockers;
- Preferential Parking – designate 10% (62 spaces) for carpool/vanpool/cleaner fuel vehicles; and
- Annual Employee Commute Survey – one year after occupancy.

Potential Future TSM/Parking Demand Management Enhancements

Additional TSM measures, listed below, would also be available to incorporate into the project as the SMCS project builds out. These additional measures would be added to the TSM Plan if it is determined, through the monitoring program, that further steps are required to reduce vehicle trips to either meet the City's 35 percent alternative mode requirement or to reduce parking demand in order to meet available parking supply.

- 100% monthly transit or vanpool subsidy (up to \$80) – to provide greater subsidies for regional transit and vanpool users;
- Monthly Cash Commute Alternative Allowance (bicyclists, walkers, roller blades, scooters, etc.);
- Periodic (quarterly) financial incentives or prizes for active alternative commuters (walking shoes, bicycle gear, tune-ups, movie tickets, etc.);
- Adjust/increase parking rates to be flexible and competitive with other hospital market rates;
- Develop electronic in-house ride-matching service for employees to carpool with other employees. Electronic kiosks to be placed at Transportation Information Boards;
- Track shuttle riders via driver-provided punch cards and offer cafeteria, café, coffee, cookie or other on-site discount for every 10th shuttle trip;
- On-site annual comprehensive Transportation (Spare the Air) Fair; and
- Allow per diem employees to participate in 100% (up to \$80 per month) transit pass program;
- Provide community telephone hotline for transportation and parking issues.

SMCS TSM Monitoring and Reporting Program

The SMCS TSM/Parking Demand Management Monitoring and Reporting program includes annual monitoring and reporting to track program success. An Annual Monitoring Report will be submitted to the City by SMCS each year. The first Annual Monitoring Report will be submitted to the City within 6 months of project approval. The Annual Monitoring Report will be made available for public review through the City of Sacramento, and through the City and SMCS websites.

The monitoring program will be designed to provide information that will help improve and fine tune the TSM/Parking Demand Management measures and will demonstrate to the City and the community the effectiveness of it's the SMCS TSM/Parking Demand Management program. One of the primary goals of the TSM program is to ensure that available parking is provided for users of the SMCS project components. The monitoring program will document the project-related parking demand, available parking in SMCS parking lots, and participation of employees in the TSM Plan. The monitoring program will include the following elements:

- SMCS will monitor and report the total SMCS daytime population, including employees, patients, visitors, vendors, etc. that access SMCS facilities;
- SMCS will monitor and report the available parking supply; and
- SMCS will monitor and report the project parking demand and employee participation in the TSM/Parking Demand Management program (e.g., transit passes, use of van pools and car pools, etc.).

Parking Resolution

If through the monitoring program it is determined that the SMCS project demand exceeds available supply of parking, measures will be implemented by SMCS to reduce demand and/or increase available supply. Additional TSM/Parking Demand Management measures, described above, will be implemented, as necessary, to reduce parking demand to the extent necessary to meet available supply. In the event that SMCS parking demand exceeds available parking supply after reasonable efforts are undertaken to expand participation in the TSM/Parking Demand Management program, SMCS will increase available parking supply through the acquisition of off-site employee parking that will be connected to SMCS facilities through a shuttle system.

Locations where off-site parking could be provided cannot be specifically identified at this time because the project would be built out over a five to six year period during which the TSM/Parking Demand Management program would be incrementally expanded as necessary. Nonetheless, in an effort to verify the availability of potential off-site parking locations for employee parking, SMCS has researched numerous sites in the Highway 99 corridor south of the project area. Within a distance of less than five miles, SMCS has identified fifteen potential sites that would allow for remote parking, ease of access to Highway 99, and a direct route to the project area by either a shuttle or, in some cases, light rail. The sites range in size from approximately 150 to 250 spaces. If acquiring off-site parking becomes a necessity, SMCS would consult with the City to narrow the number of potential sites. While it is anticipated that existing parking lots would be acquired and used by SMCS for off-site parking (thus, continuing an ongoing use of the site), if additional environmental review is required for improvements to off-site lots or operation of parking shuttles, it will be conducted when specific off-site parking sites are proposed.

SMCS Employment Population

Development of the WCC and the SMF Building would increase employee count within the SMCS complex by approximately 1,394 employees to about 2,633 employees, from a total of approximately 1,237 employees at SGH, the Buhler Building and other Sutter offices. Because hospital operations occur over a 24-hour period, seven days a week, all SMCS employees are

not on the campus at one time. Table 2-7 provides a detailed breakdown of employees on-site by shift and building.

**Table 2-7
Existing and Proposed SMCS Employees**

Existing Number of SMCS Employees						
Shifts¹	SGH/BB/ Old Tavern	MTI²	WCC	SMF	St. Luke's	Total
Day	891	2				893
Evening	221					221
Night	125					125
Total	1,237	2	0	0	0	1,239
Proposed Number of New SMCS Employees						
Day	829		726	280	TBD	1,835
Evening	208		320	0	0	528
Night	124		146	0	0	270
Total	1,161	0	1,192	280	TBD	2,633⁴

Notes:

- Day shift is from 7am to 3pm; evening shift is from 3pm to 11pm; night shift is from 11pm to 7am.
 - The MTI buildings are slated to be removed as part of the project.
 SGH = Sutter General Hospital.
 BB = Buhler Building.
 MTI = Medical office buildings owned by Sutter.
 WCC= Women's and Children's Center.
 SMF= Sutter Medical Foundation Building.
 - St. Lukes Medical Office Building has only three non-SMCS tenants.
 - SMCS total employee count is larger due to part-time status and off-site/off-campus locations.
- Source: SMCS, September 2003; SMCS 2005.

In 2003, the average number of visitors and patients accessing the parking structures between 7:00 a.m. and 4:00 p.m. for SGH was approximately 880 vehicles entering the parking structures with over 640 vehicles exiting. On average, over 150 patients per day used the hospital drop off.²

Modifications to Existing Buildings

In addition to the spanning structure and the pedestrian bridges discussed above, below-grade tunnel connections would be enhanced and additional tunnels would be constructed to allow materials and service staff to circulate throughout all SMCS buildings effectively and efficiently. This includes construction of a tunnel between the Buhler Building and SGH under L Street and another under 28th Street to connect the Buhler Building and the SMF Building. These tunnels would be used by plant operations staff and for medical service/support. There would be no public access to the tunnels.

² Memo from Bob Grandy to Steve Pyburn, City of Sacramento, June 13, 2003.

Removal of the parking garage, immediately adjacent to the east side of the Old Tavern Building to accommodate construction of the new WCC, would require the existing wall of the Old Tavern Building to be stabilized and repaired to match the existing wall.

SMCS Project Components Addressed at a Programmatic Level

Children's Theatre of California/ B Street Theatre

This EIR includes a programmatic analysis of impacts associated with future development of the Children's Theatre of California/B Street Theatre on the block bounded by Capitol Avenue and N Street and 27th and 28th Streets (see Figure 2-1). The proposed Theatre would be developed by an entity other than SMCS, and would be subject to additional environmental review during the processing of development entitlements.

At this time, the Children's Theatre of California envisions an approximately 51,000-square-foot building with two separate theatres that would include a total of 565 seats. The main theatre (Children's Theatre) would include 365 seats, with one additional theatre (B Street Theatre) that would include 200 seats.

The Children's Theatre of California and the B Street Theatre anticipate putting on a total of 11 plays per year, with each play running a total of six weeks. Show times for the B Street Theatre would be evenings Tuesday through Saturdays and afternoon matinees on Wednesdays and Sundays. The Wednesday afternoon matinees would start at 1:00 p.m. and be over by 3:00 p.m. Show times for the Children's Theatre would be morning matinees Tuesdays through Fridays and afternoon performances Saturdays and Sundays. The Children's Theatre would have performances concurrent with the school year, September through June.³

Additional SMCS Improvements

The following improvements have previously been subject to review and approval by the City of Sacramento and would be implemented independent of the SMCS project. No additional discretionary City approvals are required for these projects.

Renovation of the Existing Sutter General Hospital and Buhler Building

SGH Renovations

The existing SGH would be renovated extensively throughout to accommodate services now provided at SMH. While the external size of the building would not be increased, renovations would allow the useable area within SGH to increase from 351,000 sf to 422,300 sf. The increase of 71,300 sf of space in SGH has previously been evaluated in the EIR prepared for SGH in 1984. Based on existing available parking, adequate parking is available to ensure

3 Information provided via email from Dina Howard, Managing Director B Street Theatre, 2004.

parking demand associated with this renovation would not contribute to the parking demand associated with the SMCS project. The reallocation of space includes the following:

- Cardiovascular Services – The SGH renovation would unify all cardiac care on one floor of the hospital, including construction of four new surgical suites, as well as six new cardiac catheterization laboratories. The surgical intensive care unit, directly adjacent to the surgical suites, would be modified and renovated. In addition, new facilities for pre-operative and post-operative care would be built with a particular emphasis on the needs of pediatric cardiovascular surgery patients and their families. The majority of the fourth floor of SGH would house the telemetry rooms for patients coming from the Intensive Care Unit.
- Pediatric Emergency Department Services – Pediatric patients and their families would receive care in a special 10-room section of the emergency department, separate from adult services. Six rooms in the Pediatric Emergency Department would be devoted to emergency services and four to “Fast Track” which expedites hospital admissions and for patients requiring care, but preserves emergency room capacity.
- Observation Rooms – These rooms would provide places to wait when the emergency medicine team needs to run additional tests or for patients waiting for test results. Additionally, in instances where it is necessary to preserve capacity in the emergency department, the observation rooms would provide an alternate location where patients can continue to be observed and stabilized until the necessary information is developed to make specific treatment and care decisions.
- Diagnostic Imaging Services – Diagnostic imaging would be located within the emergency department.
- Increased number of private rooms – Would provide privacy for an additional number of patients, families and their caregivers.
- Expanded Neurology Observation Unit – The new neuro-observation unit would provide a total of 10 private rooms (net increase of four).
- Surgical Intensive Care Unit – The renovation would provide patients with more spacious rooms.
- The cafeteria and kitchen facility in SGH would be relocated to the new WCC, and that space would be redesigned to include space for nursing administration, human resources, and other administrative functions.

Landscaping

As part of the SGH improvements new landscaping is proposed around the building. This includes potentially removing nine trees along L Street. A total of three new trees would be planted. Along 28th Street, a total of four existing trees would need to be removed to accommodate a better visual and physical connection between SGH and Sutter’s Fort. Six trees along K Street and 29th Street would be removed to accommodate the improvements, but all six trees would be replaced. All new trees and landscaping would be selected in consultation with City staff.

Buhler Building

Approximately 50,000 sf of administrative and medical office space in the existing 7-story Buhler Building would be renovated to achieve more efficient use of the available space. This internal construction is anticipated to be completed in phases to begin in early spring 2006.

SMCS Construction Timing/Phasing

It is anticipated construction of the SMCS project would begin in 2006 and be completed by late 2010, subject to jurisdictional approvals. However, this schedule is preliminary and subject to change as each component of the project moves forward. The following provides a breakdown of the anticipated construction schedule for each component of the SMCS project. A more detailed breakdown is provided in Table 2-8 which shows a graph of the proposed construction schedule.

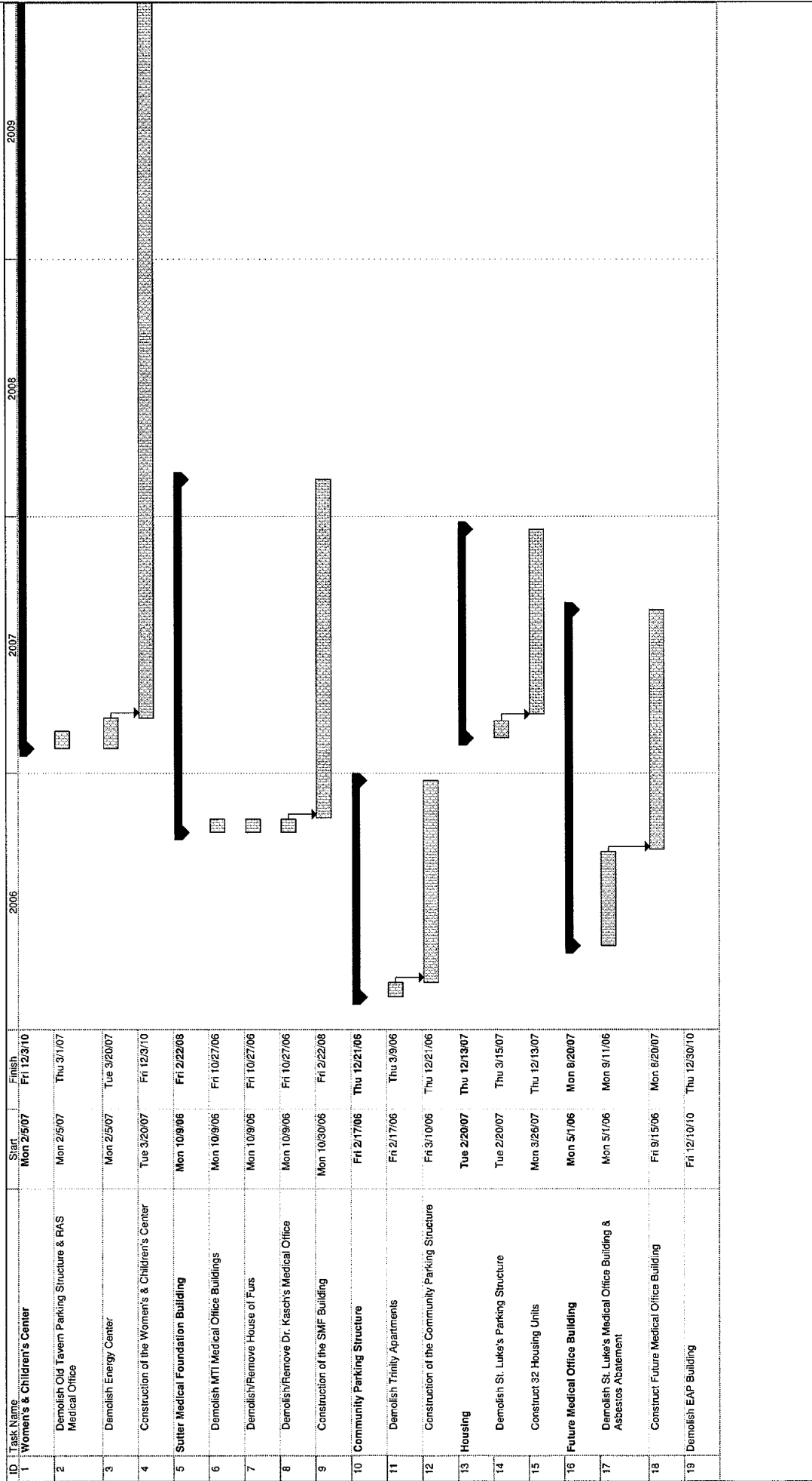
- Construction of the WCC would start in early spring 2007 and be completed by late 2010, subject to City and OSHPD approvals.
- The SMF Building and Energy Center would begin construction in fall 2006 and be completed by early spring 2008.
- The Community Parking Structure and associated commercial/retail space would start construction in spring 2006 and be completed by late 2006.
- Construction on the 32 residential units would begin in early 2007 and be completed by the end of 2007
- Construction of the Future MOB is scheduled to begin in early summer 2006 and be completed by late summer 2007.
- Installation of required utilities would be coordinated with the construction of each project and would occur between 2006 and 2009.

SMCS Construction Parking Plan

Table 2-9 provides a breakdown of available parking during project construction. According to the construction schedule (see attached Table 2-8), construction of the WCC and the SMF Building would not begin until the Community Parking Structure is completed. A total of 2,096 parking spaces are currently available to serve visitors, patients, and staff of the SMCS, as well as residents and patrons to the various restaurants and businesses in the area. As shown in Table 2-9, once construction is complete a total of 2,737 spaces would be available to serve visitors, patients, staff, residents and patrons to the area.

During construction activities, materials and equipment would be stored and staged in the northeast corner of the Community Block. The EAP Building, owned by SMCS, would be used by the construction company during construction activities. It is anticipated this building would be demolished at the end of the project.

**SMCS Project Construction Schedule
Table 2-8**



SMCS Project Approvals and Approval Process

The construction of new facilities, either the SMCS project components or the Trinity Cathedral project, that require specific planning or building entitlements from the City of Sacramento would entail Design Review/Presentation Board review and approval, Planning Commission review and approval, and City Council review and approval.

Table 2-9

SMCS – Summary of Parking during Construction Activities

Construction Activity/Existing Parking	Parking to be added/removed	Total Parking ¹
January 2006		
Construction of the Community Parking Structure (remove existing surface parking)	(142)	1,735 ¹
Demolish Trinity Apartments	(13)	1,722
Remove SGH parking	(55)	1,667
February 2006		
Redesign North Freeway (SMCS staff parking) lot	35	1,702
October 2006		
Remove Green Lot (corner of L and 28 th Streets)	(32)	1,670
Demolish MTI Buildings	(5)	1,665
Remove private medical office	(21)	1,644
Remove Pioneer Lot	(32)	1,612
December 2006		
Community Parking Structure completed	1,100	2,712
Construction of the Women's and Children's Center (remove existing Buhler Building surface parking)	(28)	2,684
Demolish Old Tavern parking structure	(137)	2,547
February 2007		
Redesign South Freeway (Visitor) lot	70	2,617
Residential units complete	40	2,657
July 2007		
Future MOB below grade parking complete	35	2,692
May 2007		
Demolish St. Luke's parking structure	(30)	2,662
February 2008		
SMF below grade parking complete	90	2,752
Removal of the EAP parking	(15)	2,737 ²

Notes:

1. As shown on Table 2-4, there are a total of 1,877 spaces currently available (including the north and south lots under the freeway).
2. The total number of spaces includes removal of the 15 spaces for the EAP building which would be removed once the theatre begins construction.

Source: SMCS, 2005.

It is anticipated that the following project approvals would be required by the City of Sacramento for the SMCS project:

- General Plan Amendment;

- Community Plan Amendment;
- Rezone;
- Special Permit (Height variance - Alhambra Corridor; Setback variances);
- Lot Line Adjustment/Partial Mergers or Tentative Subdivision map;
- Public Right-of-Way Abandonment/Vacations;
- Alley and Utility Abandonments/Vacations;
- Special Permit - Major Project;
- Special Permit – Helistop;
- Special Permit – Tandem parking;
- Ministerial level City permits, including building permits.

In addition to the above City approvals and entitlements, implementation of the SMCS project could require approval from the following State and local agencies prior to construction. Note that additional permits from other agencies may be identified during preparation of the EIR.

- County of Sacramento, Environmental Health Department - Will issue permits for kitchen facilities.
- State Department of Health Services (DHS) - Will issue license to operate New Hospital.
- Office of Statewide Health Planning and Development (OSHPD) - Will issue building permit for the New WCC, SMF Building and Energy Center and SGH renovations.
- Federal Aviation Administration (FAA) - Will review flight path and prepare an Airspace Determination for helicopter.
- Caltrans Division of Aeronautics (DOA) - Will review flight path and helistop location and issue a heliport permit.
- Sacramento Area Council of Governments (SACOG) - Airport Land Use Commission will review helistop to ensure consistency with regional airport plans.
- Sacramento Metropolitan Air Quality Management District (SMAQMD) - Will issue a permit to operate required for any commercial and office uses.
- State Water Resources Control Board - Will issue a Construction Storm Water Discharge permit.

TRINITY CATHEDRAL PROJECT

The Trinity Cathedral site is located within the SMCS project area. The Trinity Cathedral site is on the north-east portion of the block bounded by 26th and 27th Streets and Capitol Avenue and N Street. The Trinity Cathedral is adjacent to the St. Luke's Medical Office building to the west, and the Trinity Cathedral Lane (alley) to the south (see Figure 2-1).

Construction of the Trinity Cathedral project would occur in two phases. The first phase would include construction of the new Cathedral while the second phase would include construction of the adjacent meeting rooms and administrative space. The project applicant is seeking development entitlements at this time to construct both phases of the project.

Trinity Cathedral Project Background

The Trinity Episcopal Cathedral has occupied the current site at the corner of 27th Street and Capitol Avenue since 1898. The original 1898 structure was built primarily of wood. In the 1950s, the original structure was removed because the congregation had outgrown the building and there were concerns regarding its structural stability. The brick structure that is present today was constructed in 1955 in response to the needs of a growing congregation.

Trinity Cathedral is the headquarters or “see” of the Episcopal Diocese of Northern California, which includes 72 missions and parishes in a territory encompassing all of Northern California outside of the Bay Area. In the last five years, the Cathedral leadership has recognized that the size of the existing facility limits the programs and services offered to the Sacramento community by the Cathedral, as well as the continued ability for the Cathedral congregation to grow. Based on a study completed in June 2002, the Cathedral leadership determined that the Cathedral should remain on its existing site in order to serve the Midtown Sacramento neighborhood, and that the current square footage of the facility is inadequate to meet the needs of the congregation and ministry programs for the community. The Cathedral leadership has developed a vision for a larger facility that could better accommodate the growing nature of the congregation, the ability for more worshipers to participate, and the ability of the cathedral to have more community worship, ministry, and cultural programs, such as a concert series.

A Needs Assessment Study was prepared to assess the current and future ministry programs, and to determine facility space requirements for a new facility. A development concept was prepared to respond to the needs assessment and Master Plan area that anticipates replacement of the existing structures with new Cathedral facilities to better accommodate existing uses.

Project Location

The Trinity Cathedral project site includes elements on one block bounded by Capitol Avenue to the north, 26th Street to the west, N Street (alley) to the south, and 27th Street to the east.

Trinity Cathedral Project Adjacent Uses

Uses adjacent to the Trinity Cathedral project site on the same block include St. Luke's Medical Office building to the west and St. Luke's parking structure to the south along with two small apartment buildings. A surface parking lot is located to the east (across 27th Street), along with residential uses (Trinity Apartments); residential uses are also located to the south across N Street and to the north across Capitol Avenue, including a seven-story senior housing complex, as shown in Figure 2-3.

Trinity Cathedral Project Objectives

The overall vision of the new Trinity Cathedral is to provide a modern, state-of-the-art worship and ministry center for the people of the Sacramento region. This larger facility would provide more space for religious services and services to the neighborhood and community. The following are Trinity Cathedral's project objectives.

- To improve the Cathedral's ability to minister from the Midtown location to its immediate neighborhood, the Sacramento region, and more widely, to Northern California in general;
- To create a facility that is adequate to accommodate the existing and future needs of the congregation, including a facility of approximately 70,000 square feet to include worship space seating for 1,000 people, multi-purpose dining hall, meeting rooms, administrative offices, and ancillary support services, such as a nursery;
- To create a facility that could also serve as a medium-sized performing arts venue to serve the Sacramento Region;
- To establish an accessible and convenient Cathedral complex for its patrons, members of the community, and neighborhood and community service groups;
- To provide sufficient parking for Cathedral patrons, neighborhood and community service groups;
- To create an urban plaza area and provide open space for the Midtown community, including gathering, socializing, and transition space for large groups attending theatre events and worship services;
- To complement the mission of the Cathedral by designing the new cathedral project to reflect the Anglican Episcopal tradition of the church in the physical forms of the building, while complimenting the existing and changing neighborhood context;
- To continue to serve the Sacramento and Northern California community through community-wide ecumenical and interfaith public gatherings at times of crisis and need; and
- To construct a project consistent with the evolving nature of the neighborhood.

Trinity Cathedral Project (Phase 1)

Phase 1 of the Trinity Cathedral project includes demolition of the existing 8,057 sf cathedral building to provide for a new 3-story, 37,100 sf, 1,000-seat Cathedral worship facility as shown in Figure 2-23. Table 2-10 provides a breakdown of the existing building uses and disposition while Table 2-11 identifies the new facilities to be constructed as part of the Trinity Cathedral project.

Table 2-10

Trinity Cathedral – Existing Building Uses and Disposition

APN/ Existing Use	Date Constructed	Height	Size	Disposition	Current Zoning	Proposed Project Component
007-0166-014 Trinity Cathedral	1955	1 floor	8,057 sf	Building to be demolished	RO SPD	New Trinity Cathedral to replace the existing building (Phase 1)
Administratio n/ Classroom building	1968	1 floor	15,409 sf	Building to be demolished	RO SPD	New multi-purpose building to replace existing Administration/ Classroom building (Phase 2)

Notes:

RO = Residential-office.

SPD = Special Planning District.

Source: City of Sacramento; Trinity Cathedral, 2003.

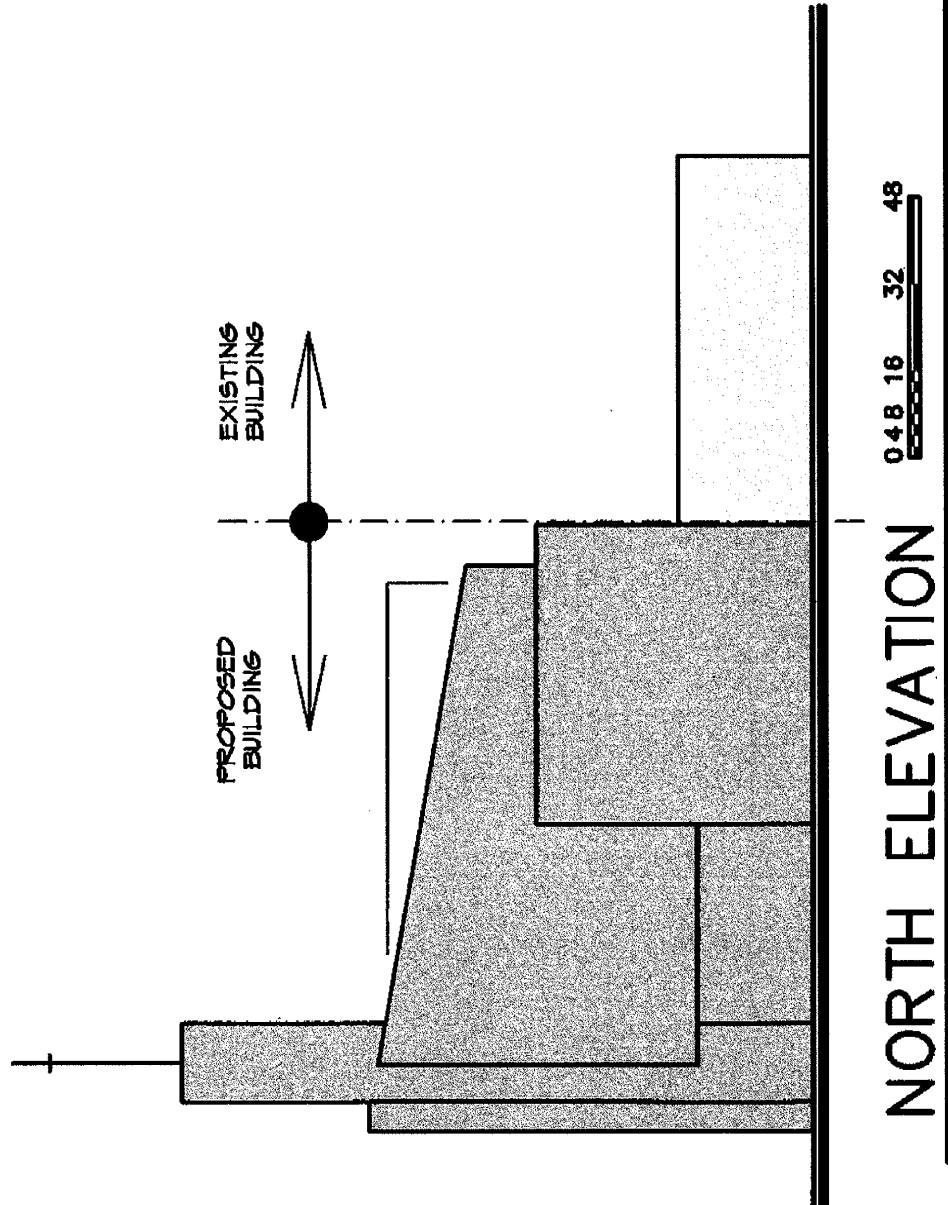
Table 2-11

Trinity Cathedral – Proposed New Buildings

Building	Location	Proposed Square Footage/ Parking Spaces	Proposed Building Height	Proposed Zoning
New Trinity Cathedral	Northern ½ block bounded by Capitol Avenue to the north, 27 th Street to the east, Trinity Cathedral Lane alley to the south, and 26 th Street to the west.	37,100 sf	80 feet, 3-stories above grade.	RO SPD
New Multi- purpose building	Northern ½ block bounded by Capitol Avenue to the north, 27 th Street to the east, Trinity Cathedral Lane alley to the south, and 26 th Street to the west.	30,750 sf	60 feet, 4- stories above grade	RO SPD

Source: City of Sacramento, Trinity Cathedral, 2003.

- +152'-0" T.O. CROSS
- +120'-0" T.O. TOWER
- +84'-0" T.O. WALLS
- +75'-0" T.O. ROOF
- +52'-0" T.O. WALL
- +0'-0" 1ST FLOOR LEVEL



NORTH ELEVATION

FIGURE 2-23

Trinity Cathedral, North Elevation

Source: WMG Architects 2005

Not to Scale



Sutter Medical Center, Sacramento

The ground floor of the proposed Trinity Cathedral would provide the main entrance to the Cathedral building, administrative space, and other meeting space. Main entrances into the Cathedral would be provided from 27th Street and Capitol Avenue. A smaller third entrance would provide access to the main circulation corridor from Trinity Cathedral Lane alley. An entrance to the Cathedral chapel space may be provided at the northeast corner of the building, at 27th Street and Capitol Avenue. Administrative offices for staff of up to 25 would be provided on the ground floor along with a Chapel for small services and prayer seating up to 100, a nursery room, restrooms and ancillary facilities. A total of approximately 15,939 sf of new floor space would be provided on the ground floor.

The second level would provide Cathedral worship space seating for 600 on the main floor with 100+/- seats on the alter platform. In addition, the second floor would provide an entrance to the narthex, restrooms, and ancillary facilities. A total of approximately 14,453 sf of floor area would be provided on the second level.

The third level would provide worship space balcony seating for 250, a balcony narthex, a music rehearsal room and ancillary facilities. A total of approximately 6,623 sf of floor area would be provided on the third level.

The scale of the building is designed to be complementary to the existing mid-sized office and apartment buildings in the neighborhood and the larger scale of the seven story senior housing at the northeast corner of Capitol Avenue and 27th Street and the new buildings to the east proposed as part of the SMCS project. A conceptual massing of the new building is shown in Figure 2-23. The exterior building envelope at the building entrances would be in context with the existing and mid-sized buildings at a 45-foot to 55-foot height to the cornice line. Expression of the interior primary worship space may be manifest in the exterior building architecture through the shape and form of the exterior walls between 60-feet and 85-feet in height. A cross tower element may have a roof peak up to 120-feet in height, and a cross symbol up to 155-feet in height. Exterior materials would be designed to establish a uniform and coordinated palette, and may include stone or masonry veneers, plaster panels, stone sculptural panels, and glass with stained glass elements.

Lighting would be a combination of accent and security downlights at the entrance and structure bays, and uplighting in the landscape areas to illuminate the cross tower as well as the Cathedral walls at 27th Street and Capitol Avenue. Sidewalk lighting may include pedestrian scale lights to match the streetlights currently provided in the neighborhood.

The existing stained glass windows in the Cathedral, along with the existing tile mosaic over the Capitol Avenue entrance would be preserved and incorporated into the new Cathedral Building. Many of the existing stained glass windows would be reused and remain at street level in the new Cathedral.

One monument sign would be located at the corner of 27th Street and Capitol Avenue. It is proposed to be incorporated into a water fountain feature. The sign would be a gray limestone to match the building base, 8 feet long and 3 feet high, with the name of the Cathedral in bronze letters. It would be illuminated by landscape up-lights. In addition, smaller 2 and a half foot by 5-foot wall-mounted signs are proposed at the two main entrances into the Cathedral building. Several banner poles are also proposed which would allow 3-foot wide by 24-foot long banners to be mounted on the building.

The Trinity Cathedral project also proposes the narrowing of 27th Street between Capitol Avenue and Trinity Cathedral Lane (alley) to create a pedestrian friendly environment that would allow for a limited use urban plaza area for gathering, socializing, and transition space for large groups attending theatre events and worship services, as shown in Figure 2-24. As shown on Figure 2-24, the narrowing of 27th Street may include wider sidewalks, decorative paving, and landscaping. In addition, there may be a bus drop-off area for the proposed Children's Theatre of California (B Street Theatre) along the east side of 27th Street or along Capitol Avenue. In addition, Trinity Cathedral is also seeking approval from the City to temporarily restrict traffic for a limited time period on Saturdays, Sundays, and other specific days and times along the portion of 27th Street between Capitol Avenue and the alley (Trinity Cathedral Lane).

Pedestrian improvements include new sidewalks around the Cathedral along with enhanced areas of specialty paving at the main entrances into the Cathedral and raised planters designed to compliment the contours of the new Cathedral design.

Trinity Cathedral Project (Phase 2)

The second phase of the Trinity Cathedral project includes demolition of the existing two-story multipurpose hall and construction of a four-story, 30,750 sf multipurpose hall, meeting rooms, and administrative offices. The main entrance to access Phase 2 would be the same as Phase 1, off of Capitol Avenue, 27th Street, and Trinity Cathedral Lane (alley). The design of Phase 2 has not been determined at this time; however, the size and footprint of the building are known (as shown in Figure 2-25). As such, the building would be straightforward and rectangular in its massing. The building would be set back 6 feet from the Cathedral with a top of wall height of 43 feet above grade and top of roof at 42 feet enclosing the first three floors; the fourth floor would step back from the lower floors, 30 feet away from the street, with the top of the wall at 60 feet above grade and the top of roof at 58 feet. It is anticipated the building would include the following facility uses:

- The ground floor would provide a multi-purpose hall that could accommodate up to 450 persons with kitchen accommodations. The ground floor would include approximately 10,500 sf.
- The second level would provide meeting rooms and support spaces for the worship space and would include approximately 2,425 sf.
- The third floor would provide meeting rooms for Christian learning and Youth programs and would include approximately 9,615 sf.
- The fourth floor would include administration offices, work areas, and meeting rooms and contain approximately 8,220 sf.

Trinity Cathedral Population⁴

Development of Trinity Cathedral project would increase employment within the cathedral. Currently there are a total of 16 employees. The Trinity Cathedral project would add 9 employees for a total of 25 employees.

4 Per email from Jim Richardson to Christine Kronenberg on, March 25, 2004.

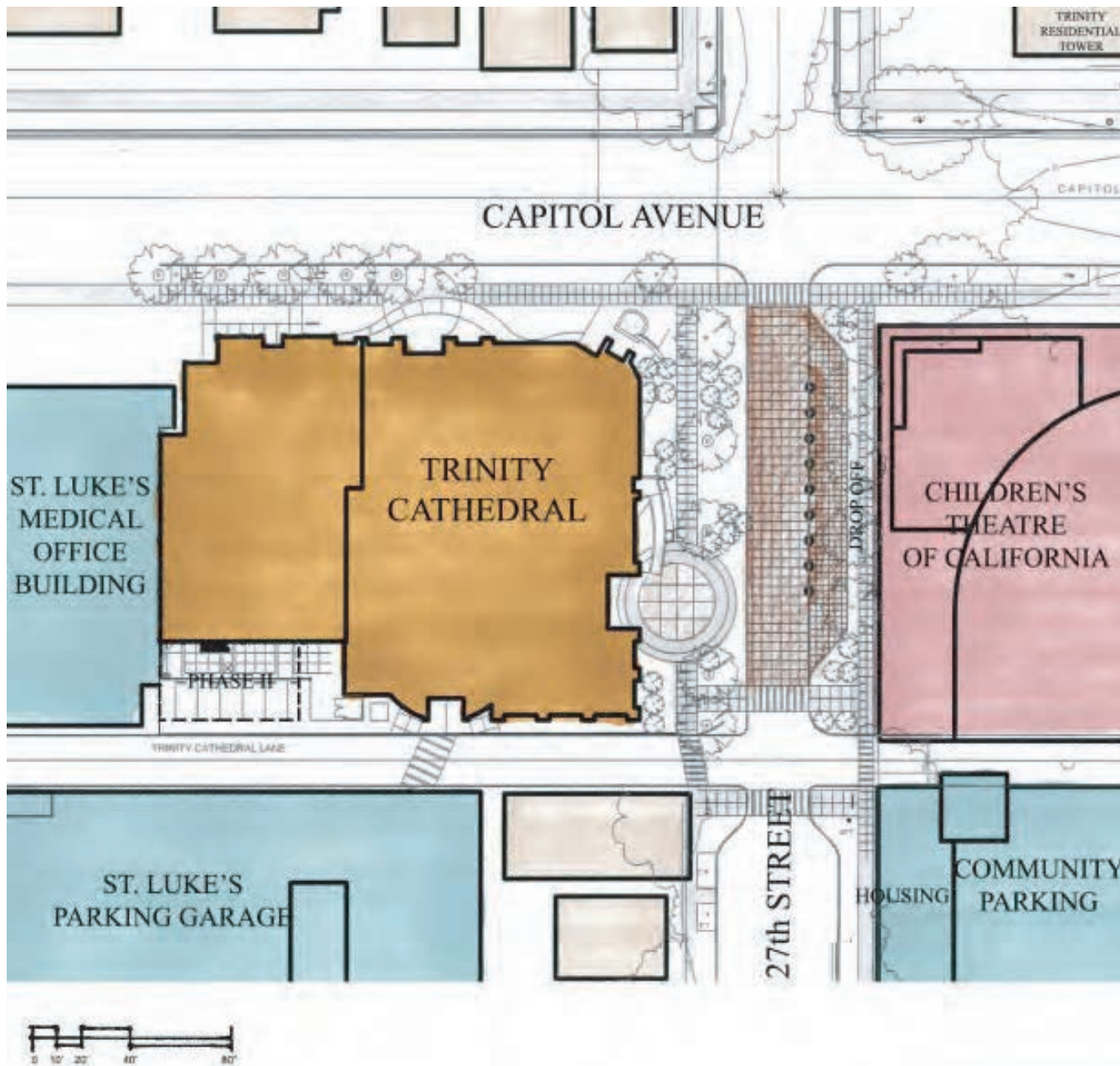


FIGURE 2-24
Proposed Trinity Cathedral and 27th Street Site Plan

Not to Scale



+152'-0" T.O. CROSS

+120'-0" T.O. TOWER

+84'-0" T.O. WALLS

+75'-0" T.O. ROOF

+52'-0" T.O. WALL

+0'-0" 1 ST FLOOR LEVEL

PROPOSED BUILDING PHASE I

PROPOSED BUILDING PHASE II

T.O. WALL +60'-0"

NORTH ELEVATION PHASE II

0 4 8 16 32 48

FIGURE 2-25
Trinity Cathedral, North Elevation Showing New Administrative Space

In 2003, average attendance on a Sunday was between 600 and 700 people. Midweek services average between 6-12 people Monday through Friday, except for Thursday evening services, which can have up to 60 people. The target attendance goal for Sunday services for 2005 is 844 and 1,350 in 2020.

In 2003, during the Christmas and Easter services, which included five services on Christmas Eve, one service Christmas day and eight services during Easter week that span three days, a total of 3,880 people attended services: 2,210 for Christmas and 1,670 for Easter. It is anticipated this number would increase once the new cathedral is constructed. The current facility is at capacity during these large holy day services.

In 2003, there were a total of 18 weddings and 28 funerals at the cathedral. Attendance of these services varies from small groups to more than 500 people at large events. It is anticipated this number would increase once the new cathedral is constructed.

In addition, the Cathedral hosts a concert series, periodic lectures, events for the Episcopal Diocese, and other special services and events. Attendance at these events ranges from approximately 50 to 300. However, attendance at some special events in the past has exceeded 1,000 people.⁵ The adjacent multi-purpose space is used to host fundraising events, annual dinner events, and daily Narcotics Anonymous meetings. Attendance for these events ranges from between 100 to 220 people.

Parking

The Cathedral currently has an existing parking agreement with SMCS for use of the St. Luke's Medical Office Building parking garage for Sunday services and day and evening uses. The Cathedral would extend their agreement with SMCS to use the Community Parking Structure for parking. A recorded agreement document with a 99-year timeframe has been signed by both SMCS and Trinity Cathedral to provide parking; final documents have been provided to the City.

Under an agreement with SMCS, a total of 500 parking spaces dedicated for Sunday services at the proposed new Community Parking Structure across 27th Street east of the Cathedral facility would be provided. For weekday evening events, the Cathedral would have 150 parking spaces dedicated in the Community Parking Structure and 25 dedicated parking spaces for Cathedral employees during the day in the Community Parking Structure and additional access to parking if necessary.

A 20-foot deep service loading area would be provided for the Cathedral facility in Phase 1 and 2 accessed from Trinity Cathedral Lane. After completion of Phase 1, six parking spaces would remain available on-site accessed from Trinity Cathedral Lane until Phase 2 is constructed. Once Phase 2 begins construction, these 6 spaces would be removed to accommodate Phase 2.

5 Memorial Service for Princess Diana, Princess of Wales.

Building Demolition

To accommodate development of the new Trinity Cathedral, the existing Cathedral building would be demolished. However, the existing two-story structure adjacent to the Cathedral to the west would remain and continue to be used for offices, meeting rooms and a bookstore until the new multi-purpose space is constructed. During construction of the Cathedral, services would be held in the existing hall; when that is impractical, space would be rented or borrowed in another church.

Construction Phasing

It is anticipated that Trinity Cathedral Phase 1 construction would begin sometime in 2007. If started in 2007, the construction would be completed by 2009.

Trinity Cathedral Project Approvals

It is anticipated that the following project approvals would be required by the City of Sacramento for the Trinity Cathedral project:

- Building Permit(s);
- Special Use Permit – For Use;
- Special Permit – Height
- Special Permit – Off-site parking;
- Encroachment Permit; and
- Sign Variance.

Chapter 3 Summary of Environmental Effects

Chapter 3 Summary of Environmental Effects

OVERVIEW OF THE SMCS PROJECT AND THE TRINITY CATHEDRAL PROJECT

This EIR evaluates the environmental effects associated with implementation of the SMCS project as well as implementation of the Trinity Cathedral project. The project applicant for the SMCS project, Sutter Medical Center, Sacramento (SMCS), is requesting a General Plan Amendment, Community Plan Amendment, Rezone, Lot Line Adjustments/Merges, Alley and Utility Abandonments, and a Special Permit for height and a helistop as well as for a major project. The Trinity Cathedral project is requesting a Building permit, Encroachment permit, sign variance, and a Special Permit for height, parking, and use.

The SMCS project is seeking project approval and the necessary entitlements to construct and operate a number of new facilities, including the new Women's and Children's Center (WCC), Sutter Medical Foundation Building (SMF), Energy Center and parking, Community Parking Structure with Retail/Commercial, Future Medical Office Building (Future MOB), and 32 units of housing. This EIR evaluates the direct, indirect, and cumulative impacts of the planning, construction, and operation of the project components listed above on a project-specific level using the most current information. In addition, the SMCS project includes future development of the Children's Theatre of California. The EIR analyzes potential impacts associated with the Children's Theatre on a program level because details of the project have not been identified and the project applicant, B Street Theatre, is not seeking any development entitlements at this time. When the project applicant has specific details for the theatre and seeks entitlements, additional environmental review would be prepared, likely tiered from this EIR.

In addition to the SMCS project, this EIR analyzes construction and operation of the Trinity Cathedral project. The Trinity Cathedral project includes removal of the existing Cathedral and construction of a new larger cathedral and adjacent administrative/meeting space. This EIR evaluates the direct, indirect, and cumulative impacts of construction and operation of the Trinity Cathedral project.

The EIR uses the land use assumptions shown in Table 3-1 for the SMCS project and Table 3-2 for the Trinity Cathedral project to evaluate potential impacts associated with future development of these uses.

This summary provides an overview of the analysis contained in Chapters 6 and 7 (Environmental Analysis) of this EIR. Chapter 6 contains the analysis for the SMCS project; Chapter 7 addresses the Trinity Cathedral project. This summary also includes discussions of (a) effects found to be less than significant; (b) potential areas of controversy; (c) significant impacts; (d) mitigation measures to avoid or reduce identified significant impacts; (e) unavoidable significant impacts; and (f) project alternatives to the SMCS project and Trinity Cathedral project. A separate alternatives analysis is provided for each project in Chapter 8.

**Table 3-1
SMCS Project – Development Summary**

Proposed Zoning	Land Use	SF/Units/spaces	Total
Project-Specific Analysis			
H-SPD	New Women's and Children's Center	398,362 sf	398,362 sf
C2-SPD OB-SPD	SMF Building	203,382 sf 90 spaces	203,382 ¹ sf
C-2-R-SPD-WC C2-SPD R-3A-SPD	Community Parking Structure and Retail/Commercial	302,579 sf 1,064 spaces 9,000 sf (retail)	302,579 sf
OB-SPD	Future MOB	35,000 sf 35 spaces	35,000 sf 35 spaces
R-3A-SPD	Housing	32 units 40 spaces	32 units 40 spaces
			Total (sf) 643,181
Programmatic Analysis			
N/A	Children's Theatre	51,000 sf	51,000 sf
			Total SMCS Project (sf) 694,181²

Notes:

1. Includes Energy Center and Parking.
 2. This total does not include the Community Parking Structure.
- Source: SMCS, 2005.

**Table 3-2
Trinity Cathedral – Development Summary**

Proposed Zoning	Land Use	SF/Units	Total
RO-SPD	New Cathedral	37,100 sf 3-stories above grade	37,100 sf
RO-SPD	Multi-Purpose Building	30,750 sf 4-stories above grade	30,750 sf
			Total Trinity Cathedral Project (sf) 67,850

Source: Trinity Cathedral, 2004.

Tables 3-3 and 3-4, provided at the end of this chapter, summarize impacts discussed in Chapters 6 and 7.

Effects Found to be Not Significant

The City of Sacramento prepared a Notice of Preparation (NOP) for both the SMCS project and the Trinity Cathedral project in January 2004 for circulation to all responsible and trustee agencies as well as interested members of the public.¹ A copy of the NOP can be found in Appendix C. An Initial Study (IS) was also prepared to analyze any potential impacts. The IS is

¹ In October 2003 an NOP was released for just the SMCS project.

included as Appendix E. The IS identified a number of impacts that were found to be less than significant. These include increased seismic groundshaking, seismic-related ground failure, landslides, and unstable soils; conflicts with any applicable habitat conservation plan or natural community conservation plan; impacts to farmlands; the displacement of substantial numbers of existing housing or residents; flooding due to the failure of a levee or dam; inundation by seiche, tsunami or mudflow; the creation of objectionable odors; changes to air traffic patterns; increased hazards due to design; loss of mineral resources; safety hazards within an airport land use plan or private airstrip; wildland fires; and recreation resources. It is not anticipated that there would be any impacts in these issue areas associated with either the SMCS project or the Trinity Cathedral project.

Potential Areas of Controversy

The major areas of potential controversy identified through the environmental evaluation process for both the SMCS project and the Trinity Cathedral project include traffic and circulation, parking, disturbance to existing cultural resources (including Sutter's Fort and the State Indian Museum), aesthetics, air quality, and construction- and helicopter-generated noise and vibration. Comments on both the 2003 NOP and the 2004 NOP can be found in Appendices B and D.

Significant Impacts and Mitigation Measures

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. The SMCS project and the Trinity Cathedral project would result in significant impacts on these resources, but many of these significant impacts would be reduced to a less-than-significant level with mitigation identified in the EIR. The mitigation measures presented in the EIR will form the basis of the Mitigation Monitoring Program (MMP). A separate MMP will be prepared for each project, if necessary.

Significant Unavoidable Impacts

Significant and unavoidable project-specific and cumulative impacts identified for the SMCS project (including the Theatre) include:

SMCS Project-Specific Significant and Unavoidable Impacts

- Construction of the SMCS project would increase emissions of nitrogen oxide (NO_x) generated by construction on a short-term basis (6.2-3).
- Operation of the SMCS project would generate an increase in ROG and NO_x (criteria pollutants) (6.2-4).
- Construction activities of the SMCS project would intermittently generate noise levels above existing ambient levels in the project vicinity on a short-term basis (6.6-1).
- The SMCS project and Children's Theatre would increase traffic volumes on the freeway system (6.7-2).

- The SMCS project and Children's Theatre would increase demand for parking (6.7-6).
- The SMCS project would generate more than 500 tons of solid waste per year (6.8-11).

SMCS Project Cumulative Significant and Unavoidable Impacts

- The SMCS project, in combination with other projects in the Sacramento Valley Air Basin, could result in a cumulative impact on criteria pollutants associated with project operation (6.2-8).
- The SMCS project would increase traffic volumes on the freeway system under year 2025 conditions (6.7-9).
- The SMCS program and Trinity Cathedral project would increase traffic volumes at study intersections under year 2025 conditions (6.7-10).
- The SMCS program and Trinity Cathedral project would increase traffic volumes on the freeway system under year 2025 conditions (6.7-11).
- The SMCS project (with Two-Way Conversion) would increase traffic volumes at study intersections under year 2025 conditions (6.7-12).
- The SMCS program and Trinity Cathedral project (with Two-Way Conversion) would increase traffic volumes at study intersections under year 2025 conditions (6.7-14).
- The SMCS program and Trinity Cathedral project (with Two-Way Conversion) would increase traffic volumes on the freeway system under year 2025 conditions (6.7-15).

Significant and unavoidable project-specific and cumulative impacts identified for the Trinity Cathedral project include:

Trinity Project-Specific Significant and Unavoidable Impacts

- Construction of the Trinity project would intermittently generate noise levels above existing ambient levels in the project vicinity on a short-term basis (7.6-1).
- The Trinity Cathedral project would increase traffic volumes on the freeway system (7.7-2).
- The Trinity Cathedral project would increase demand for parking (7.7-6).

Trinity Project Cumulative Significant and Unavoidable Impacts

- The Trinity Cathedral project would increase traffic volumes on the freeway system under 2025 conditions (7.7-8).

Project Alternatives

The alternatives to the proposed SMCS project analyzed in this EIR are:

1. **No Project/No Action Alternative** assumes that the SMCS project would not be developed, but development could occur on any undeveloped land owned by SMCS within the project area. This alternative assumes uses at Sutter Memorial Hospital (SMH) would not change and the existing Sutter General Hospital (SGH) and Buhler Building would remain the same as all the other existing structures.
2. **Smaller SMF Building Alternative** assumes that the Specialty Care medical office uses (63,400 +/- sf) would not be constructed in the SMF Building, thereby reducing the overall size of the building. The medical uses proposed to relocate into the SMF Building would stay where they are currently located.
3. **Reduced Size Alternative** assumes that the WCC, Energy Center, Housing, and Community Parking Structure would be constructed, but the SMF Building and Future MOB would not be constructed.
4. **Full Parking Supply Alternative** assumes that the Community Parking Structure would be expanded and redesigned to accommodate the parking demand associated with the SMCS project, Trinity Cathedral and the Children's Theatre.
5. **Off-site Alternative** assumes that the SMCS project would be constructed on an approximately 40-acre parcel of land located in North Natomas. Under this alternative, the WCC, SGH, and the SMF Building would be constructed at this location, creating a new medical complex.

Project alternatives for the Trinity Cathedral project include:

1. **No Project/No Development Alternative** assumes that the existing Trinity Cathedral project would not be altered.
2. **Smaller Cathedral Alternative** assumes that the new Trinity Cathedral Building would be reduced in size to approximately 27,750 sf, while the multipurpose space would be reduced to 23,062 sf.
3. **Off-site Alternative** assumes that the Trinity Cathedral project would be developed on an approximately 15-to 20-acre site located along Capitol City Freeway in the City of Sacramento.

SUMMARY TABLE

A Summary of Impacts and Mitigation Measures table is provided for each project. The summary table for the SMCS project is Table 3-3, while Trinity Cathedral is included in Table 3-4. Each table has been organized to correspond with environmental issues discussed

in Chapters 6 and 7. The summary table is arranged in four columns. The table is organized as follows:

1. Environmental impacts;
2. Level of significance;
3. Applicable mitigation; and
4. The level of significance after implementation of mitigation.

Table 3-3

**SMCS Project
Summary of Impacts and Mitigation Measures**

Impact	Level of Significance Prior to Mitigation		Mitigation Measure(s)	Level of Significance After Mitigation	
	SMCS	Theatre		SMCS	Theatre
6.1 Aesthetics					
6.1-1 Implementation of the SMCS project could be visually incompatible with the mass, scale, or character of existing development in the vicinity of the project area.	LS	LS	None required	NA	NA
6.1-2 Implementation of the SMCS project could create light or glare that could affect adjacent properties	PS	PS	(SMCS/Theatre) 6.1-2 (a) The configuration of exterior light fixtures shall emphasize close spacing and lower intensity light that is directed downward in order to minimize glare on adjacent uses. (b) Highly reflective mirrored glass or metal walls shall be avoided as a primary building material for facades. (SMCS) (c) To the extent feasible, the proposed illuminated skyline light on the west side of the WCC Building shall be set back to a position where it is not visible from Sutter's Fort.	LS	LS
6.1-3 Implementation of the SMCS project could create substantial shadows on adjacent properties.	LS	LS	None required	NA	NA
6.1-4 Implementation of the SMCS project could conflict with applicable City policies or design guidelines.	LS	LS	None required	NA	NA
6.1-5 Implementation of the SMCS project, in combination with cumulative development, could alter the visual character of the Central City.	LS	LS	None required	NA	NA

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Table 3-3

**SMCS Project
Summary of Impacts and Mitigation Measures**

Impact	Level of Significance Prior to Mitigation		Mitigation Measure(s)	Level of Significance After Mitigation	
	SMCS	Theatre		SMCS	Theatre
6.1-6 Implementation of the SMCS project, in combination with cumulative development within the viewshed of the project site, could create light or glare that could affect adjacent properties.	LS	LS	None required	NA	NA
6.2 Air Quality					
6.2-1 Increase in fugitive dust from demolition of existing buildings.	STS	STS	(SMCS/Theatre) 6.2-1 (a)	LS	LS
			The project applicant shall require in all construction contracts that the demolition contractors will ensure that all exterior surfaces of buildings are wetted during building demolition activities. The material from any building demolition shall be completely wetted during any period when the material is being disturbed, such as during the removal from the construction site.		
			(b) All piles of demolished material shall be wetted covered until they are removed from the site.		
			(c) Maintain two feet of freeboard space on haul trucks. (d) All operations shall expeditiously remove the accumulation of mud or dirt from adjacent public streets at the end of each workday. (The use of dry brushes is expressly prohibited except where preceded by sufficient water or chemical stabilizer/suppressant).		

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	SMCS	Theatre		SMCS	Theatre
6.2-2 Fugitive dust during grading of construction site(s).	STS	STS	(e) Wheel washers for exiting trucks shall be installed, or all trucks and equipment leaving the site shall be washed off.	LS	LS
			(SMCS/Theatre) 6.2-2 The following measures are required by the SMAQMD for level one mitigation, and shall be implemented during grading at all project sites: (a) Water exposed soil twice daily. (b) Maintain two feet of freeboard space on haul trucks. In addition, the following measures shall be implemented to further reduce the PM ₁₀ impact during construction activity: (c) All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at the end of each workday. (The use of dry brushes is expressly prohibited except where preceded or accompanied by sufficient water or chemical stabilizer/suppressant.) (d) Wheel washers for all exiting trucks shall be installed, or all trucks and equipment leaving the site shall be washed off. (e) Excavation and grading activity shall be suspended when winds exceed 20 mph.		
6.2-3 Increase in NO _x emissions generated by construction equipment.	STS	LS	(SMCS) 6.2-3 The following measures shall be incorporated into construction practices as recommended by the SMAQMD:	STS	NA

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	SMCS	Theatre		SMCS	Theatre
			<p>(a) The project applicant shall require the project developer or contractor to 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, will 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.</p> <p>(b) The project applicant shall require the project developer or contractor to submit to SMAQMD a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that will 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 representative shall provide SMAQMD with the anticipated construction timeline including start date, and name and phone number of the project manager and on-site foreman.</p>		

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			<p>(c) The project applicant shall require the project developer or contractor to 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.</p> <p>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 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.</p> <p>In addition to the above, the following NO_x reducing measures shall be incorporated in all construction contracts:</p> <p>(d) Construction equipment shall be kept in optimum running condition at all times.</p> <p>(e) Minimize idling time (10 minute maximum)</p> <p>(f) When appropriate, use alternative fueled or catalyst equipped diesel construction equipment.</p>		

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	SMCS	Theatre		SMCS	Theatre
6.2-4 Generation of ROG and NO _x (criteria pollutants) associated with project operation.	S	LS	(g) When appropriate, replace fossil-fueled equipment with electrically driven equivalents (provided they are not run via a portable generator set).	SU	NA
			(SMCS) 6.2-4 After approval by the SMAQMD, SMCS shall institute the following measures:		
			(a) Exceed Title 24 energy standards for cooling energy by 50% at non-residential buildings. (1 point)		
			(b) Install low NO _x hot water heaters.		
			(c) Install ozone destruction catalyst on air conditioning systems in consultation with SMAQMD or local district. (2.5 points)		
			(d) Provide preferential parking for carpools and vanpools.		
(e) To the extent that loading docks are incorporated into the project, equip all truck loading and unloading docks with one 110/208 volt power outlet for every two dock doors. Diesel trucks shall be prohibited from idling more than five minutes and shall be required to connect to the 110/208 bolt power to run any auxiliary equipment. Signage addressing these requirements shall be provided at the loading docks.					
(f) Provide showers and lockers for use by employees that bike to work. (0.5 points)					

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			(g) Provide secure bicycle storage at public parking facilities. (0.5 points) (h) The project applicant shall implement permanent TMA membership funding. (2.5 points) (i) The project applicant shall provide employees with a transit pass subsidy and/or a commute alternative allowance. (1.5 points) (j) Provide electric vehicle charging facilities. (1 point) (k) Increase parking lot shading by 20% over code. (1 point)		
6.2-5 Increase in CO concentrations from project-related traffic.	LS	LS	None required	NA	NA
6.2-6 Increase in exposure of sensitive receptors to toxic air contaminants.	LS	LS	None required	NA	NA
6.2-7 The SMCS project, in combination with other projects proposed within the SVAB, could result in a significant temporary cumulative impact from construction activities.	STS	STS	(SMCS/Theatre) 6.2-5 Construction activity shall halt when the Air Quality Index (AQI) is forecast to be in excess of 150 (Unhealthy). Construction activity shall halt two days in advance of, and extend through, the day that is forecast to be 150 or greater on the AQI chart. AQI forecasts can be found at www.sparetheair.org . 6.2-6 Implement Mitigation Measure 6.2-3.	LS	LS
6.2-8 The SMCS project, in combination with other projects in the SVAB, could result in a cumulative impact on criteria pollutants associated with project operation.	S	LS	6.2-7 Implement Mitigation Measure 6.2-4	SU	NA

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6.2-9 Cumulative impact of CO concentrations from project-related traffic.	LS	LS	None required	NA	NA
6.2-10 Cumulative impact of project-generated TACs.	LS	LS	None required	NA	NA
6.3 Cultural Resources					
6.3-1 Construction of the SMCS and Theatre projects could adversely affect known and/or previously unidentified prehistoric or historic archaeological resources.	PS	PS	(SMCS/Theatre) 6.3-1 (a) The project applicant shall hire a qualified professional to prepare a formal research design and testing strategy with regards to sub-surface cultural resources during construction. Testing shall include geophysical mapping of the near-surface, ground-truthing using both the geophysical maps and historic maps, and evaluation of discovered resources for CRHR eligibility. All testing shall be conducted prior to initiation of construction for the project. Based on the results of testing, recommendations shall be provided, which may include additional testing, data recovery, future construction monitoring, etc. All recommendations shall be submitted to the City of Sacramento's Historic Preservation Director for approval.	LS	LS

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	SMCS	Theatre		SMCS	Theatre
<p>6.3-2 Construction of the SMCS project could adversely affect the significance of any or all of the following historical resources: Old Tavern, Pioneer Congregational Church, Sutter's Fort, Eastern Star Hall, Capitol Commercial Building, and the residence on the 2600 Block of the Capitol Mansions Historic District.</p>	PS	PS	<p>(b) The project applicant shall hire a professional archeologist to perform archaeological monitoring during ground-disturbing construction activities for the duration of the project. If resources are discovered during construction, the procedure laid out in the Unanticipated Discovery Plan will be followed.</p>	LS	LS
				<p>(a) (SMCS/Theatre) The project applicant shall hire a qualified geologist or other professional with expertise in ground vibration effects on existing structures to prepare a study of the potential of vibrations caused by construction activities. Based on the results of the study, incorporate into contract specifications restrictions on, and monitoring of construction. A copy of the study, contract specifications, and monitoring reports shall be provided to the City of Sacramento's Historic Preservation Director.</p> <p>(b) The project applicant shall incorporate into the construction contract with a provision for establishing a training program for construction workers identifying the historic resources and features in the area and emphasizing the importance of protecting historic resources. Included shall be directions on working around and operating equipment near historic buildings and features taking means to reduce vibrations from demolition and drilling, being aware of and</p>	

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	SMCS	Theatre		SMCS	Theatre
			<p>reporting any potential problems that could affect the historic resources in the area. The location of the historic street feature (cut-stone curb) shall be disclosed in the construction contract. Construction crews shall be made aware of this historic street feature location, and the feature shall be flagged or fenced off as to prevent accidental damage or removal. The contract provisions shall be reviewed and approved by the City of Sacramento's Historic Preservation Director.</p>		
			<p>(SMCS) 6.3-3 (a) The project applicant shall hire a registered structural engineer, with a minimum of five years of experience in the rehabilitation and restoration of historic buildings, to investigate the existing relationship of the Old Tavern's foundation along the eastern elevation, including at the location of the elevator pit, to the western foundation of the garage. Any required test excavations shall be performed only in the presence of the structural engineer. The structural engineer shall prepare a report of findings, recommendations, and any related design modifications necessary to retain the structural integrity of the Old Tavern. The structural engineer (in consultation with a historic preservation architect, with a minimum of five years of experience in the rehabilitation and restoration of</p>		

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	SMCS	Theatre		SMCS	Theatre
			<p>historic buildings, as well as meeting the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation, Professional Qualifications Standards, if necessary) shall prepare designs and specifications for protective barriers required to protect the exposed Old Tavern wall from potential damage caused by construction activities. The structural engineer (with geotechnical consultation as necessary) shall also determine, due to the nature of the excavations, soils, and method of soil removal, and given the existing foundation of each building (the Old Tavern and Pioneer Congregational Church), the potential for settlement and whether the buildings would require underpinning and/or shoring. All documents prepared in accordance with this Measure shall be reviewed and approved by the City of Sacramento's Historic Preservation Director.</p>		

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Impact	Level of Significance Prior to Mitigation		Mitigation Measure(s)	Level of Significance After Mitigation	
	SMCS	Theatre		SMCS	Theatre
			<p>Prior to demolition, the project applicant shall hire a historic preservation architect and a structural engineer to undertake an existing condition study of the identified historic resources identified in the Cultural Resources Report. The purpose of the study shall be to establish the baseline condition of the buildings prior to construction. The documentation shall take the form of written descriptions and visual illustrations, including those physical characteristics of the resources that convey their historic significance and that justify their inclusion on, or eligibility for inclusion on, the California Register of Historic Resources and local register. The documentation shall be reviewed and approved by the City of Sacramento's Historic Preservation Director.</p> <p>The structural engineer shall make periodic site visits to monitor the condition of the properties, including monitoring of any instruments, such as crack gauges. The structural engineer shall consult with the historic preservation architect, especially if any problems with character defining features of a historic resource are discovered. If, in the opinion of the structural engineer, in consultation with the historic preservation architect, substantial adverse impacts to historic resources related to construction activities are found during construction, the monitoring team shall so inform</p>		

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	SMCS	Theatre		SMCS	Theatre
			<p>the project sponsor or sponsor's designated representative responsible for construction activities. The project sponsor shall adhere to the monitoring team's recommendations for corrective measures, including halting construction in situations where construction activities would imminently endanger historic resources. The monitoring team shall prepare site visit reports.</p> <p>The project applicant shall respond to any claims of damage by inspecting the affected property promptly, but in no case more than five working days after the claim was filed and received by the project sponsor's designated representative. Any new cracks or other changes in the structures will be compared to pre-construction conditions and a determination made as to whether the proposed project could have caused such damage. In the event that the project is demonstrated to have caused any damage, such damage shall be repaired to the pre-existing condition.</p> <p>Site visit reports and documents associated with claims processing shall be provided to the City of Sacramento's Historic Preservation Director.</p> <p>(b) The historic preservation architect and structural engineer shall specifically include the stained glass windows in their survey and monitoring of historic resources (see Mitigation Measure 6.3-1(a)). Included in the team's evaluation of the windows</p>		

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	SMCS	Theatre		SMCS	Theatre
6.3-3 The SMCS project could directly or indirectly destroy a unique paleontological resource or unique geologic feature.	LS	LS	<p>shall be consideration of whether it would be necessary to remove any of the windows. If such a recommendation is made, it should address methods for removal, transportation, storage and reinstallation.</p> <p>(c) The project applicant shall hire a historic preservation architect with a minimum of five years of experience in the rehabilitation and restoration of historic buildings as well as meeting the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation, Professional Qualifications Standards, to prepare proposed treatments of the Old Tavern wall for conservation purposes and designs for new openings.</p> <p>Such treatments and designs shall be reviewed and approved by the City of Sacramento's Historic Preservation Director.</p>	NA	NA
6.3-4 The SMCS project, in combination with other development in the City, could substantially adversely alter archaeological resources, which could result in a significant cumulative impact.	PS	PS	<p>(SMCS/Theatre) 6.3-4 Implement Mitigation Measure 6.3-1.</p>	LS	LS

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	SMCS	Theatre		SMCS	Theatre
6.3-5 The SMCS project could, in combination with other development in the City, substantially adversely alter historical resources, which could result in a significant cumulative impact.	PS	PS	(SMCS/Theatre) 6.3-5 Implement Mitigation Measures 6.3-2 and 6.3-3.	LS	LS
6.3-6 The SMCS project, in combination with other development in the City, could substantially adversely alter paleontological resources, which could result in a significant cumulative impact.	PS	PS	(SMCS/Theatre) 6.3-6 Implement Mitigation Measure 6.3-1.	LS	LS
6.4 Hazardous Materials and Public Safety					
6.4-1 Existing buildings demolished to accommodate the SMCS project are known to contain or may contain asbestos or lead-based paint or other hazardous substances, which could be released to the environment during demolition if not properly removed, contained, and transported for disposal at approved sites.	PS	PS	(SMCS/Theatre) 6.4-1 (a) Prior to demolition of the St. Luke's Office Medical Building, MTI Building, EAP Building, and House of Furs building, the project applicant shall provide written documentation to the City that ACBM abatement has occurred in compliance with applicable State and local laws and regulations. (b) Prior to demolition of the RAS Building, Energy Center, private medical office building, and Trinity Apartments, the project applicant shall provide written documentation to the City that ACBM testing and abatement, if necessary, has been completed in accordance with applicable State and local laws and regulations.	LS	LS

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			(c) Prior to demolition of the St. Luke's Medical Office Building, MTI Building, EAP Building, RAS Building, Energy Center, private medical office building, and Trinity Apartments, the project applicant shall provide written documentation to the City that lead-based paint testing and abatement, if necessary, has been completed in accordance with applicable State and local laws and regulations.		
			(d) Prior to demolition of the RAS Building, St. Luke's Medical Office Building, and private medical office building, the project applicant shall submit a written plan to the Sacramento County Environmental Management Department describing methods to be used to: (1) identify locations that could contain hazardous residues (e.g., mercury in sink traps); (2) remove plumbing fixtures known to contain or potentially containing hazardous substances; (3) determine the waste classification for the debris; (4) package contaminated items and wastes; and (5) identify disposal site(s) permitted to accept such wastes. Demolition shall not occur until the plan has been accepted by SCEMD and all hazardous components have been removed to the satisfaction of SCEMD staff.		

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<p>6.4-2 Site preparation activities associated with the SMCS project (excavation, grading, trenching) have the potential to encounter previously unidentified contaminated soil or groundwater or buried debris that may contain hazardous substances.</p>	PS	PS	<p>Prior to demolition, the project applicant shall retain a qualified environmental specialist (e.g., a Registered Environmental Assessor or similarly qualified individual) to inspect all existing buildings subject to demolition for the presence of PCBs, mercury, or other hazardous materials. The applicant shall submit the report to the City, together with an explanation of how the project will mitigate any issues identified in the report. If found at levels that require special handling (i.e., removal and disposal as hazardous waste), the applicant shall manage these materials as required by law and according to federal and state regulations and guidelines, including those of DTSC, SCEMD, Cal/OSHA, and any other agency with jurisdiction over these hazardous materials.</p>	LS	LS

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			<p>(a) For building locations that have not been subject to Phase I ESAs, before each site is developed under the SMCS project, the project applicant shall ensure that each site is or has been investigated for the possible presence of hazardous materials in soils and buildings. Investigative measures could include, but would not be limited to, a comprehensive review of historic maps and aerial photographs, Sanborn maps, review of available city or county records, and consultation with knowledgeable individuals. If the Phase I ESA recommends a Phase II evaluation, the Phase II evaluation shall be completed prior to site preparation.</p> <p>(b) In the event that site inspections find evidence of contamination, waste discharges, underground storage tanks, abandoned drums, or other environmental impairment at locations to be developed or in the project site, the SCEMD shall be notified. A site remediation plan shall be prepared that (1) specifies measures to be taken to protect workers and the public from exposure to potential site hazards and (2) certifies that the proposed remediation measures would clean up the contaminants, dispose of the wastes, and protect public health in accordance with federal, state, and local requirements. Commencement of work in the areas of potential hazards shall not proceed until the site remediation plan has been completed to the satisfaction of the SCEMD.</p>		

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			(c) A site health and safety plan, which meets the intent of OSHA hazardous materials worker requirements, shall be prepared and in place prior to commencing work on any contaminated sites. SMCS, through its contractor, shall ensure proper implementation of the health and safety plan. (d) In the event that previously unidentified USTs or other features or materials that could present a threat to human health or the environment are discovered during excavation and grading, construction in that immediate area shall cease immediately. A qualified professional shall evaluate the location and hazards and make appropriate recommendations. Work shall not proceed in that area until identified hazards are managed to the satisfaction of SCEMD.		
6.4-3 Construction and operation of the SMCS project would result in the continued routine use, storage, transport, and disposal of hazardous materials.	LS	LS	None required	NA	NA
6.4-4 Implementation of the SMCS project would involve the use, storage, and transport of hazardous materials, substances, or waste within ¼ mile of an existing or proposed school.	LS	LS	None required	NA	NA

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6.4-5 The SMCS project proposed heli-stop risks would not result in substantial safety risks due to helicopter operations. However, the design of the proposed heli-stop serving the Women's and Children's Center could be inconsistent with Section 12.92.070 of the Sacramento City Code pertaining to heli-stop design.	LS	LS	Recommended (SMCS) 6.4-3 If Section 12.92.070 of the Sacramento City Code has not been amended prior to action by the Planning Commission recommending City Council approval of a Special Use Permit for the SMCS heli-stop, the applicant shall request a variance to the City's Helicopter Ordinance requesting approval for the proposed heli-stop design, which complies with current FAA design criteria set forth in Advisory Circular 150/5390-2B (September 2004).	NA	NA
6.4-6 Implementation of the SMCS project could interfere with emergency response and/or emergency evacuation plans.	LS	LS	None required	NA	NA
6.4-7 The SMCS project, in combination with other development in the City of Sacramento, would result in the demolition of existing buildings. This demolition and other site preparation activities that could result in a release of hazardous materials to the environment thus exposing the public to potential health risks.	STS	STS	(SMCS/Theatre) 6.4-5 Implement Mitigation Measures 6.4-1 and 6.4-2	LS	LS

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	SMCS	Theatre		SMCS	Theatre
6.4-8 The SMCS project, in combination with other development in the City of Sacramento, could increase the risk of exposure of people to hazards due to increased volume and type of hazardous materials used, transported, stored, and disposed in the City.	LS	LS	None required	NA	NA
6.4-9 Implementation of the SMCS project, in combination with existing and anticipated development in the Sacramento metropolitan area, would increase the number of permitted heliports, heliports, and helipads.	LS	NI	None required	NA	NA
6.4-10 The SMCS project, in combination with development in the City of Sacramento, could interfere with emergency response plans and/or emergency evacuation plans.	LS	NI	None required	NA	NA
6.5 Hydrology and Water Quality					
6.5-1 Implementation of the SMCS project could result in an increase in the rate and amount of stormwater runoff from the project area, which could cause or exacerbate flood conditions on- or off-site.	LS	LS	None required	NA	NA

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Table 3-3

**SMCS Project
Summary of Impacts and Mitigation Measures**

Impact	Level of Significance Prior to Mitigation		Mitigation Measure(s)	Level of Significance After Mitigation	
	SMCS	Theatre		SMCS	Theatre
6.5-2 Stormwater runoff from the SMCS project would contain urban pollutants that could be discharged to the Sacramento River, which could affect surface water quality.	LS	LS	None required	NA	NA
6.5-3 Groundwater from construction and foundation dewatering would be discharged to the City's CSS, which could result in CSS capacity and water quality impacts.	LS	LS	None required	NA	NA
6.5-4 Wastewater flows from the SMCS project would contain chemicals, radioactive materials, and chemotherapeutic wastes that would be discharged to the Sacramento River via the CSS and SRWTP, which could affect water quality.	LS	NI	None required	NA	NA
6.5-5 The project, in combination with cumulative development in the CSS service area, would generate stormwater runoff that could result in localized flooding.	LS	LS	None required	NA	NA
6.5-6 Stormwater runoff from the project, in combination with cumulative development in the CSS service area, would discharge urban pollutants to the Sacramento River, which could affect water quality.	LS	LS	None required	NA	NA

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Table 3-3

SMCS Project

Summary of Impacts and Mitigation Measures

Impact	Level of Significance Prior to Mitigation		Mitigation Measure(s)	Level of Significance After Mitigation	
	SMCS	Theatre		SMCS	Theatre
6.5-7 The project, in combination with cumulative development in the CSS service area, would discharge groundwater from dewatering to the sewer.	LS	LS	None required	NA	NA
6.5-8 The project, in combination with cumulative development in the CSS service area, would result in increased wastewater flows, which could affect Sacramento River water quality.	LS	LS	None required	NA	NA
6.6 Noise					
6.6-1 Construction activities would intermittently generate noise levels above existing ambient levels in the project vicinity.	STS	STS	(SMCS/Theatre)	STS	STS
			6.6-1		
			(a) All construction equipment shall be equipped with factory matching mufflers and in good working order.		
			(b) All staging areas and water tanks shall be located as far away from residential, hospital, medical office, and other noise-sensitive uses as possible.		
6.6-2 Construction activities could result in groundborne vibration.	LS	LS	None required	NA	NA
6.6-3 The SMCS project could result in an increase in existing traffic noise levels at existing land uses in the project vicinity on the existing local roadway network.	LS	LS	None required	NA	NA
6.6-4 Helicopter activities could exceed the City's exterior noise threshold.	LS	NA	None required	NA	NA

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Table 3-3

**SMCS Project
Summary of Impacts and Mitigation Measures**

Impact	Level of Significance Prior to Mitigation		Mitigation Measure(s)	Level of Significance After Mitigation	
	SMCS	Theatre		SMCS	Theatre
6.6-5 Helicopter activities could exceed Caltrans exterior noise thresholds.	LS	NA	None required	NA	NA
6.6-6 Helicopter activities could exceed the city's interior noise thresholds.	LS	NA	None required	NA	NA
6.6-7 Helicopter activities could contribute to a sleep disturbance in adjacent neighborhoods.	PS	NA	6.6-2 All helicopter operations shall use the flight paths described in this EIR, unless safety precautions require a diversion from the flight paths.	SU	NA
6.6-8 The SMCS project could result in an increase in future traffic noise levels at existing land uses in the project vicinity on the existing local roadway network.	LS	LS	None required	NA	NA
6.6-9 Future traffic noise levels may exceed acceptable noise level criteria at the exterior of the Women's and Children's Center.	S	LS	(SMCS) 6.6-3 Construction of the proposed Women's and Children's Hospital shall occur only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features are included in the design.	LS	NA
6.6-10 The SMCS project, along with other future development in the City, would increase noise levels.	LS	LS	None required	NA	NA
6.7 Transportation and Circulation					
6.7-1 Intersections – The SMCS project and the Children's Theatre would increase traffic volumes at study intersections.	LS	LS	None required	NA	NA

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**SMCS Project
Summary of Impacts and Mitigation Measures**

Impact	Level of Significance Prior to Mitigation		Mitigation Measure(s)	Level of Significance After Mitigation	
	SMCS	Theatre		SMCS	Theatre
6.7-2 Freeway System – The SMCS project and Children’s Theatre would increase traffic volumes on the freeway system.	S	S	None available	SU	SU
6.7-3 Bikeways – The SMCS project and Children’s Theatre would result in the addition of employees, residents, patrons, and visitors to the site, some of whom would travel by bicycle.	LS	LS	None required	NA	NA
6.7-4 Pedestrian Facilities – The SMCS project and Children’s Theatre would result in the addition of employees, residents, patrons, and visitors to the site.	LS	LS	None required	NA	NA
6.7-5 Transit Services – The SMCS project and Children’s Theatre would increase demand for transit services.	LS	LS	None required	NA	NA
6.7-6 Parking – The SMCS project and Children’s Theatre would increase demand for parking.	PS	PS	(SMCS/Theatre) 6.7-1 In the event the TSM/Parking Management Program monitoring identifies parking demand that exceeds available supply shall make additional parking supplies available in an expeditious fashion such that parking supply is equal to or exceeds demand.	PSU	PSU

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Table 3-3

**SMCS Project
Summary of Impacts and Mitigation Measures**

Impact	Level of Significance Prior to Mitigation		Mitigation Measure(s)	Level of Significance After Mitigation	
	SMCS	Theatre		SMCS	Theatre
6.7-7 Parking – The Children’s Theatre would increase demand for oversized vehicle parking.	NA	PS	(Theatre) 6.7-2 The Children’s Theatre shall provide off-street and/or off-site parking for school buses and other oversized vehicles destined to theatre midday events without displacing occupied on-street parking spaces.	NA	LS
6.7-8 Intersections – The SMCS project would increase traffic volumes at study intersections under 2025 conditions.	S	NA	(SMCS) 6.7-3 (a) The SMCS project shall pay its fair share to fund the future construction of a traffic signal at 27 th Street and Capitol Avenue intersection. (b) The SMCS project shall pay to restripe the northbound and southbound intersection approaches at 28th Street and Capitol Avenue to provide one left turn lane and one through – right turn lane. (c) The SMCS project shall pay to add a northbound left turn lane at Alhambra Boulevard and L Street by restriping the northbound approach to provide one left turn lane and one through – right turn lane. (d) The SMCS project shall pay to convert all intersection approaches to one left turn, one through, and one right turn lane on Alhambra Boulevard and Capitol Avenue.	LS	NA
6.7-9 Freeway System – The SMCS project would increase traffic volumes on the freeway system under year 2025 conditions.	S	NA	None available	SU	NA

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**SMCS Project
Summary of Impacts and Mitigation Measures**

Impact	Level of Significance Prior to Mitigation		Mitigation Measure(s)	Level of Significance After Mitigation		
	SMCS	Theatre		SMCS	Theatre	
6.7-10 Intersections – The SMCS program and Trinity Cathedral project would increase traffic volumes at study intersections under year 2025 conditions.	S	NA	(SMCS) 6.7-4	SU	NA	
			(a)			The SMCS project shall pay its fair share to signalize the intersection at 27 th Street and Capitol Avenue.
			(b)			The SMCS project shall pay to restripe northbound and southbound intersection approaches at 28th Street and Capitol Avenue to provide one left turn lane and one through – right turn lane.
			(c)			The SMCS project shall pay to restripe the southbound intersection approach to 29th and N Streets to provide one through – right turn lane, one through lane, two left turn lanes to the freeway, and one left turn lane to N Street.
6.7-11 Freeway System – The SMCS program and Trinity Cathedral project would increase traffic volumes on the freeway system under year 2025 conditions.	S	NA	(SMCS) 6.7-5	SU	NA	
						SMCS shall pay to implement ramp metering on the southbound Business Route 80 entrance ramp from N Street.

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**SMCS Project
Summary of Impacts and Mitigation Measures**

Impact	Level of Significance Prior to Mitigation		Mitigation Measure(s)	Level of Significance After Mitigation	
	SMCS	Theatre		SMCS	Theatre
6.7-12 Intersections – The SMCS project (with Two-Way Conversion) would increase traffic volumes at study intersections under year 2025 conditions.	PS	NA	(SMCS) 6.7-6 (a) SMCS shall pay to restripe the southbound intersection approach to 28th and N Streets to provide one left turn and one through lane and restripe the westbound intersection approach to provide one through – left turn and one right turn lane.	SU	NA
			(b) SMCS shall pay to restripe the southbound intersection approach to 29th and N Streets to provide one through – right turn lane, one through lane, two left turn lanes to the freeway, and one left turn lane to N Street.		
			(c) SMCS shall pay to convert all intersection approaches to one left turn, one through, and one right turn lane at Alhambra Boulevard and Capitol Avenue.		
6.7-13 Freeway System – The SMCS project would increase traffic volumes on the freeway system under year 2025 conditions.	LS	NA	None required	NA	NA
6.7-14 Intersections – The SMCS program and Trinity Cathedral project (with Two-Way Conversion) would increase traffic volumes at study intersections under year 2025 conditions.	S	NA	(SMCS) 6.7-7 (a) SMCS shall pay to restripe the southbound intersection approach at 28th and N Streets to provide one left turn and one through lane and restripe the westbound intersection approach to provide one through – left turn and one right turn lane.	SU	NA

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**SMCS Project
Summary of Impacts and Mitigation Measures**

Impact	Level of Significance Prior to Mitigation		Mitigation Measure(s)	Level of Significance After Mitigation	
	SMCS	Theatre		SMCS	Theatre
6.7-15 Freeway System – The SMCS program and Trinity Cathedral project (with Two-Way Conversion) would increase traffic volumes on the freeway system under year 2025 conditions.	S	NA	(b) SMCS shall pay to restripe the southbound intersection approach at 29th and N Streets to provide one through – right turn lane, one through lane, two left turn lanes to the freeway, and one left turn lane to N Street. (c) SMCS shall pay to convert all intersection approaches at Alhambra Boulevard and Capitol Avenue to one left turn, one through, and one right turn lane.	SU	NA
6.7-16 Construction of the SMCS program and Trinity Cathedral project would include the temporary closure of numerous transportation facilities, including portions of City streets, sidewalks, bikeways, and off-street parking.	PS	NA	(SMCS) 6.7-8 Implement Mitigation Measure 6.7-4. (SMCS) 6.7-9 (a) Prior to beginning of construction, a construction traffic management plan shall be prepared by the project applicant to the satisfaction of the City traffic engineer. (b) The project applicant shall monitor parking occupancy on a regular basis during construction, particularly upon the closure of any parking facility. Adequate parking for patients/visitors shall be maintained at all times. As necessary, remote parking (with shuttle service) shall be provided for SMCS employees, including construction workers.	LS	NA

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**SMCS Project
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Impact	Level of Significance Prior to Mitigation		Mitigation Measure(s)	Level of Significance After Mitigation	
	SMCS	Theatre		SMCS	Theatre
6.8 Utility Systems					
6.8-1 Implementation of the SMCS project could increase demand for potable water in excess of available supplies.	LS	LS	<i>None required</i>	NA	NA
6.8-2 The SMCS project could result in inadequate treatment capacity to supply the SMCS project with no plans or processes in place for obtaining needed infrastructure.	LS	LS	<i>None required</i>	NA	NA
6.8-3 The SMCS project could result in inadequate water distribution infrastructure to supply the SMCS project with no plans or processes in place for obtaining needed infrastructure.	LS	LS	<i>None required</i>	NA	NA
6.8-4 The SMCS project could increase water demand by more than 10 million gallons per day.	NI	NI	<i>None required</i>	NA	NA
6.8-5 The SMCS project, in combination with other development in the City of Sacramento, could increase demand for one or more of the following in excess of available supplies: potable water, water treatment, water capacity, and/or water infrastructure.	LS	LS	<i>None required</i>	NA	NA

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Impact	Level of Significance Prior to Mitigation		Mitigation Measure(s)	Level of Significance After Mitigation	
	SMCS	Theatre		SMCS	Theatre
6.8-6 The SMCS project could result in or require the construction of new or expansion of existing wastewater collection or treatment facilities or exceed RWQCB requirements.	LS	LS	None required	NA	NA
6.8-7 The SMCS project could create or contribute runoff water over pre-development conditions that would exceed the capacity of existing or planned stormwater drainage systems, including the City's CSS.	LS	LS	None required	NA	NA
6.8-8 The SMCS project, in combination with other development within the CSS service area, could result in or require the construction of new or expansion of existing wastewater and stormwater collection or treatment facilities.	LS	LS	None required	NA	NA
6.8-9 The SMCS project could increase the production of solid waste in excess of available distribution or landfill capacity.	LS	LS	None required	NA	NA
6.8-10 The SMCS project could substantially increase the production of recyclable solid waste in excess of available materials recovery facility (MRF) capacity.	LS	LS	None required	NA	NA

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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	
	SMCS	Theatre		SMCS	Theatre
6.8-11 The SMCS project could generate more than 500 tons of solid waste per year.	S	LS	(SMCS) <i>None available</i>	SU	NA
6.8-12 The SMCS project, in combination with other development, could substantially increase the production of solid waste in excess of available distribution or landfill and MRF capacity without also including provisions to adequately accommodate the increased production.	LS	LS	<i>None required</i>	NA	NA

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Table 3-4

**Trinity Cathedral Project
Summary of Impacts and Mitigation Measures**

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
7.1 Aesthetics			
7.1-1 Implementation of the Trinity Cathedral project could be visually incompatible with the mass, scale, or character of existing development in the vicinity of the project area.	LS	<i>None required</i>	NA
7.1-2 Implementation of the Trinity Cathedral project could create light or glare that could affect adjacent properties.	LS	Recommended: 7.1-1 (a) <i>The configuration of exterior light fixtures shall emphasize close spacing and lower intensity light that is directed downward in order to minimize glare on adjacent uses.</i> (b) <i>Highly reflective mirrored glass or metal walls shall be avoided as a primary building material for facades.</i>	NA
7.1-3 Implementation of the Trinity Cathedral project could conflict with applicable City policies or design guidelines.	LS	<i>None required</i>	NA
7.1-4 Implementation of the Trinity Cathedral project, in combination with cumulative development within the viewshed of the project site, could alter the visual character of the Central City.	LS	<i>None required</i>	NA

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**Trinity Cathedral Project
Summary of Impacts and Mitigation Measures**

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
7.1-5 Implementation of the Trinity Cathedral project, in combination with cumulative development within the viewshed of the project site, could create light or glare that could affect adjacent properties.	LS	None required	NA
7.2 Air Quality			
7.2-1 Increase in fugitive dust from demolition of existing buildings.	STS	<p>7.2-1 The demolition contractor shall ensure that the following measures are implemented during construction activities:</p> <p>(a) The demolition contractor shall ensure that all exterior surfaces of buildings are wetted during demolition. The material from the building demolition shall be completely wetted during any period when the material is being disturbed, such as during the removal from the construction site.</p> <p>(b) All piles of demolished material shall be wetted and covered until removed from the site.</p> <p>(c) Maintain two feet of freeboard space on haul trucks.</p> <p>(d) All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at the end of each workday. (The use of dry brushes is expressly prohibited except where preceded or accompanied by sufficient water or chemical stabilizer/suppressant.)</p> <p>(e) Wheel washers for all exiting trucks shall be installed, or all trucks and equipment leaving the site shall be washed off.</p>	LS

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**Trinity Cathedral Project
Summary of Impacts and Mitigation Measures**

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
7.2-2 Increase in fugitive dust during grading of construction site.	LS	7.2-2 The construction contractor shall ensure that the following measures are implemented during construction activities: (a) Water exposed soil twice daily. (b) Maintain two feet of freeboard space on haul trucks. (c) All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at the end of each workday. (The use of dry brushes is expressly prohibited except where preceded or accompanied by sufficient water or chemical stabilizer/suppressant). (d) Wheel washers for all exiting trucks shall be installed, or all trucks and equipment leaving the site shall be washed off. (e) Excavation and grading activity shall be suspended when winds exceed 20 mph.	NA
7.2-3 Increase in NO _x generated by construction equipment.	LS	Recommended Mitigation Measures 7.2-3 The following two measures shall be incorporated into construction practices 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, will 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; and	NA

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**Trinity Cathedral Project
Summary of Impacts and Mitigation Measures**

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		<p>(b) The project 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 throughout the duration of the project, except that the monthly summary shall not be required for any 30-day period in which no</p>	<p>The project applicant or contractor shall submit to SMAQMD a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that will 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 representative shall provide SMAQMD with the anticipated construction timeline including start date, and name and phone number of the project manager and on-site foreman.</p>

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**Trinity Cathedral Project
Summary of Impacts and Mitigation Measures**

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
7.2-4 Increase in criteria pollutants associated with project operation.	LS	construction activity occurs. The monthly summary shall include the quantity and type of vehicles surveyed as well as the dates of each survey.	NA
7.2-5 Increase in CO concentrations from project-related traffic	LS	None required	NA
7.2-6 Increase in exposure of sensitive receptors to toxic air contaminants.	LS	None required	NA
7.2-7 The Trinity Cathedral project, in combination with other projects proposed within the SVAB, could result in a significant temporary cumulative impact from construction activities.	STS	7.2-4 Construction contracts shall require that construction activity shall halt when the Air Quality Index (AQI) is forecast to be in excess of 150 (Unhealthy). Construction activity shall halt two days in advance of, and extend through, the day that is forecast to be 150 or greater on the AQI chart. AQI forecasts can be found at www.sparetheair.org .	LS
7.2-8 The Trinity Cathedral project, in combination with other projects in the SVAB, could result in a cumulative impact on criteria pollutants associated with project operation.	LS	None required	NA
7.2-9 Cumulative impact of CO concentrations from project-related traffic.	LS	None required	NA
7.2-10 Cumulative impact of project-generated TACs.	LS	None required	NA

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**Trinity Cathedral Project
Summary of Impacts and Mitigation Measures**

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
<p>7.3-1 The Trinity Cathedral project could disturb or destroy unidentified subsurface archaeological resources during project construction.</p>	<p>PS</p>	<p>7.3 Cultural Resources 7.3-1 (a) The project applicant shall hire a qualified professional to prepare a formal research design and testing strategy. Testing shall be conducted prior to initiation of construction for the project. Based on the results of testing recommendations shall be provided, which may include additional testing, data recovery, and future construction monitoring. All recommendations shall be submitted to the City of Sacramento's Historic Preservation Director for approval. Should any cultural resources, such as structural features, any amount of bone or shell, artifacts, human remains, or architectural remains be encountered during any subsurface development activities, work shall be suspended within 100 feet of the find, and the City of Sacramento shall be immediately notified. At that time, the project proponent in consultation with City staff shall coordinate any necessary investigation of the site with qualified archaeologists as needed to assess the resource and provide proper management recommendations. Possible management recommendations for important resources could include resource avoidance or data recovery excavations. The contractor shall implement any measures deemed necessary for the protection of</p>	<p>LS</p>

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Trinity Cathedral Project
Summary of Impacts and Mitigation Measures

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
7.3-2 The Trinity Cathedral project could substantially adversely change the significance of a historic resource.	LS	the cultural resources. In addition, pursuant to section 5097.98 of the State Public Resources Code, and section 7050.5 of the State Health and Safety Code, in the event of the discovery of human remains, the County Coroner shall be immediately notified. If the remains are determined to be Native American, guidelines of the Native American Heritage Commission shall be adhered to in the treatment and disposition of the remains.	NA
7.3-3 The Trinity Cathedral project could directly or indirectly destroy a unique paleontological resource or unique geologic feature.	LS	(c) The project proponent shall ensure that archaeological monitoring is performed by a professional archaeologist during ground-disturbing construction activities for the duration of project construction. If resources are discovered during construction, the procedures laid out in the unanticipated Discovery Plan will be followed.	NA
7.3-4 The Trinity Cathedral project, in combination with other development in the Sacramento Valley, could disturb or destroy unidentified subsurface archaeological resources during project construction.	PS	7.3-2 Implement Mitigation Measure 7.3-1	LS

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Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
7.3-5 The Trinity Cathedral project, in combination with other development in Sacramento, could substantially adversely change the significance of a historic resource, which could result in a significant cumulative impact.	LS	None required	NA
7.3-6 The Trinity Cathedral project could substantially adversely alter paleontological resources, which could result in a significant cumulative impact.	PS	7.3-3 Implement Mitigation Measure 7.3-1	LS
7.4 Hazardous Materials and Public Safety			
7.4-1 Asbestos or lead-based paint may be present in Trinity Cathedral structures. These substances could be released to the environment during demolition if not properly removed, contained, and transported for disposal at approved sites.	PS	7.4-1 Prior to demolition of the Trinity Cathedral buildings, the project applicant shall provide written documentation to the City that ACBM and lead testing and abatement, if necessary, has been completed in accordance with applicable State and local laws and regulations.	LS
7.4-2 Demolition and site preparation activities associated with the Trinity Cathedral project (excavation, grading, trenching) have the potential to encounter previously unidentified contaminated soil or groundwater or buried debris that may contain hazardous substances.	PS	7.4-2 The following measures shall be implemented at the Trinity Cathedral project site: Prior to site preparation, the project applicant shall ensure the Trinity Cathedral site is investigated for the possible presence of hazardous materials in soil and groundwater, including underground tanks. Investigative measures shall include, but would not be limited to, a comprehensive review of historic maps and aerial photographs, Sanborn maps,	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
		<p>review of available city or county records, and consultation with knowledgeable individuals, consistent with ASTM Phase I ESA requirements. A Phase II investigation, if recommended in the Phase I ESA, shall be completed prior to site preparation.</p> <p>(a) In the event that site inspections find evidence of contamination, waste discharges, underground storage tanks, abandoned drums, or other environmental impairment at locations to be developed or in the project area, the SCEMD shall be notified. A site remediation plan shall be prepared that (1) specifies measures to be taken to protect workers and the public from exposure to potential site hazards and (2) certifies that the proposed remediation measures would clean up the contaminants, dispose of the wastes, and protect public health in accordance with federal, state, and local requirements. Commencement of work in the areas of potential hazards shall not proceed until the site remediation plan has been completed to the satisfaction of the SCEMD.</p> <p>(b) A site health and safety plan, which meets the intent of OSHA hazardous materials worker requirements, shall be prepared and in place prior to commencing work on any contaminated sites. The project applicant, through its contractor, shall ensure proper implementation of the health and safety plan.</p>	

LS = Less than Significant
SU = Significant and Unavoidable

S = Significant
STS = Short-term Significant

STSU = Short-term Significant and Unavoidable
NA = Not Applicable

PS = Potentially Significant
NI = No Impact

**Table 3-4
Trinity Cathedral Project
Summary of Impacts and Mitigation Measures**

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		(c) <i>In the event that USTs or other features or materials that could present a threat to human health or the environment are discovered during excavation and grading, construction in that immediate area shall cease immediately. A qualified professional shall evaluate the location and hazards and make appropriate recommendations. Work shall not proceed in that area until identified hazards are managed to the satisfaction of SCEMD.</i>	
7.4-3 Construction and operation of the Trinity Cathedral project would result in the limited use of hazardous materials.	LS	None required	NA
7.4-4 The proposed Trinity Cathedral project would be located two blocks from a proposed helistop serving the Women's and Children's Center.	LS	None required	NA
7.4-5 Implementation of the Trinity Cathedral project could interfere with emergency response plans and/or emergency evacuation plans.	LS	None required	NA
7.4-6 The Trinity Cathedral project, in combination with other development in the City of Sacramento, could increase the risk of exposure of people to hazardous materials.	PSTS	7.4-3 Implement Mitigation Measures 7.4-1 and 7.4-2	LS

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Table 3-4

**Trinity Cathedral Project
Summary of Impacts and Mitigation Measures**

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
7.4-7 Implementation of the Trinity Cathedral project in combination with other projects within the City involving changes in traffic circulation could interfere with emergency response plans and/or emergency evacuation plans.	LS	None required	NA
7.5 Hydrology and Water Quality			
7.5-1 Implementation of the Trinity Cathedral project could result in an increase in the rate of stormwater runoff from the project site, which could contribute to the potential for localized street flooding during large storm events.	LS	None required	NA
7.5-2 Implementation of the Trinity Cathedral project would generate stormwater runoff containing urban pollutants that could be discharged to the Sacramento River.	LS	None required	NA
7.5-3 If dewatering is required during construction, groundwater would be discharged to the City's CSS, which could affect CSS capacity and result in surface water quality impacts.	LS	None required	NA
7.5-4 The Trinity Cathedral project, in combination with cumulative development in the CSS service area, would generate stormwater runoff.	LS	None required	NA

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 NA = Not Applicable
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Table 3-4
Trinity Cathedral Project
Summary of Impacts and Mitigation Measures

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
7.5-5 Stormwater runoff from the Trinity Cathedral project, in combination with cumulative development in the CSS service area, would discharge groundwater from dewatering to the sewer.	LS	None required	NA
7.6 Noise			
7.6-1 Construction activities associated with the Trinity Cathedral project would intermittently generate noise levels above existing ambient levels in the project vicinity.	STS	7.6-1 The project applicant shall require all construction contracts include the following provisions: (a) All construction equipment shall be equipped with factory matching mufflers and in good working order. (b) All staging areas, and water tanks shall be located as far away from residential and other noise-sensitive uses as possible.	STSU
7.6-2 Construction activities could result in groundborne vibration.	LS	None required	NA
7.6-3 The Trinity Cathedral project could result in an increase in existing noise levels at existing land uses in the project vicinity.	LS	None required	NA
7.6-4 The Trinity Cathedral project, in addition to other development in the vicinity of the project area, could add to a cumulative increase in noise levels.	LS	None required	NA

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 STS = Short-term Significant

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Table 3-4

**Trinity Cathedral Project
Summary of Impacts and Mitigation Measures**

Impact	Level of Significance Prior to Mitigation	7.7 Transportation and Circulation		Level of Significance After Mitigation
		Mitigation Measure(s)		
7.7-1 Intersections – The Trinity Cathedral project would increase traffic volumes at study intersections.	LS	None required		NA
7.7-2 Freeway System – The Trinity Cathedral project would increase traffic volumes on the freeway system.	S	None available		SU
7.7-3 Bikeways – The Trinity Cathedral project would result in the addition of employees, Church members, and visitors to the site, some of whom would travel by bicycle.	LS	None required		NA
7.7-4 Pedestrian Facilities – The Trinity Cathedral project would result in the addition of employees, church members, and visitors to the site.	LS	None required		NA
7.7-5 Transit Services – The Trinity Cathedral project would increase demand for transit services.	LS	None required		NA
7.7-6 Parking – The Trinity Cathedral project would increase demand for parking.	PS	7.7-1 Implement Mitigation Measure 6.7-1.		PSU
7.7-7 Intersections – The Trinity Cathedral project would increase traffic volumes at study intersections under 2025 conditions.	LS	None required		NA

LS = Less than Significant S = Significant STSU = Short-term Significant and Unavoidable PS = Potentially Significant
 SU = Significant and Unavoidable STS = Short-term Significant NA = Not Applicable

Table 3-4

**Trinity Cathedral Project
Summary of Impacts and Mitigation Measures**

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
7.7-8 Freeway System – The Trinity Cathedral project would increase traffic volumes on the freeway system under 2025 conditions.	S	None available	SU
7.8 Utility Systems			
7.8-1 The Trinity Cathedral project could increase the demand for potable water in excess of available supplies.	LS	None required	NA
7.8-2 The Trinity Cathedral project could result in inadequate water treatment capacity with no plans or processes in place for obtaining needed infrastructure.	LS	None required	NA
7.8-3 The Trinity Cathedral project could result in inadequate distribution infrastructure with no plans or processes in place for obtaining needed infrastructure.	LS	None required	NA
7.8-4 The Trinity Cathedral project could increase water demand by more than 10 million gallons per day.	NI	None required	NA
7.8-5 The Trinity Cathedral Project, in combination with other development in the City of Sacramento, could increase demand for one or more of the following in excess of available supplies: potable water, water treatment capacity, and/or infrastructure.	LS	None required	NA

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Table 3-4

**Trinity Cathedral Project
Summary of Impacts and Mitigation Measures**

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
7.8-6 The Trinity Cathedral project could result in or require the construction of new or expansion of existing wastewater collection or treatment facilities or exceed RWQCB requirements.	LS	None required	NA
7.8-7 The Trinity Cathedral project could create or contribute runoff water over pre-development conditions that would exceed the capacity of existing or planned stormwater drainage systems, including the City's CSS.	LS	None required	NA
7.8-8 The Trinity Cathedral Project, in combination with other development within the CSS service area, could result in or require the construction of new or expansion of existing wastewater and stormwater collection or treatment facilities.	LS	None required	NA
7.8-9 The Trinity Cathedral project could substantially increase the production of solid waste in excess of available distribution or landfill capacity.	LS	None required	NA
7.8-10 The Trinity Cathedral project could substantially increase the production of recyclable solid waste in excess of available Material Recycling Facility (MRF) capacity.	LS	None required	NA

LS = Less than Significant S = Significant STSU = Short-term Significant and Unavoidable PS = Potentially Significant
 SU = Significant and Unavoidable STS = Short-term Significant NA = Not Applicable NI = No Impact

Table 3-4

**Trinity Cathedral Project
Summary of Impacts and Mitigation Measures**

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
7.8-11 The Trinity Cathedral project could generate more than 500 tons of solid waste per year.	NI	None required	NA
7.8-12 The Trinity Cathedral project, in combination with other development, could substantially increase the production of solid waste in excess of available distribution or landfill and MRF capacity without also including provisions to adequately accommodate the increased production.	LS	None required	NA

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Chapter 4 Land Use and Planning Analysis

Chapter 4 Land Use and Planning Analysis

INTRODUCTION

This chapter of the EIR provides an overview of the land use and planning effects that may result from development of the SMCS project and the Trinity Cathedral project. CEQA does not recognize land use, socio-economic or population, employment or housing 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. An EIR may provide information regarding land use, planning and socio-economic effects; however, CEQA does not recognize these issues as typical environmental impacts on the physical environment. 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 Chapters 6 and 7 of this EIR (see Sections 6.1 through 6.8 for the SMCS project and Sections 7.1 through 7.8 for the Trinity Cathedral project). Chapter 8 addresses project alternatives.

This chapter describes the existing and planned land uses within the SMCS project area, and in the project vicinity, including the 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 SMCS project and the Trinity Cathedral project and the City of Sacramento General Plan, the Central City Community Plan, and the City's Comprehensive Zoning Ordinance are evaluated in this chapter. Documents referenced include the City's General Plan, the Central City Community Plan, and the City's Zoning Ordinance.

No specific areas of concern relating to land use or planning issues were raised in comment letters received in response to either the first Notice of Preparation (NOP) (October 2003) or the Revised NOP (January 2004) (see Appendices B and D). The Initial Study (see Appendix E) determined that no agricultural resources would be significantly impacted by the SMCS project or the Trinity Cathedral project. Therefore, this issue will not be discussed further in this EIR.

ENVIRONMENTAL SETTING

Project Location and Vicinity Characteristics

The SMCS project area encompasses a geographic area that is roughly bounded by 26th Street to the west, N Street to the south, K Street to the north, and 30th Street to the east, shown in Figure 4-1.

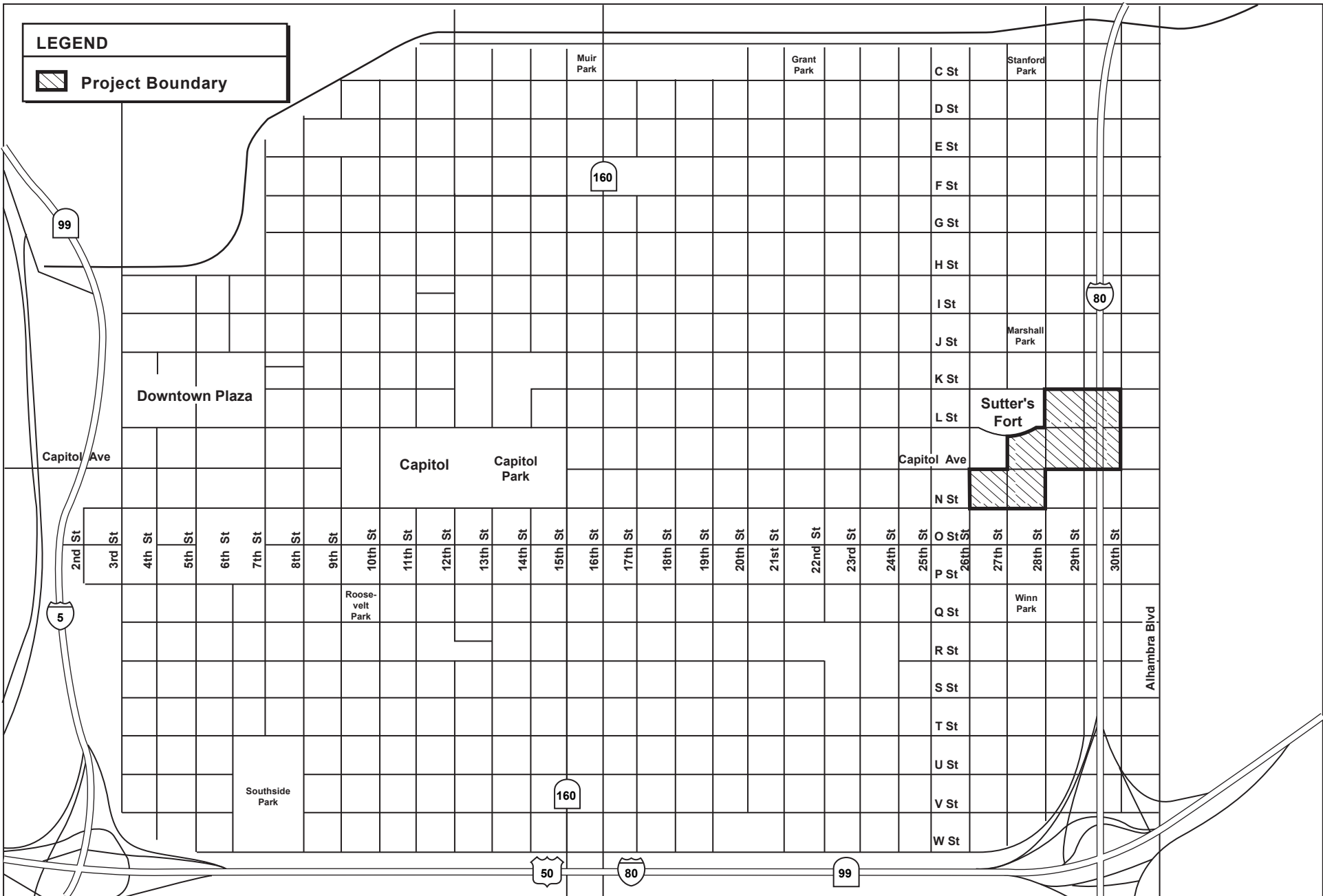


FIGURE 4-1
Project Site Boundaries

10828-02

Source: EIP Associates 2003

Not to Scale



Sutter Medical Center, Sacramento

The project area includes elements on a total of seven (7) blocks, as shown on Figure 4-2 as described below.

- The existing Sutter General Hospital bounded by K Street to the north, L Street to the south, 29th Street to the east, and 28th Street to the west.
- The block bounded by L Street to the north, 29th Street to the east, Capitol Avenue to the south, and 28th Street to the west, which includes the existing Buhler Building, the Old Tavern Building, Sutter's Energy Center, and a surface parking lot (proposed Women's and Children's Center project site). The Buhler Building and Old Tavern Building will remain.
- The approximately half block located west of 28th Street between L Street and Capitol Avenue, which contains the House of Furs building, MTI office buildings and vacant lots (proposed SMF Building site). Pioneer Church and the senior housing complex will remain.
- The block bounded by Capitol Avenue to the north, 28th Street to the east, N Street to the south, and 27th Street to the west, which contains the Trinity Apartments, surface parking, EAP building, vacant lot, and a large surface parking lot (proposed Community Parking Structure and Retail/Commercial site). Café Bernardo's, the Monkey Bar, and a physical therapy business located on the northeast corner of the block will remain.
- The approximately half block bounded by Capitol Avenue to the north, N Street to the south, 26th Street to the west, and 27th Street to the east, which contains St. Luke's Medical Office Building and parking garage (proposed new residential development, currently St. Luke's parking garage). The two small apartment buildings will remain.
- The two blocks containing existing parking lots leased from Caltrans located under the Capital City Freeway between K Street and Capitol Avenue, 29th and 30th Streets.

Existing land uses in the project vicinity include medical offices, Regional Transit (RT) service center, restaurants, churches, Sutter's Fort State Historic Park, small apartment buildings, a senior housing project, older Victorian residences, and office space. See Figure 2-1 in Chapter 2, Project Description, which identifies existing land uses in the vicinity of the project area.

Land Use and Zoning Designations

The existing City of Sacramento General Plan land use designations for the SMCS project area include Regional Commercial & Offices (RCO), Community/Neighborhood Commercial & Offices (CNCO), High Density Residential (HDR), and Public/Quasi-Public-Miscellaneous unicipal (PQPM), as shown in Figure 2-4 in Chapter 2, Project Description.

The existing Central City Community Plan (CCCP) land use designations include Residential Office (RO), General Commercial (GC), and Multi-Family Residential (MF), shown on Figure 4-3. The CCCP does not include definitions for these land use designations.

- 01. Sutter General Hospital
- 02. Buhler Building (Sutter Cancer Center)
- 03. Surface Parking Lot
- 04. Energy Center
- 05. Old Tavern Parking
- 06. (Former)RAS Building
- 07. Old Tavern Building
- 08. Vacant Lot
- 09. Vacant Lot
- 10. MTI Office Building C
- 11. MTI Office Building B
- 12. MTI Office Building A
- 13. House of Furs Building
- 14. Medical Office Building
- 15. Surface Parking Lot
- 16. Vacant Lot
- 17. Trinity Apartments
- 18. Surface Parking
- 19. EAP Building
- 20. Vacant Lot
- 21. Surface Parking (includes 7 lots)
- 22. St. Luke's Medical Office Building
- 23. St. Luke's Parking Structure
- 24. North Parking Lot
- 25. South Parking Lot
- 26. Trinity Cathedral

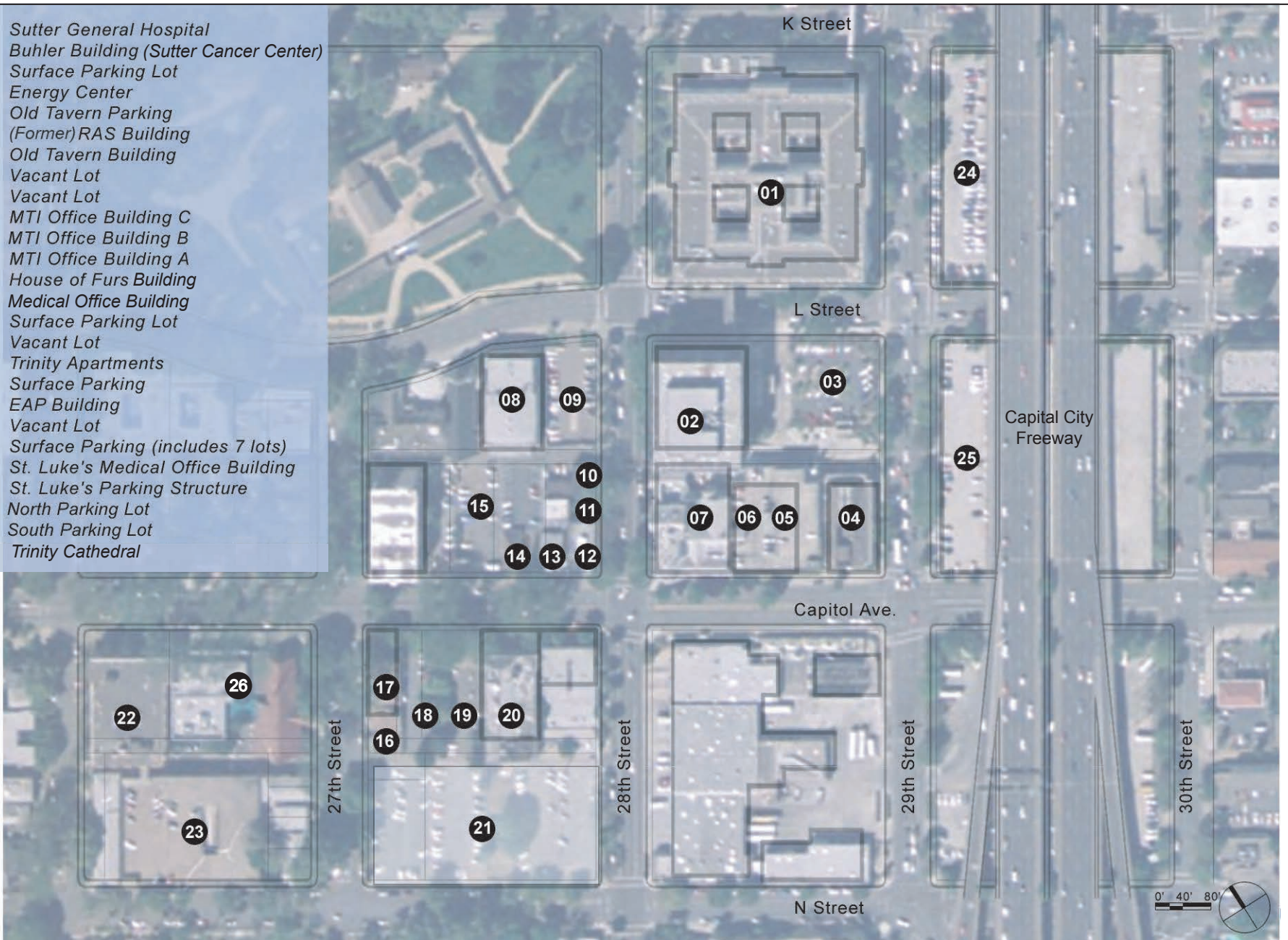


FIGURE 4-2
Existing Building Uses



10828-02

Source: KMD Architects 2004

Not to Scale



Sutter Medical Center, Sacramento

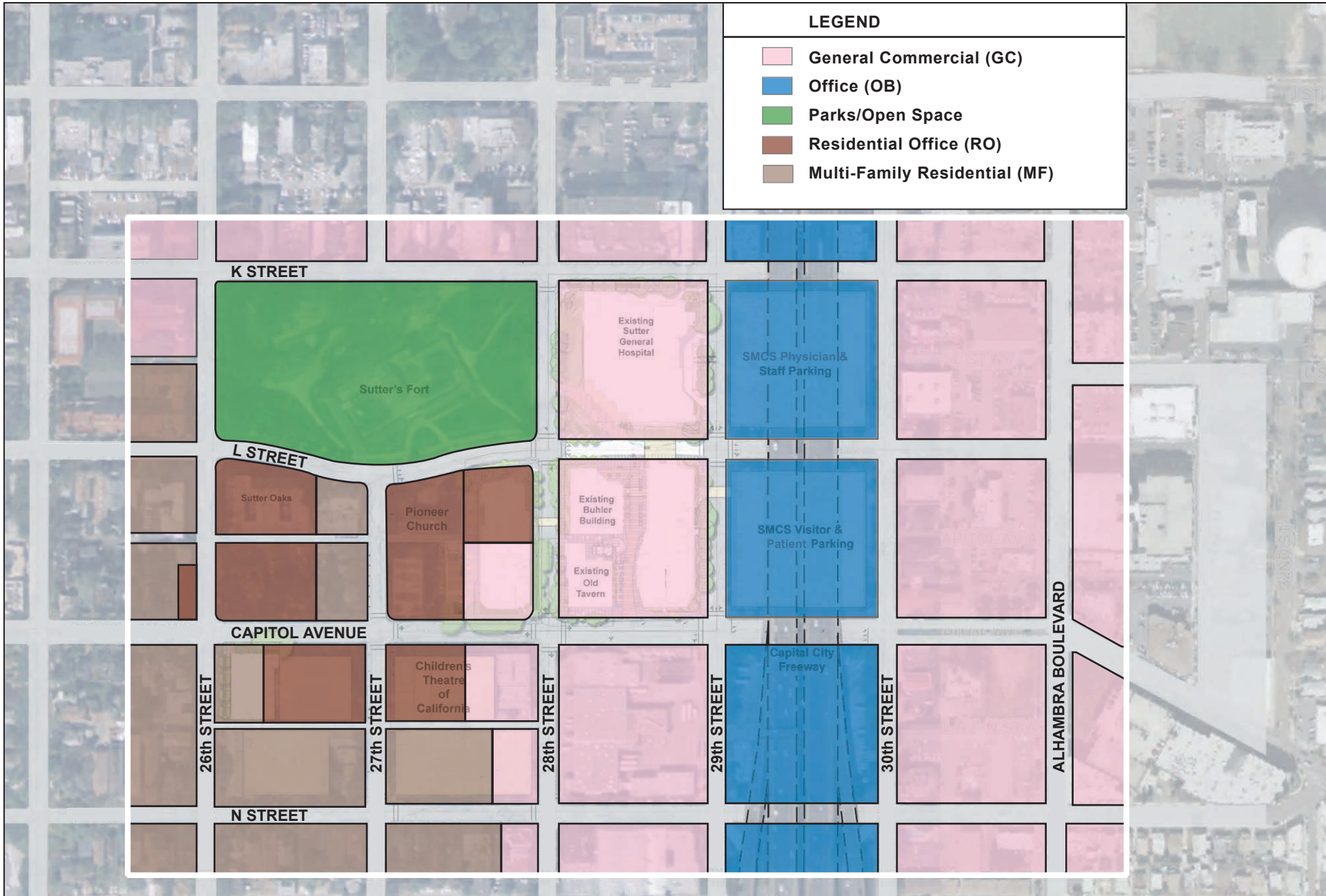


FIGURE 4-3
Central City Community Plan Land Use Designations



10828-02

Source: City of Sacramento, GIS, 2005

Not to Scale



Current zoning for the SMCS project includes Hospital (H-SPD), Transportation Corridor (TC-SPD), Office (OB-SPD), General Commercial (C-2-SPD), Commercial (C-2-R-SPD -W/C), Multi-Family Residential (R-3-A-SPD), and Residential Office (RO-SPD), as shown on Figure 2-5 in Chapter 2, Project Description.

The existing General Plan and Community Plan land use designations and zoning for the Trinity Cathedral project include HDR, RO, and RO-SPD, as shown in Figures 2-4, 2-5 and 4-3.

REGULATORY SETTING

Federal and State

There are no applicable federal or State agencies, plans or policies that oversee local planning issues.

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 and brought local issues into a contemporary framework for action. The General Plan is a 20-year policy guide for physical and economic growth and renewal of the City. A total of ten sections are contained within the SGPU. Each section 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.

Goals and Policies for Medical Facilities

Goal A	Support a balanced system of quality medical facilities.
Policy 1	In reviewing medical facility proposals coordinate with other agencies that are responsible for planning medical facilities to meet the health care needs of Sacramento.
Policy 2	Advocate the retention of hospitals in areas with the greatest need or seek alternative methods to provide these services.
Policy 3	Evaluate medical facility proposals considering capacity, convenience to population served, impacts on adjoining uses, the medical needs of the area and proximity to existing and proposed transit services.

General Housing Supply Policies

- Policy 1.B The City shall maintain an adequate supply of appropriately zoned land with public services to accommodate the projected housing needs in accordance with the General Plan as updated.

- Policy 1.C The City shall ensure that its adopted policies, regulations and procedures do not add unnecessarily to the cost of housing while still attaining other important City objectives.

- Policy 1.E The City shall continue to promote appropriate and compatible infill housing.

- Policy 1.G The City shall continue to support well designed and compatible second units and carriage homes, and other non conventional housing opportunities such as artist live-work spaces.

- Goal 5 Housing Quality and Neighborhood Improvement
 - Policy 5.A The City shall expand the design review program to encourage residential development of high architectural and structural quality which is compatible with neighboring land uses.

 - Policy 5.B The City shall continue to work with neighborhood residents in ensuring that all our neighborhoods are safe, decent and pleasant places to live and work. This includes working with schools, community oriented policing, addressing problem properties, and ensuring new development is compatible with existing neighborhoods.

 - Policy 5.D Promote quality residential infill development in infill areas or designated infill sites through flexible development standards.

- Goal 6 Conserve Sacramento Neighborhoods and Rehabilitate Affordable Housing
 - Policy 6.A Revitalize and improve the quality of existing Sacramento neighborhoods.

Goals, Policies, Actions for Streets and Roads

- Goal C Create and maintain a street system which protects residential neighborhoods from unnecessary levels of traffic.
 - Policy 1 Continue wherever possible to design streets and to approve development applications in such a manner as to eliminate high traffic flows and parking problems within residential neighborhoods.

- Goal D Work towards achieving an overall Level of Service C on the City's local and major street systems.
 - Policy 1 Assess the impacts of land use decisions on the surrounding City street system.

Goals, Policies, Actions for Transportation Systems Management

Goal A Increase the commute vehicle occupancy rate by fifty percent.

Policy 1 Encourage and support programs that increase vehicle occupancy.

Central City Transportation

Goal A Provide a street system within the Central City which ensures the safe and efficient movement of people and goods consistent with other transportation needs.

Goal C Develop a balanced transportation system which will encourage the use of public transit, multiple occupancy of the private automobile, and other forms of transportation.

Policy 3 Consider the use of pedestrian pathways that can support the efficient movement of people, new development, and adopted Central City Design Concepts.

Goal D Provide an adequate amount of parking to support continued downtown development prosperity, alternative modes of transportation, and the Central City Urban Design Plan.

Policy 1 Provide additional parking as part of development projects and in free standing parking structures.

Goals, Policies, Actions for Parking

Goal A Provide adequate off-street parking for new development and reduce the impact of onstreet parking in established areas.

Policy 1 Continue to use parking standards which will provide adequate off-street parking.

Goals, Policies, Actions for Pedestrianways

Goal A Increase the use of the pedestrian mode as a mode of choice for all areas of the city.

Policy 1 Require new subdivisions and planned unit developments to have safe pedestrian walkways that provide direct links between streets and major destinations such as bus stops, schools, parks, and shopping centers.

Policy 3 Encourage existing and new commercial and office establishments to develop and enhance pedestrian pathways using planting, trees and creating pedestrian crosswalks through parking areas or over major barriers such as freeways or canals.

Goals, Policies, Actions for Airports

Policy 4 Limit helicopter usage to existing and designated areas determined by the Helicopter Ordinance for the City of Sacramento.

Comprehensive, Citywide Preservation Program

Goal A To Maintain a Comprehensive, Citywide Preservation Program

Policy A.1 The City shall promote the recognition, preservation, and enhancement of historic and cultural resources throughout the city.

Policy A.2 The City shall promote the preservation, restoration, enhancement, and recognition of historic and cultural resources. Historic and cultural resources include not only sites and structures, but also features such as infrastructure (e.g., bridges, canals, roads, and trails), signs, landscaping and trees, open space areas, lighting, and hardscape (e.g., sidewalks, paving) that are important to the overall context.

Policy A.6 The City shall encourage preservation of historic and cultural resources to promote sustainability of its neighborhoods.

Policy A.7 The City shall consider historic and cultural resources in its long-term comprehensive planning efforts. To this end, the City shall incorporate specific preservation goals, policies, and programs into Community Plan updates and neighborhood planning efforts, as appropriate.

Policy A.10 The City should support public, quasi-public, and private entities in their preservation efforts.

Policy A.11 The City shall explore public/private partnerships in its preservation program efforts, including partnerships with business and education interests, and expansion of shared missions with Sacramento Heritage, Inc.

Resource Preservation

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

Policy B.2 The City shall review new development, alterations, and rehabilitation/remodels in design review areas, preservation areas, and other areas of historic resources for compatibility with the surrounding historic context.

Policy B.3 The City shall establish and maintain preservation areas to provide for the preservation and restoration of those areas that are of historic, cultural, or architectural significance.

Policy B.6 The City shall promote the conservation of historic neighborhoods to encourage preservation of structures and other features. In these areas, the City shall encourage the maintenance or reconversion of

4.0 Land Use and Planning

parkway strips to landscaping, maintenance and replication of historic sidewalk patterns, use of historic street lamps and street signs, and maintenance or restoration of historic park features.

- Policy B.8 The City shall regard demolition of historic resources as a last resort, to be permitted only after the City determines that the resource retains no reasonable economic use, that demolition is necessary to protect health, safety, and welfare, or that demolition is necessary to proceed with a new project where the benefits of the new project outweigh the loss of the historic resource.
- Policy B.9 The City shall protect heritage trees as important historic resources.
- Policy B.10 The City shall seek to minimize or avoid adverse impacts to historic and cultural resources from natural disasters. To this end, the City shall promote City of Sacramento seismic safety, flood protection, and other building programs that preserve, enhance and protect these resources.

Archaeological Resources

Goal E To Identify and Protect Archaeological Resources that Enrich our Understanding of the Early Sacramento Area

- Policy E.3 The City shall not knowingly approve any public or private project that may adversely affect an archaeological site without first consulting the North Central Information Center of the California Historical Resources Information System, requiring a site evaluation as may be indicated, and attempting to mitigate any adverse impacts according to the recommendations of a qualified archaeologist. City implementation of this policy shall be guided by Section 15064.5 of the CEQA Guidelines (March 1999) or relevant sections as amended. To this end, the City shall require that upon discovery of archaeological resources during excavation or construction, all construction affecting the site shall cease and the contractor shall contact the City Preservation Office or City Environmental Coordinator.

Incentives

Goal F To Provide Incentives to Encourage Owners of Historic Properties to Preserve and Rehabilitate their Properties

- Policy F.4 The City shall encourage the adaptive reuse of historic resources where appropriate.
- Policy F.5 The City shall ensure that its regulations and policies support, encourage, and ease the process for historic rehabilitation and renovations.

The land use designations of the SGPU define the appropriate types, densities, and function of uses for each land use designation. The SGPU designates the SMCS project and Trinity Cathedral project site for PQPM, RCO, CNCO, and HDR. The following land use designations are defined by the Sacramento General Plan as follows:

PQPM – This definition is not specifically provided in the General Plan but is used for hospitals, airports, the City’s convention center, the Army Depot, etc.¹

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.

CNCO – Includes shopping centers (less than 200,000 square feet), commercial strips, and smaller office developments which offer goods and services for the daily needs of adjacent residential areas. These uses may be located adjacent to residential areas without significant adverse impacts.

HDR - This designation refers to areas planned for development that consists of a mixture of residential densities along with limited commercial or office use. The density range for this residential category is from 30 to 156 units per net acre. This type of development is most commonly found within the Central City and in select areas along major streets in other portions of the city. Although this designation indicates predominantly residential uses other uses may be allowed as indicated in the community plans.

Sacramento 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 following is a list of goals and policies from the CCCP that are applicable to the SMCS project and Trinity Cathedral 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.

Housing and Residential Goal:

Provide the opportunity for mixture of housing with other uses in the same building or site at selected locations to capitalize on the advantages of close-in living.

Provide rental and homeownership opportunities to meet the needs of elderly persons, low and moderate income families, and other groups with specialized housing needs.

1 Written communication, Mark Kraft, City of Sacramento, March 17, 2005.

Transportation Goal:

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.

Community Services and Facilities Goals:

Continue to maintain and improve the existing level of public services, libraries, senior citizen facilities, and public health facilities.

Encourage the establishment of adequate neighborhood facilities, such as community recreation and youth centers to serve community needs.

Environment Goals:

Reduce the impact of traffic upon residential neighborhoods and discourage where possible through traffic in residential areas.

Support programs for the preservation of historically and architecturally significant structures which are important to the unique character of the Central City.

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 and divides the city into zones of such shape, size, and number best suited to carry out these regulations, and to provide for their enforcement.

The project area that includes the SMCS project site and the Trinity Cathedral project site is zoned for a variety of uses including Hospital (H-SPD), General Commercial (C-2-SPD), Office (OB-SPD), Residential Office (RO-SPD), Commercial (C-2-R-SPD-W/C), and Multi-Family

Residential (R-3-A-SPD). These designations taken from the zoning ordinance are defined below.

H--Hospital Zone. This zone is designed primarily for medically-related services such as hospitals and convalescent homes, and for group care facilities for the physically and mentally handicapped. In addition, medical offices, laboratories, and pharmacies are also permitted.

C-2--General Commercial Zone. This is a general commercial zone which provides for the sale of commodities, or performance of services, including repair facilities, offices, small wholesale stores or distributors, and limited processing and packaging.

OB--Office Zone. This is a zone designed to permit development of business office centers, and institutional or professional buildings, wherein the normal development of mixed commercial uses would not be appropriate.

RO--Residential-Office Zone. This is a medium density multiple family zone, generally located inside the central city and in certain areas adjacent thereto. The zone permits development of office uses subject to the granting of a special permit by the planning commission. The special permit allows city review of the project to ensure that the proposed office use is compatible with adjacent residential uses. Maximum density in the RO zone is thirty-six (36) dwelling units per acre.

R-3A--Multi-Family Zone. This is a multi-family residential zone located in the central city and certain areas adjacent thereto. It is designed to provide development regulations that are consistent with goals for various residential areas in the central city. Minimum land area per unit is one thousand two hundred (1,200) square feet. Maximum density for the R-3A zone is thirty-six (36) dwelling units per acre.

The zoning code designates several Special Planning Districts (SPD) within the City of Sacramento. The SPD designation means that the property is subject to the requirements set forth in the City Code and a SPD ordinance adopted specifically for the property. Relevant provisions of the SPD designation include:

Chapter 17.104 Alhambra Corridor Special Planning District

The goals of the Alhambra Corridor SPD are as follows:

- A. Maintain and improve the character, quality and vitality of individual neighborhoods.
- B. Maintain the diverse character and housing opportunities provided in these urban neighborhoods.
- D. Maintain the neighborhood character of existing commercial neighborhoods while allowing for limited office to serve the medical complex in this area.

Section 17.104.020 Alhambra Corridor special regulations and restrictions

- F. Residential Preservation Transition Buffer Area Zone
 - 1. General Rule. Except as provided below, any development in any zone that is located within three hundred (300) feet of a residential zone (measured from the street centerline) shall not exceed thirty-five (35) feet in height. The intent of this restriction

buffer zone to protect residential neighborhoods from visual intrusion by new development that is out of scale with the adjacent residential neighborhood.

2. Exception. The planning commission may approve a special permit for a development between J Street and S Street for additional height provided that the height may not exceed the limits established by Chapter 17.60 of this title. To approve this special permit, the planning commission must find that, in addition to meeting the requirements of Chapter 17.212 of this title, the development will not be out of scale with the adjacent residential neighborhood. Examples of instances where the intent of the buffer zone may be maintained while allowing additional height would include, but are not limited to the following:
 - a. Less than fifty (50) percent of the parcel upon which the building is located within the three hundred (300) foot transition buffer area, and the entire portion of the building for which the additional height is requested is located at least two hundred (200) feet from residentially zoned property;
 - b. Design features that reduce the walled effect on adjacent smaller scaled residential development are included; and
 - c. Development is compatible in height and scale with adjacent residential neighborhoods.

Central City Neighborhood Design Guidelines

The Central City Neighborhood Design Guidelines are part of the City's Design Review Program and are intended to provide design guidance for projects in a way that respects and enhances existing neighborhoods and ensures that building design is compatible with its surroundings in terms of scale, mass, building patterns and details. The Guidelines articulate an urban design vision for Central City neighborhoods and corridors to be used by neighborhood residents, City staff, the Design Review and Preservation Board, and City Planning Commission in the review of proposals for new development, building additions, alternations and public improvements within the Central City Design Review District (bounded by the Sacramento River, the Union Pacific mainline, Alhambra Boulevard, and Broadway). The SMCS project area is located within the Fremont School subdistrict of the Central City Neighborhood Design Guidelines. The Fremont School subdistrict is roughly bounded by J Street on the north, the Capital City Freeway on the east, Q Street on the south, and 21st Street on the west. The proposed SMCS project area is also located within the Alhambra Corridor Special Planning District and is subject to both the Alhambra Corridor Design Guidelines and the Central City Neighborhood Design Guidelines.

Alhambra Corridor Design Guidelines

The Alhambra Corridor Design Guidelines were developed by the City to address the form and function of the Alhambra Corridor as a whole, as well as each neighborhood. The guidelines were intended to ensure the proper relationship and connection with surrounding development between neighborhoods in the Alhambra Corridor, East Sacramento and Midtown. Within the Alhambra Corridor, the Midtown portion contains a variety of styles. According to the Design Guidelines, landscaping is an important design element of any building, and can be used to soften the building edge and, to a degree, offset the scale of a building. Appropriate landscaping can also help define new and existing pedestrian paths as well as provide a canopy for the pedestrian.

F. Landscape Element

The following provisions and tree species have been identified for use in the Alhambra Corridor Design Guidelines to ensure a healthy environment for landscape features and corridors.

Tree Planting Standards

Where there are existing trees present, tree planting areas should provide a minimum of 10 feet of unexcavated or minimally excavated soils area radiating from the curbside of sidewalk directly behind the tree. Soil depth shall be a minimum of 4 feet from the surface unless otherwise stated. This area shall not be subject to excavation greater than 12". Where there are no existing trees, tree planting areas should provide a minimum of 10 feet of soil area radiating from the curbside of sidewalk directly behind the tree planting location with a minimum depth of 4 feet from the surface unless otherwise stated. Street trees will be required.

Ten-foot setback for the third story and above (10' measured from back edge of sidewalk) in addition to an 8' planting strip and sidewalk width.

Encourage park strips in back of curb between the sidewalk and street, and encourage large shade trees.

SMCS Project and Trinity Cathedral Project Elements

As detailed in Chapter 2, Project Description, and discussed above, the SMCS project is proposed on sites with four different General Plan land use designations. Development under the SMCS project would require an amendment to the City's General Plan to change the land use designations on one full block and half of another block. The block that includes the St. Luke's Medical Office Building parking garage along with Trinity Cathedral is designated for High Density Residential (HDR) uses. The HDR designation for these uses would not change, as shown in Table 4-1.

Development under the CCCP would also require an amendment to change parcels designated for Multi-Family Residential (MF) to General Commercial (GC) and some parcels currently designated for Residential Office (RO) to GC. All of these parcels would also be re-zoned from Multi-Family Residential (R-3-A) to General Commercial (C-2). Those parcels designated RO would be re-zoned to C-2.

General Plan and CCCP land use changes for the SMCS project and the Trinity Cathedral project are shown in Table 4-1.

Table 4-1
Changes in Land Use Designations

Project Component	Existing SGPU	Amended SGPU	Existing CCCP¹	Amended CCCP
WCC	RCO	APN # 007-0173-001, -002, -003 change to PQPM	GC	No change
SMF Building	RCO	No change	RO, GC	Change RO to GC
Community Block ²	HDR, CNCO	APN # 007-0166-016, 007-0172-001, 002, 003, 004, 014, 016, 018, 019 change HDR to CNCO	RO, GC, MF	Change RO and MF to GC
Future MOB	HDR	CNCO	MF	Change MF to GC
Housing	HDR	No change	MF	No change
Trinity Cathedral	HDR	No change	RO	No change

Notes:

1. CCCP = Central City Community Plan.

2. Community Block = Community Parking Structure and Retail/Commercial.

Source: City of Sacramento General Plan, last amended 1994; Sacramento Central City Community Plan, 1980.

LAND USE EVALUATION

Methods of Analysis

The SMCS project and the Trinity Cathedral project are both evaluated for compatibility with the existing and planned land uses, consistency with zoning and applicable policies, including the City's General Plan and CCCP. Environmental impacts resulting from either project are discussed in the respective environmental sections in Chapters 6 and 7 (e.g., Section 6.7, Transportation and Circulation for significant traffic impacts associated with the SMCS project and Section 7.7 for the Trinity Cathedral project). An inconsistency is identified if either project is inconsistent with the City's Comprehensive Zoning Ordinance or any applicable adopted plan. This section differs from other discussions in that only plan consistencies are addressed, 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 SMCS project and the Trinity Cathedral project are evaluated for compatibility with existing and planned land uses adjacent to the different project sites. The evaluation considers the type and intensity of uses in the project vicinity. The analysis evaluates each project against the existing environment and determines if it is compatible with those existing and planned uses surrounding the project sites. As stated above, the respective environmental sections are referred to for discussion of any potential physical/environmental impacts that are identified and potential incompatibilities may be considered in the determination of physical environmental impacts identified in the technical sections of this document.

Long-term incompatibilities arise when adjacent land uses result in activities that could conflict with each other. For example, land uses that produce excessive noise, light, dust, odors, traffic, or hazardous emissions may be undesirable when they intrude on places where people sleep and recreate (residences and parks). Therefore, some industrial or agricultural uses (which can produce noise, odor, and so on) would not be considered compatible with residential uses, unless buffers, landscaping or screening can be used to protect residents from health hazards or nuisances.

Consistency with Adopted Plans, Policies, and Zoning

This chapter discusses any inconsistencies between the two projects and the adopted land use designations related to the various project sites. This consistency analysis considers the adopted goals and policies of the General Plan and the CCCP. Regional plans, such as the Sacramento Area Regional Ozone Attainment Plan, are addressed in the applicable technical section of this EIR.

The projects are compared to the City's Comprehensive Zoning Ordinance to identify any inconsistencies. An inconsistency with the zoning ordinance does not constitute a physical environmental impact. Zoning inconsistencies may be eliminated in one of two ways: (1) change an element of the project to be consistent with the zoning requirements (e.g., modify parking spaces to be consistent with the minimum standards), or (2) grant approval of a variance or appropriate entitlement to modify or waive the zoning ordinance requirements. No environmental threshold exists for this category, as it does not result in a direct physical change in the environment.

Compatibility and Consistency Analysis

Compatibility with Existing and Planned Adjacent Land Uses

This section focuses only on compatibility with existing and planned adjacent land uses.

SMCS Project

Implementation of the SMCS project would re-develop urban land for medical or community uses. The SMCS project is currently seeking development entitlements to construct a new Women's and Children's Center (WCC), two new medical office buildings with associated parking, residential uses, and a community parking garage that also includes a retail /commercial component. A complete description of the various components of the SMCS project is included in Chapter 2 of this EIR. The SMCS project area is located within the City of Sacramento's jurisdiction and has been designated for future development both under the City's General Plan and the CCCP.

Existing land uses, as shown on Figure 2-3 in Chapter 2, project Description, include the following uses identified by each proposed new building described below.

Women's and Children's Center (WCC)

Uses immediately adjacent to the proposed WCC building site on the same block include the Buhler Building, which houses the Sutter Cancer Center and the existing Radiation Oncology Center (ROC) located below-grade (beneath the surface parking lot) on the northeast portion of the block; the existing hospital's Energy Center building; the (former) RAS medical office; and the Old Tavern parking garage and the historic Old Tavern building, located on the southwest portion of that block. The Energy Center, (former) RAS medical office building, surface parking lot, and Old Tavern parking garage are all proposed to be removed to accommodate construction of the WCC (see Figure 2-6 in Chapter 2, Project Description).

Uses surrounding the new WCC site include Sutter General Hospital to the north across L Street; Capital City Freeway and parking to the east across 29th Street; the Buhler Building and Old Tavern building to the west; and Regional Transit Bus Service Center to the south across Capitol Avenue.

Sutter Medical Foundation Building (SMF Building)

Uses presently located on the SMF Building project site include small surface parking lots, the MTI office buildings, the House of Furs building, and a private third-party medical office. All of these uses would be removed to accommodate construction of the SMF Building (see Figure 2-11 in Chapter 2).

Existing uses adjacent to the proposed SMF Building include the Buhler Building and the Old Tavern building to the east across 28th Street; restaurants, including Café Bernardo's and the Monkey Bar to the south across Capitol Avenue; senior housing and Pioneer Church to the west; and Sutter's Fort State Historic Park to the north.

Future Medical Office Building (Future MOB), Residential, and Trinity Cathedral

This block currently includes Trinity Cathedral and the adjacent administration/multi-purpose space east of St. Luke's Medical Office Building, and two small apartment buildings adjacent to both the east and west sides of the St. Luke's parking structure along N Street. With the exception of the apartment buildings, all of these uses would be removed to accommodate construction of the Future MOB, residential units, and a new cathedral and adjacent administrative space as part of the Trinity Cathedral project (see Figure 2-20 in Chapter 2).

Existing adjacent uses include residences and offices to the north across Capitol Avenue; residences to the west across 26th Street, and to the south across N Street; a small apartment building and a surface parking lot are located to the east across 27th Street on the site of the proposed Community Parking Structure and future Children's Theatre of California.

Community Parking Garage and Retail/Commercial

This block currently includes two restaurants (Café Bernardo's and the Monkey Bar), Capitol Physical Therapy, EAP Building, surface parking lots, and Trinity Apartments.

Community Parking Structure

Existing uses on this half-block include a large surface parking lot.

Existing uses adjacent to the proposed Community Parking Structure site include Trinity Cathedral and a small apartment building to the west; senior housing, general and medical office buildings, and the House of Furs building to the north; Regional Transit Bus service center to the east; and a restaurant (Ink Eats and Drinks), bakery and residential uses to the south across N Street.

Compatibility Analysis

During project construction, the area in and around the project vicinity could experience short-term temporary impacts from noise, dust, and construction traffic as the sites are developed. According to the construction schedule (see Chapter 2), project construction would be phased to minimize disruption to the neighborhood; however, there could be some overlap between construction schedules. Impacts associated with project construction are analyzed in the appropriate technical sections of this EIR (see Section 6.2 Air Quality, Section 6.6, Noise and Section 6.7, Transportation and Circulation). As mentioned earlier, long-term incompatibilities arise when adjacent land uses result in activities that could conflict with each other. For example, land uses that produce excessive noise, light, dust, odors, traffic, or hazardous emissions are undesirable when they intrude on places where people sleep and recreate (residences and parks). Therefore, some industrial or agricultural uses (which can produce noise, odor and so on) are not considered compatible with residential uses, unless buffers, landscaping or screening can be used to protect residents from health hazards or nuisances.

Women's and Children's Center

The WCC is not located adjacent to any residential areas, but is located in a developed urban environment. The new WCC is proposed adjacent to the Buhler Building and Old Tavern Building to the west and across L Street from Sutter General Hospital to the south. During project construction there will be noise and dust associated with site preparation and construction activities. These activities would be short-term and, as discussed in Section 6.2, Air Quality, 6.6, Noise, and 6.7, Transportation and Circulation, would result in some impacts that cannot be mitigated to a less-than-significant level.

As part of the project, a helistop is proposed on the roof of the WCC. The helistop would provide helicopter access to allow scheduled transports of critically ill patients. Helicopters would not be parked or fueled in this location. The helistop would only be used to pick up and drop off critically ill patients. The helicopters would be required to access the helistop via a flight path along Capital City freeway; however, depending upon weather conditions the helicopter pilot would have discretion to alter a flight path for safety reasons. It is anticipated that the helistop would receive no more than 200 flights on an annual basis. There are no residences located immediately adjacent to proposed WCC. Based on the analysis in Section 6.6, Noise, the interference of the helicopter would be short-term and would not exceed the City's existing standard. However, it would result in disturbances to residences in the area if any helicopter activity were to occur during the nighttime hours. This impact cannot be mitigated to a less-than-significant level. Noise associated with the helicopter would be short-term in nature and would not exceed the City's current noise standards. However, because the noise could result in sleep disturbances if any helicopters were to fly in the nighttime hours, this

component of the SMCS project would not be considered compatible with residential uses in the area. Because the flights are scheduled transfers, it is not anticipated that there would be many evening flights.

From an operational or long-term standpoint, the proposed WCC would be compatible with the adjacent medical uses and would be a compatible use in a developed urban environment. In addition, the WCC would not result in excessive noise, lights, odors, or traffic that would be inconsistent with an urban area resulting in a land use incompatibility.

Sutter Medical Foundation Building

The SMF Building is not located adjacent to any residential areas, but it is located adjacent to Pioneer Church, which includes a Montessori School. Senior housing is located to the west across L Street from the Sutter's Fort State Park to the north, and the Buhler Building and the Old Tavern building are located to the east across 28th street.

As discussed above, during the initial site preparation and construction stages there would be an increase in dust, noise, and construction traffic. This would be considered a short-term inconvenience and once construction is completed would no longer be an issue. Potential impacts associated with project construction are addressed in Sections 6.2, 6.6, and 6.7.

The SMF Building would contain medical offices and would be connected to the Buhler Building across 28th Street to the east. The hospital's Energy Center would be located below the SMF Building. The Energy Center would include oxygen tanks and a transformer yard located immediately adjacent to an existing playground for the Montessori school, as shown in Figure 2-11 in Chapter 2, Project Description. The adjacency of these types of uses could pose a safety risk for children playing in the playground. However, the oxygen tanks and transformer have been designed and located in conformance with the Uniform Building Code and the City of Sacramento requirements which require a solid wall a minimum of 6-feet tall between the playground and the oxygen tanks and the transformer yard. Based on the UBC and City requirements this would be adequate to ensure there would be no safety hazard to children and the uses would be compatible. This issue is also discussed in Section 6.4, Hazardous Materials and Public Safety.

Once the project is operational it is not anticipated to result in excessive noise, lights, odors or traffic inconsistent with a developed urban environment that could result in a land use incompatibility with the adjacent State park or church/school use. The SMF Building would complement and support the existing medical buildings including Sutter General Hospital, the WCC and the Buhler Building.

Future Medical Office Building and Residential

The Future Medical Office Building (Future MOB) and 32 residential units are all proposed on the same block bounded by Capitol Avenue to the north, N Street to the south, 27th Street to the east and 26th Street to the west. In addition, there are small apartment buildings also located on that block, adjacent to the existing St. Luke's parking garage. Residences and offices are located across Capitol Avenue to the north, as well as to the west and south. The proposed Community Parking Structure and future Children's Theatre of California would be located across 27th Street to the east.

Development on this block includes demolishing the existing 70,000 sf St. Luke's Medical Office Building and constructing a smaller (35,000 sf) medical office building as well as demolishing the existing 249-space parking structure and constructing 32 residential units on this site. The Future MOB would be smaller than the existing structure by approximately 35,000 sf. It is anticipated that the new structure would maintain approximately the same building footprint as the existing structure. This type of medical office use is the same as the use currently on the site and is consistent with what currently is allowed in this area. In addition, a smaller building would be considered less intense than the existing structure. Therefore, because the Future MOB would replace an existing medical office allowed in this area it would not result in a land use incompatibility because it would not generate any uses that would be considered incompatible with adjacent residential areas.

As discussed above, once the project is operational it is not anticipated to result in excessive noise, lights, odors or traffic inconsistent with a developed urban environment that could result in a land use incompatibility with the adjacent residential uses. During the initial site preparation and construction stages there would be an increase in dust, noise and construction traffic. This would be considered a short-term inconvenience and once construction is completed would no longer be an issue. Potential impacts associated with project construction are addressed in Sections 6.2, 6.6, and 6.7.

Community Parking Structure and Retail/Commercial

Currently, the location of the proposed Community Parking Structure includes a surface parking lot bounded by Trinity Cathedral and residences to the west, a restaurant and residences to the south, RT Bus Service center to the east, and the Trinity Apartments, the EAP Building, Capitol Physical Therapy, Monkey Bar, and Café Bernardo's to the north. The design of the parking structure also includes retail/commercial uses that front N Street, as discussed in Chapter 2, Project Description. These proposed retail uses would provide street level activity along N Street. A few residences and offices are located across N Street to the south and across 27th Street to the west from the proposed parking structure. The parking structure would include exterior building lights and signage, as discussed in Section 6.1, Aesthetics. However, because it is in a developed, urban environment where lights and signage are part of the urban landscape, the parking structure is not considered an incompatible use. It is not anticipated that the parking structure would generate excessive noise, light, dust, odors, hazardous emissions, or excessive traffic volumes that would be considered incompatible in an urban environment and be incompatible with existing residences to the east and south.

Children's Theatre of California

In addition to the SMCS project, the proposed Children's Theatre of California (and B Street Theatre) project would be located in the northwest section of the block that includes the proposed Community Parking Structure at 27th and Capitol Avenue. As discussed in Chapter 2, the Children's Theatre of California is not currently seeking development entitlements at this time. Additional environmental review would be required at the time a formal application is submitted to the City. However, at this time it is not anticipated that development of a theatre in this area would pose any land use incompatibilities with existing uses and that a theatre would be considered a compatible use.

Summary

As discussed above and in the technical sections contained within this EIR, it is not anticipated that the SMCS project would generate excessive noise, light, dust, odors, traffic, or hazardous emissions that could be considered incompatible in an urban environment with existing or planned adjacent land uses. The existing and planned adjacent land uses are either similar uses to the SMCS project or would be considered compatible uses in an urban environment; therefore, it is not anticipated that any land use incompatibility would occur.

Trinity Cathedral Project

The Trinity Cathedral project site is located on the same block as the St. Luke's Medical Office Building, as shown on Figure 2-1 in Chapter 2. Existing land uses on the block include two small apartment buildings located along N Street; the St. Luke's parking garage located to the south along N Street; and St. Luke's Medical Office Building located to the west. Adjacent land uses include the Trinity Apartments located across 27th Street to the east and residences mixed with some office uses located across Capitol Avenue to the north. Future uses include residential on the site of the existing St. Luke's parking garage to the south, the Community Parking Structure and the future Children's Theatre of California to the east, and future medical uses to the west, as discussed above.

The Trinity Cathedral project includes demolishing the existing cathedral and adjacent administrative space and constructing a new, larger cathedral building along with a larger building for administrative office space and meeting space. Residential uses are located across Capitol Avenue to the north from the cathedral. A cathedral has occupied this site since the late 1800s and is not anticipated that replacement of this existing use with the same type of use would result in any land use incompatibilities. Residential areas are considered compatible with church uses.

As discussed above, during project construction, the area around the project site could experience short-term temporary impacts from noise, dust, and construction traffic as the site is developed. These impacts are analyzed in the appropriate technical sections of this EIR (see Section 7.1 Aesthetics, 7.2 Air Quality, Section 7.6, Noise and Section 7.7, Transportation and Circulation).

The operation of a cathedral would be consistent with the existing use on this site and would not result in a land use incompatibility because it would not generate any hazardous or noxious uses that would be considered incompatible with adjacent residential areas to the north and future residential use to the south. Therefore, the proposed Trinity Cathedral project would be compatible with existing and planned land uses in an urban environment.

Consistency with Adopted Plans, Policies, and Zoning

This consistency analysis is intended to provide the reader with a general overview of the guidelines set forth in the City's General Plan, the Central City Community Plan, and the Zoning Ordinance and to address whether the project is essentially in harmony with the overall intent of these goals or requirements. It is within the purview of the City to interpret its own documents and ultimately to decide if the project is consistent or inconsistent with any adopted plans.

An analysis of the Alhambra Corridor Design Guidelines and the Central City Design Guidelines is included in Section 6.1, Aesthetics. This analysis focuses on project design and consistency with the adopted design guidelines.

SMCS Project

City of Sacramento General Plan

The SMCS project would require a General Plan Amendment (GPA) to modify existing land use designations from Regional Commercial Office (RCO) to Public/Quasi Public Miscellaneous (PQPM) and High Density Residential (HDR) to Community Neighborhood Commercial and Office (CNCO), as shown in Table 4-1. As stated in the Regulatory Context section, the General Plan includes specific goals and policies designed to support a balanced system of quality medical facilities (Goal A) that would be considered applicable to the SMCS project. The SMCS project proposes to amend the current General Plan land use designations to meet the intent of this goal, which is for the City to support a balanced system of quality medical facilities. The SMCS project would be considered consistent with the intent of the City's goals and policies pertaining to the provision of medical facilities.

Central City Community Plan

The CCCP would also be required to be amended to accommodate the SMCS project. The existing CCCP designations for the SMCS project area include General Commercial, Residential/Office, and Multi-Family Residential. The SMCS project proposes a Community Plan Amendment (CPA) to change RO and MF to GC, as shown in Table 4-1. These designations are consistent with surrounding uses and would be consistent with the land uses that currently exist in the area.

Zoning

As stated above in the Setting section, there are currently various zoning districts on the site that would be rezoned to accommodate the SMCS project. The SMCS project includes new hospital uses, medical offices, parking facilities, retail/commercial, theatre, and residential. These uses would be allowed in the zoning districts proposed for the project and would, therefore, be consistent with the city's zoning. It should be noted that prior to rezoning the site, the Planning Commission and the City Council would need to make a determination as to whether the proposed zoning would result in any incompatibilities with adjacent uses. The proposed zoning would allow uses consistent with those found in an urban area. As shown in the description of these districts in the Regulatory Setting, there would be no inherent incompatibilities with this mix of uses and, in fact, the Residential-Office (RO) zone is intended to include its own internal mix of office and residential. Assuming that uses allowed in each district comply with its regulations, these uses would be considered compatible with one another.

As part of the project, a height variance has been requested for the WCC because the proposed building height is in conflict with the Alhambra Corridor design guidelines. The City would review these changes to ensure consistency with the City's zoning ordinance. As with the rezone request, the variance for building height would be reviewed by the Planning Commission and the City Council, thus, the determination of consistency would be at the discretion of those entities.

For a discussion of the project's consistency with the Alhambra Corridor Design Guidelines and the Central City Neighborhood Design Guidelines, please see Impact 6.1-4 in Section 6.1, Aesthetics for a detailed discussion.

Trinity Cathedral Project

The Trinity Cathedral project is not requesting a General Plan Amendment or a Community Plan Amendment. The site is currently designated HDR in the City's General Plan and zoned RO-SPD. Church uses are allowed under the existing land use designation and zoning. Therefore, the project is not requesting a GPA, CPA, or rezone to accommodate the project.

The existing CCCP designation and zoning for the site is currently Residential-Office and would not be changed for the project. Church uses are allowed in this district with a special permit. To accommodate building height, the project applicant is seeking a special permit from the City that would allow the proposed building height. Therefore, the Trinity Cathedral would be consistent with the applicable plans and zoning for the site.

Chapter 5 Introduction to the Analysis

Chapter 5 Introduction to the Analysis

TOPICS ADDRESSED

An Environmental Impact Report (EIR) analyzes the environmental effects of a proposed project, indicates ways to reduce or avoid potential environmental damage resulting from the project, and identifies alternatives to the proposed action. The purpose of this EIR is to provide the public and decision makers with an objective analysis of these issues. The EIR does not recommend either approval or denial of the project, but provides information to aid in the decision-making process, taking the environmental consequences of the proposed project into account. The technical sections of this EIR (see Chapter 6 for the SMCS project and Chapter 7 for the Trinity Cathedral project) discuss the environmental setting, impacts, and mitigation measures for the SMCS project and the Trinity Cathedral project for each of the following topics:

- Aesthetics,
- Air Quality,
- Cultural and Historic Resources,
- Hazardous Materials and Public Safety,
- Hydrology and Water Quality,
- Noise,
- Transportation and Circulation, and
- Public Utilities (water, wastewater/storm drainage, solid waste).

BASIS OF ANALYSIS

This EIR evaluates the environmental effects of the proposed SMCS project and the Trinity Cathedral project in separate technical sections (see Chapters 6 and 7). This EIR is intended to focus on those issues that are not fully addressed in the Initial Study (see Appendix E). Issue areas addressed in the Initial Study are summarized in the Introduction of each technical section. In addition, the EIR incorporates responses to comments on the two NOPs that were released in the applicable technical sections.

SECTION FORMAT

Chapters 6 and 7 are divided into technical sections (e.g., Aesthetics, Air Quality, etc.) that provide the environmental setting, regulatory setting, standards of significance, impacts to the environment, and identifies feasible mitigation measures for significant impacts pertinent to that

particular issue area. An analysis of cumulative impacts for each issue area is included at the end of each section. Each section begins with a description of the project's **environmental setting** (e.g., existing conditions) and a **regulatory setting** as it pertains to a particular issue. The environmental setting provides a point of reference for assessing the environmental impacts of the project and project alternatives. The environmental setting discussion addresses the conditions that exist prior to implementation of the project. This setting establishes the baseline by which the project and project alternatives are measured for environmental impacts. In some instances the environmental setting and regulatory setting established for the SMCS project is very similar or nearly identical to the Trinity Cathedral project. Therefore, in some of the technical sections in Chapter 7 the reader is referred to the environmental setting discussion included in Chapter 6, SMCS project.

The setting description in each section is followed by an **impacts** and **mitigation** discussion. The impact and mitigation portion of each section includes impact statements, prefaced by a number in bold-faced type. An explanation of each impact is followed by an analysis of its significance. This EIR assumes compliance with applicable laws and other regulations. Mitigation measures pertinent to each individual impact appear after the impact section. The reduction of the impacts provided by identified mitigation measures is also evaluated. An example of the format is shown below.

Section 6.7, Transportation and Circulation, for the SMCS project is formatted slightly differently. The program-level analysis for the B Street Theatre project is addressed in the analysis and is not identified as a separate discussion, as shown in the impact format below.

Impact 6.X-1: Statement of Impact for the SMCS project.		
	SMCS Project	Theatre
Significance Before Mitigation	The level of significance prior to mitigation will be identified.	The level of significance prior to mitigation will be identified.
Mitigation Measures	Applicable mitigation measures will be identified. The full mitigation measure will be included following the impact discussion.	Applicable mitigation measures will be identified. The full mitigation measure will be included following the impact discussion.
Significance After Mitigation	The level of significance after mitigation will be identified.	The level of significance after mitigation will be identified.

Each section also includes **Standards of Significance** which identify the City of Sacramento standards used to evaluate impacts of a project.

SMCS Project

General discussion of impact for the total project in paragraph form. Statement of the ***level of significance*** before mitigation in bold type and italics.

Theatre

Additional discussion of impact specific to the B Street Theatre, as applicable. Statement of the ***level of significance*** before mitigation in bold type and italics.

Mitigation Measures

Statement of ability of mitigation measure to reduce impact to a *less-than-significant level*.

(SMCS/Theatre)*

6.1-1 (a) *Recommended mitigation measure in italics and numbered in consecutive order.*

(Theatre)*

6.1-1 (b) *Additional mitigation, as necessary.*

* Indicates whether the mitigation measure applies to the SMCS project or just the Theatre project component.

Impact 7.X-2: Statement of Impact for the Trinity Cathedral project.	
Significance Before Mitigation	The level of significance prior to mitigation will be identified.
Mitigation Measures	Applicable mitigation measures will be identified. The full mitigation measure will be included following the impact discussion.
Significance After Mitigation	The level of significance after mitigation will be identified.

Cumulative Impacts

Cumulative impacts follow the impacts and mitigation. An introductory statement that defines the cumulative scenario (e.g., SACOG projections, the Sacramento Air Basin). In some instances, an impact may result on a project-specific level but would not result in a cumulatively considerable impact.

The cumulative impacts section will be formatted the same as the project-specific impacts, as shown above.

TERMINOLOGY USED IN THE EIR

This Draft EIR uses the following terminology to describe environmental effects of the Proposed Project:

- **Standards of Significance:** A set of criteria used by the lead agency to determine at what level or “threshold” an impact would be considered significant. Standards of Significance used in this EIR include those standards provided by the City of Sacramento. In determining the level of significance, the analysis assumes that the project would comply with relevant federal, State, and local regulations and ordinances.
- **Less than Significant Impact:** A project impact is considered less than significant when it does not reach the applicable standard of significance and would therefore cause no substantial change in the environment (no mitigation required).
- **Potentially Significant Impact:** A potentially significant impact is an environmental effect that may cause a substantial adverse change in the environment; however, additional information is needed regarding the extent of the impact to make the determination of significance. For CEQA purposes, a potentially significant impact is treated as if it were a significant impact.
- **Significant Impact:** A project impact is considered significant if it results in a substantial adverse change in the physical conditions of the environment. Significant impacts are identified by the evaluation of project effects in the context of specified significance criteria. Mitigation measures and/or project alternatives are identified to reduce these effects to the environment where feasible.
- **Significant and Unavoidable Impact:** A project impact is considered significant and unavoidable if it would result in a substantial adverse change in the environment that cannot be feasibly avoided or mitigated to a less-than-significant level if the project is implemented. A Statement of Overriding Considerations must be adopted if the project is approved and significant impacts cannot be mitigated to less-than-significant levels.
- **Cumulative Impacts:** According to CEQA, “cumulative impacts refer to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts” (CEQA Guidelines, Section 15355). CEQA requires that cumulative impacts be discussed when the “project’s incremental effect is cumulatively considerable” (CEQA Guidelines, Section 15130 (a)).
- **Mitigation Measures:** The CEQA Guidelines (Section 15370) define mitigation as:
 - a) Avoiding the impact altogether by not taking a certain action or parts of an action;
 - b) Minimizing impacts by limiting the degree of magnitude of the action and its implementation;
 - c) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;
 - d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and
 - e) Compensating for the impact by replacing or providing substitute resources or environments.

Chapter 6 SMCS Project

6.1 Aesthetics

6.1 Aesthetics

INTRODUCTION

This section provides a description of existing visual conditions in the SMCS project area and describes changes to those conditions that would result from implementation of the SMCS project. Cumulative effects of the SMCS project are evaluated in conjunction with other potential development in the south midtown area. This section addresses the project elements of the SMCS. For a discussion of the visual impacts of the Trinity Cathedral project, please see Section 7.1 of this EIR.

As discussed in the Initial Study (see Appendix E), the project area is not located in a scenic vista area or within a State scenic highway; therefore, the 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. These issues are not addressed in this EIR.

In response to the initial Notice of Preparation (October 2003), concerns were raised regarding the aesthetic impact on the Pioneer Congregational Church, located on the City block bounded by 27th and 28th Streets and L Street and Capitol Avenue. Specific concerns included the potential for new buildings to interfere with the natural light necessary to illuminate Pioneer Church's stained glass windows. Concern was also raised by the Capitol Physical Therapy Center located at 1308 28th Street associated with the north wall of the proposed Community Parking Structure. The Winn Park/Capitol Avenue Neighborhood Association requested streetlights be installed throughout the SMCS project area, from K Street to N Street and from 29th Street to 26th Street, and that the new Community Parking Structure be reduced by one story and set back further to reduce the overall mass of the building. Public comments in response to the October 2003 NOP and the revised January 2004 NOP also expressed concern regarding the view from and across the corner to the main gate to Sutter's Fort, located on L Street. Public comments in response to the January 2004 NOP raised concerns regarding the height and mass of the parking structure, as well as lighting, glare, and compatibility of the SMCS components. Additional concerns raised in response to the January 2004 NOP included a desire to see more street lights. These issues are all addressed in this section of the EIR.

Information to prepare this section was obtained from a visual inspection and site visit, review of the City of Sacramento General Plan, Alhambra Corridor Design Guidelines (Design Guidelines), Central City Community Design Guidelines, Central City Community Plan, and City Code, as well as a review of project-specific material provided by the project applicant.

ENVIRONMENTAL SETTING

Regional Setting

The SMCS project area is located within the Central City Community Plan (CCCP) area as well as the Alhambra Corridor Special Planning District (SPD) and SPD Design Review District. The

CCCP area encompasses the area between the Sacramento River on the west, the American River on the north, the Capital City Freeway and 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 CCCP.

Site Characteristics

The SMCS project area is located in a developed area of the City of Sacramento within the South Midtown portion of the CCCP area, as shown in Figure 6.1-1. South Midtown is characterized by low scale single- and multi-family residential uses, small-scale office buildings, Sutter General Hospital, parks, schools, and churches. The South Midtown portion of Sacramento is an established neighborhood with mature trees and older buildings, including many residential structures constructed in the late 1800s and early 1900s.

The project area is located within the Alhambra Corridor SPD and SPD Design Review District. The Alhambra Corridor (Corridor) area consists of properties located between 26th and 34th Street from the Union Pacific railroad mainline levee to the Capital City Freeway. This area consists of a number of different neighborhoods and is intended to provide residential uses along with neighborhood-related commercial uses in commercial districts. The Alhambra Corridor plan is intended to assist in the preservation of the neighborhood scale and character along with providing additional housing opportunities in the area.¹

Views from the Project Area

Figure 6.1-1 identifies the locations from which photographs for this section were taken. The area surrounding the SMCS project area is fully developed. Views from the various project sites are distinguished by Sutter's Fort State Historic Park, bounded by K and L Streets and 26th and 28th Streets. Sutter's Fort consists of the original central two-story adobe building, as well as reproductions of the surrounding structures such as stores, a print shop, and a blacksmith shop. The main entrance to Sutter's Fort is located on the north side of L Street and consists of the adobe and unreinforced brick walls of the fort, set behind a grassy lawn and a sidewalk that surrounds the fort (see View 1 on Figure 6.1-2).

To the west of the project area is Pioneer Congregational Church located on L Street directly across from Sutter's Fort. Pioneer Church was constructed in 1926 as a Gothic revival structure. To the south of Pioneer Church is the Chateau on Capitol Avenue (formerly Trinity House), an existing seven-story senior residential apartment building (see View 2 on Figure 6.1-2). The church is bordered to the east by an existing parking lot, which is enclosed with a fence that faces L Street and 28th Street (see Views 3 and 4 on Figure 6.1-3).

The eastern portion of the project area is distinguished by Capital City Freeway, which consists of an elevated freeway deck running in a north-south direction between 29th and 30th Streets. Two block-long parking decks are located at street level between 29th and 30th Streets and K Street and Capitol Avenue. The Sacramento Regional Transit Bus Service Center is located on Capitol Avenue between 28th and 29th Streets. The service center includes a maintenance building with large roll-up doors fronting 28th Street. Regional Transit's facilities also include a parking lot located beneath the Capital City Freeway between Capitol Avenue and N Street.

1 City of Sacramento City Code, Title 17: Zoning, Chapter 17.104 Alhambra Corridor Special Planning District, Section 17.104.010.

Existing Adjacent Uses

- 01. Sutter's Fort
- 02. Old Tavern
- 03. Pioneer Church
- 04. Senior Housing
- 05. Cafe Bernardo
- 06. Monkey Bar
- 07. Capitol Physical Therapy
- 08. Regional Transit Bus Service Center
- 09. Trinity Cathedral
- 10. Residences

LEGEND

Building Names

View Points

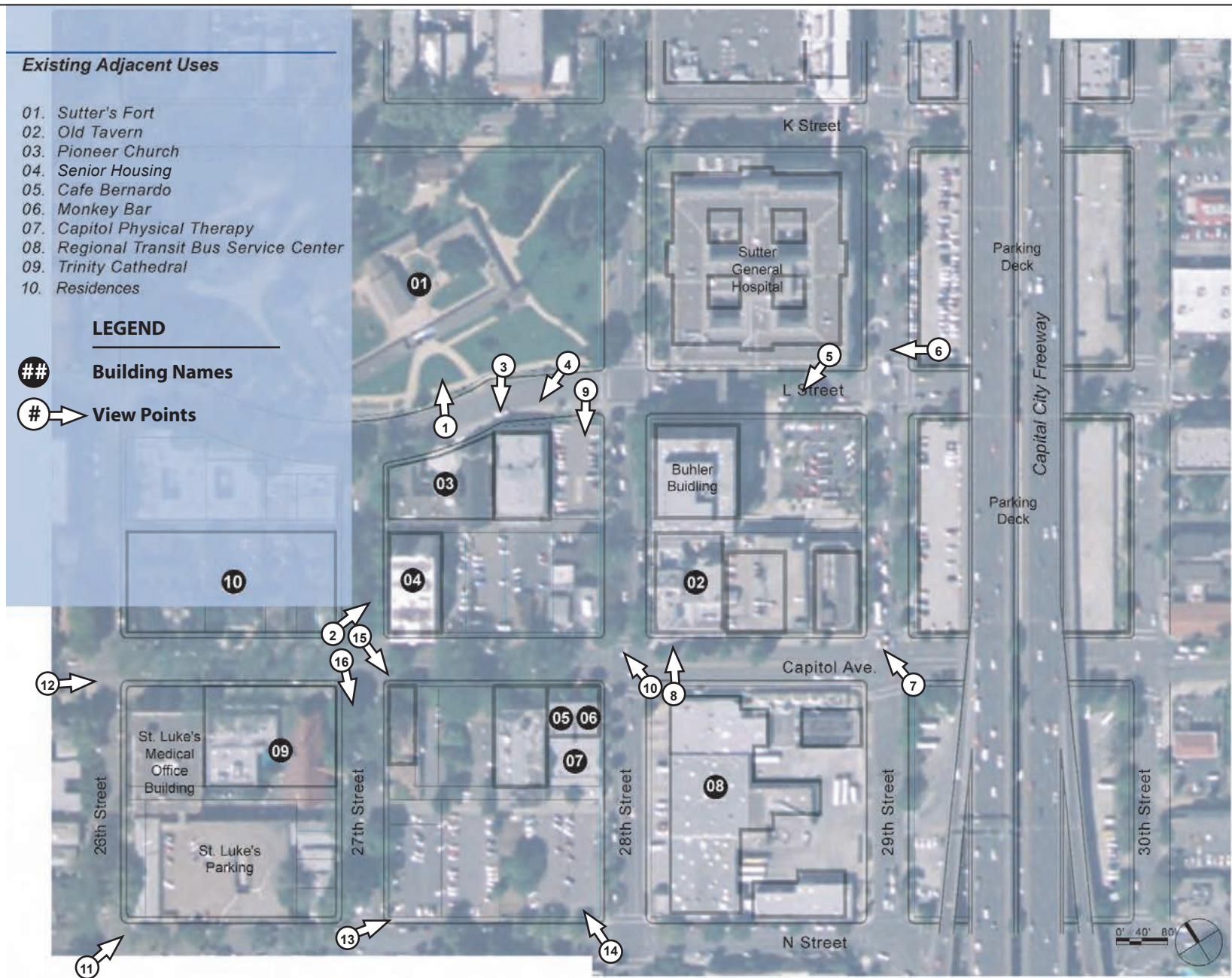


FIGURE 6.1-1
Viewpoint Map

10828-02

Source: KMD Architects 2004

Not to Scale



Sutter Medical Center, Sacramento



View 1: Sutter's Fort Main Entrance on L Street



View 2: Senior Housing at Capitol Avenue and 27th Street

FIGURE 6.1-2
Photo Views 1 and 2



View 3: Pioneer Church on L Street



View 4: East side of Pioneer Church and Adjacent Parking

FIGURE 6.1-3
Photo Views 3 and 4

Views to the south of the project area consist of residential, dining, and office uses on the south side of N Street, and the RT bus maintenance facility on 28th Street and Capitol Avenue.

Views onto the SMCS Project Area

Views onto the SMCS project area consist of the existing Sutter General Hospital (SGH), Buhler Building, surface parking lots, parking structures, and office and commercial buildings. A majority of the buildings are set back from the street with landscaped sidewalks and mature street trees.

Women's and Children's Center Project Site

The project site for the Women's and Children's Center (WCC) is distinguished by the existing five-story SGH and seven-story Buhler Building, located to the north and south of L Street, respectively, between 28th and 29th Streets (see Views 5 and 6 on Figure 6.1-4). Views of the WCC site consist of a surface parking lot and the existing Energy Center building. The Energy Center is located on 29th Street and Capitol Avenue, with an entrance facing Capitol Avenue. The Energy Center building is a two-story brick and concrete structure with glass-enclosed HVAC units on the roof.

The WCC site also contains the three-story parking structure for the Old Tavern Building (Old Tavern Parking) and the former Radiological Associates of Sacramento (RAS) medical office (see View 7 on Figure 6.1-5). The parking structure is three stories in height. Its entrance is located on Capitol Avenue. The ground-floor level of this structure formerly included the RAS medical office. The parking structure abuts directly against the Old Tavern Building. The Old Tavern Building is a two- to four-story building located on the northeast corner of the Capitol Avenue/28th Street intersection. The Old Tavern Building was constructed in 1849 and used as a warehouse and distillery for Sutter's Fort until the early 1850s when purchased for use as a brewery. The building underwent alterations in the 1920s that reflect the English Revival style (see View 8 on Figure 6.1-5). The building currently houses a restaurant and office space.

Sutter Medical Foundation Building Project Site

Views onto the Sutter Medical Foundation Building (SMF Building) site currently consist of the surface parking lots adjacent to the Pioneer Congregational Church (see View 9 on Figure 6.1-6) and existing one- to two-story office buildings fronting 28th Street and Capitol Avenue, including the House of Furs building (see View 10 on Figure 6.1-6). The surface parking lot is surrounded by a wood fence with murals facing both 28th and L Streets. One- and two-story medical and office buildings (MTI office buildings) are located on 28th Street and Capitol Avenue. The House of Furs building is a three-story structure constructed in the early 1940s. An existing one-story building, which has been used as a private medical office, is located next to the House of Furs building on Capitol Avenue.



View 5: East side of Buhler Building on L Street



View 6: South Side of Sutter General Hospital from L and 29th Streets

FIGURE 6.1-4
Photo Views 5 and 6



View 7: Sutter Energy Center, Old Tavern Parking Structure, (former) RAS Office, and Old Tavern from Capitol Avenue and 29th Street



View 8: Old Tavern Building on Capitol Avenue

FIGURE 6.1-5
Photo Views 7 and 8



View 9: Surface Parking at L and 28th Streets (Formerly the Tuesday Club)



View 10: Private Medical office building, House of Furs building, MTI office buildings, and Senior Housing from Capitol Avenue and 28th Street

FIGURE 6.1-6
Photo Views 9 and 10

Future Medical Office Building Project Site

Views onto the proposed Future Medical Office Building (Future MOB) project site consist of the existing St. Luke's Medical Office Building. The existing medical office is a four-story building located on the corner of Capitol Avenue and 26th Street (see View 12 on Figure 6.1-7). The remainder of the block includes Trinity Cathedral, the St. Luke's parking structure, and two small apartment buildings.

Housing

Views onto the site of the proposed housing include the existing St. Luke's parking structure. The parking garage is a three-story concrete structure spanning most of the half-block on N Street between 26th and 27th Streets south of the alley (see View 11 on Figure 6.1-7). Existing two-story residential units border the east and west sides of the parking structure. The remainder of the block includes Trinity Cathedral and St. Luke's medical Office Building.

Community Parking Structure

The site of the proposed Community Parking Structure and commercial/retail includes existing surface parking lots and associated landscaping on N Street between 27th and 28th Streets. Views to the north from N Street extend across the alley to Capitol Physical Therapy, the EAP Building, and Trinity Apartments, as well as across Capitol Avenue to Pioneer Church and senior housing (see Views 13 and 14 on Figure 6.1-8).

Children's Theatre of California

Views onto the proposed Children's Theatre of California project site currently consist of surface parking lots, (see Views 15 and 16 on Figure 6.1-9). The block also includes the EAP Building, Trinity Apartments, Capitol Physical Therapy, Café Bernardo, the Monkey Bar, and an empty lot with a painted wooden fence fronting Capitol Avenue. The block is ringed with existing sidewalks and mature street trees.

REGULATORY SETTING

Federal and State

There are no federal or State regulations regarding aesthetics that are applicable to the SMCS project.



View 11: Existing Residential and St. Luke's Parking from N and 26th Streets



View 12: West side of St. Luke's Medical Office Building from 26th Street

FIGURE 6.1-7
Photo Views 11 and 12



View 13: Existing Parking Lot from 27th and N Streets



View 14: Existing Parking Lot from 28th and N Streets

FIGURE 6.1-8
Photo Views 13 and 14



View 15: Existing Uses on Capitol Avenue at 27th Street EAP Building and Trinity Apartments



View 16: Existing Uses on 27th Street from Capitol Avenue Trinity Apartments

FIGURE 6.1-9
Photo Views 15 and 16

Local

City of Sacramento General Plan

The City of Sacramento General Plan is the City's long-range planning document and serves as a 20-year policy guide for physical and economic growth and renewal of the City. The City is currently in the process of updating the current 1988 General Plan. The existing General Plan goals and policies applicable to the SMCS project are listed below.

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.

- Neighborhood character and identity are important qualities in the urban environment. These qualities help define the parameters of each neighborhood and distinguish each sub-community from another. The preservation and maintenance of neighborhood character and identity is an essential factor to consider when new development is proposed in an existing community.
- Certain areas in the City are subject to design standards which control the quality of development. Development in some newer communities is guided by Planned Unit Development criteria, design standards set forth in new Community Plans, and in Design Review Districts. Yet, areas which are substantially developed and where zoning is in place are generally provided only minimum standards to guide residential development. Measures designed to improve the overall design standards could improve the quality of new residential development and the total urban environment.

Section 10 Preservation Element

The City of Sacramento adopted a Preservation Element into their 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 SMCS 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.

Policy B.2 The City shall review new development, alterations, and rehabilitation/remodels in design review areas, preservation areas, and other areas of historic resources for compatibility with the surrounding historic context.

Central City Community Plan

The CCCP was adopted by the City of Sacramento in 1980 and is a guide for the public and private development and revitalization of the Central City area. 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. The following goals of the CCCP are applicable to the aesthetics analysis for this section of the EIR.

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.

City of Sacramento City Code

Title 17 of the City of Sacramento City Code is the City's zoning code. The purpose of the zoning code is to regulate the use of land, buildings, or other structures for residences, commerce, industry and other uses required by the community. The zoning code designates several Special Planning Districts (SPD) within City of Sacramento. The SPD designation means that the property is subject to the requirements set forth in the City Code and a SPD ordinance adopted specifically for the property. The Alhambra Corridor SPD applies to a portion of the SMCS project area. The following City Code goals and policies are applicable to this Aesthetics section of the EIR.

Title 17: Zoning

Chapter 17.104 Alhambra Corridor Special Planning District

The goals of the Alhambra Corridor SPD are as follows:

- A. Maintain and improve the character, quality and vitality of individual neighborhoods.

6.1 Aesthetics

- B. Maintain the diverse character and housing opportunities provided in these urban neighborhoods.
- C. Maintain the neighborhood character of existing commercial neighborhoods while allowing for limited office to serve the medical complex in this area.

Section 17.104.020 Alhambra Corridor special regulations and restrictions

- F. Residential Preservation Transition Buffer Area Zone
 - 1. General Rule. Except as provided below, any development in any zone that is located within three hundred (300) feet of a residential zone (measured from the street centerline) shall not exceed thirty-five (35) feet in height. The intent of this restriction is to establish a buffer zone to protect residential neighborhoods from visual intrusion by new development that is out of scale with the adjacent residential neighborhood.
 - 2. Exception. The planning commission may approve a special permit for a development between J Street and S Street for additional height provided that the height may not exceed the limits established by Chapter 17.60 of this title. To approve this special permit, the planning commission must find that, in addition to meeting the requirements of Chapter 17.212 of this title, the development will not be out of scale with the adjacent residential neighborhood. Examples of instances where the intent of the buffer zone may be maintained while allowing additional height would include, but are not limited to the following:
 - a. Less than fifty (50) percent of the parcel upon which the building is located within the three hundred (300) foot transition buffer area, and the entire portion of the building for which the additional height is requested is located at least two hundred (200) feet from residentially zoned property;
 - b. Design features that reduce the walled effect on adjacent smaller scaled residential development are included; and
 - c. Development is compatible in height and scale with adjacent residential neighborhoods.

Central City Neighborhood Design Guidelines

The Central City Neighborhood Design Guidelines are part of the City's Design Review Program and are intended to provide design guidance for projects in a way that respects and enhances existing neighborhoods and ensures that building design is compatible with its surroundings in terms of scale, mass, building patterns and details. The Guidelines articulate an urban design vision for Central City neighborhoods and corridors to be used by neighborhood residents, City staff, the Design Review and Preservation Board, and City Planning Commission in the review of proposals for new development, building additions, alterations and public improvements within the Central City Design Review District (bounded by the Sacramento River, the UP mainline, Alhambra Boulevard, and Broadway). The SMCS project area is located within the Fremont School subdistrict of the Central City Neighborhood Design Guidelines. The Fremont School subdistrict is roughly bounded by J Street on the north, the Capital City Freeway on the east, Q Street on the south, and 21st Street on the west. The proposed SMCS project area is also located within the Alhambra Corridor Special Planning District and is subject to both the Alhambra Corridor Design Guidelines (Design Guidelines) and the Central City Neighborhood Design Guidelines.

Alhambra Corridor Design Guidelines

The Design Guidelines were developed by the City to address the form and function of the Corridor as a whole, as well as of each neighborhood within the Corridor. The guidelines were intended to ensure the proper relationship and connection with surrounding development between neighborhoods in the Corridor, East Sacramento, and Midtown. The SMCS project area is located within the Corridor and would include new structures on 29th Street, as well as other streets within the Corridor. Within the Corridor, the Midtown portion contains a variety of styles. According to the Design Guidelines, landscaping is an important design element of any building, and can be used to soften the building edge and, to a degree, offset the scale of a building. Appropriate landscaping can also help define new and existing pedestrian paths as well as provide a canopy for the pedestrian.

The following provisions and tree species have been identified in the Design Guidelines for use in the Corridor to ensure a healthy environment for landscape features and corridors.

1. Tree Planting Standards

- Where there are existing trees present, three planting areas should provide a minimum of 10 feet of unexcavated or minimally excavated soils area radiating from the curbside of sidewalk directly behind the tree. Soil depth shall be a minimum of 4 feet from the surface unless otherwise stated. This area shall not be subject to excavation greater than 12". Where there are no existing trees, tree planting areas should provide a minimum of 10 feet of soil area radiating from the curbside of sidewalk directly behind the tree planting location with a minimum depth of 4 feet from the surface unless otherwise stated. Street trees will be required.
- Ten-foot setback for the third story and above (10' measured from back edge of sidewalk) in addition to an 8' planting strip and sidewalk width.
- Encourage park strips in back of curb between the sidewalk and street, and encourage large shade trees.

IMPACTS AND MITIGATION MEASURES

Methods of Analysis

A description of the project area was prepared based on visits to the project site in March 2004. The proposed site plan for the SMCS project was used to evaluate the potential effects of project development on the existing visual character of the project area and the nearby area. The analysis focuses on the manner in which development could change the visual elements or features that currently exist within the project area.

The impacts of the SMCS project are analyzed in relation to existing conditions, which are primarily urban conditions consisting of a mixture of residential, business, and public uses. The positive or negative value attached to changes in visual character is largely subjective. This EIR does not seek to assign a judgment of "good" or "bad" change; rather, it identifies any substantive changes as significant.

The visual effects of construction activities are not evaluated in this section because they would be intermittent and temporary. The entire project area is not anticipated to be developed in a single construction season, and views of construction activities would vary depending on where such activities would be focused. Chapter 2, Project Description, includes a construction schedule for construction of the various project components.

Standards of Significance

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

- Substantially alter or degrade the existing visual character or quality of the project site and its surroundings;
- Create a new source of substantial light or glare which would adversely affect day or nighttime views; or
- Create substantial new shadows of long duration affecting sensitive activity areas; or
- Conflict with applicable City design guidelines.

Impact 6.1-1: Implementation of the SMCS project could be visually incompatible with the mass, scale, or character of existing development in the vicinity of the project area.		
	SMCS Project	Theatre
Significance Before Mitigation	Less than Significant	Less than Significant
Mitigation Measures	None required	None required
Significance After Mitigation	N/A	N/A

SMCS Project

SMCS Common Elements

All of the components of the SMCS project are subject to the Central City Neighborhood Design Guidelines, as well as the Design Guidelines and will be reviewed by the City’s Design Review and Preservation Board.

All components of the SMCS project would include multiple exterior sign types used for wayfinding, identification and regulatory requirements within the project area. Proposed illuminated skyline signs for the WCC are discussed below.

Monument-style signs would be located at ground level and would identify the medical complex boundaries and provide directional information to major buildings or services. Each monument-style sign would include the SMCS name on top and would display directional information to the

various buildings and departments, for example: Emergency Room, WCC, Sutter Medical Foundation Building, and Buhler Building. These signs would be four-sided with information on all sides including multi-lingual text. They would be placed at each major decision-making corner throughout the complex and would be internally illuminated for night viewing. Monument-style sign massing would be approximately 10 feet in height and five feet wide per side.

Vehicular-directional signage would be monument-style signs that would be placed at individual driveways into the WCC and SMF Building. These two-sided signs would be illuminated and would stand 10 feet in height and five feet wide.

Parking-identification style signs would mark entries into parking areas and would also be placed to clearly identify Valet Parking services at specific buildings. The parking signs would be low in profile and could be single or double post and panel signs that would be five to six feet in height.

Women's and Children's Center

The WCC is an 8-story above-grade structure, approximately 167 feet high to the top of the mechanical penthouse. Construction of the WCC would replace views of the existing Energy Center, the Old Tavern parking structure, the (former) RAS medical office, and the existing surface parking lot (see Figure 6.1-10).

The WCC would be designed as an articulated structure with a multi-planed facade. The variation in planes is intended to minimize the overall scale of the building's mass. The design of the WCC the horizontal proportions of Sutter General Hospital to create a unified medical complex. The exterior of the WCC would be composed of bands of off-white metal panels, combined with transparent and patterned or etched glass, creating an overall sense of scale and detail. The building's base would be sheathed in copper and would contain planters to integrate the building mass into the landscape. Air handling units, exhaust fans, and miscellaneous mechanical equipment would all be located on the roof of the new building. The main entrance to the WCC would be to the west of the building through a private drive and entryway running north/south between the WCC and the Buhler Building (see Figure 2-6 in Chapter 2, Project Description).

The WCC would be connected to the existing SGH by a three-level spanning structure on levels 2, 3, and 4. The spanning structure would cross L Street from the north side of the WCC to the south side of SGH. Currently a pedestrian bridge spans across L Street on the western edge of the block from SGH to the Buhler Building. This one-story-tall bridge would be removed, and the new three-story spanning structure would be located closer to 29th Street (see Figure 6.1-11). In addition to the spanning structure across L Street, one enclosed pedestrian bridge would span 29th Street, south of the intersection of L and 29th Streets, connecting the WCC with the existing parking structure under the freeway. Another pedestrian bridge would span the private drive between the WCC and the Buhler Building connecting the two buildings.

Similar to the existing SGH and Buhler Building, the proposed WCC would be visible to traffic on the elevated Capital City Freeway to the east. The new building would replace existing views of the Buhler Building from the freeway and from 29th Street looking west. Looking east from Sutter's Fort and L Street, the top of the WCC would be visible above the Buhler Building. Views from Sutter's Fort would be consistent with existing views to the east that currently include SGH, the Buhler Building and the existing bridge between the two buildings.



FIGURE 6.1-10
Women's and Children's Center, East Elevation

10828-02

Source: KMD Architects 2005

Sutter Medical Center, Sacramento

EIP
ASSOCIATES



FIGURE 6.1-11
Spanning Structure Across L Street

10828-02 **Source:** KMD Architects 2005

Sutter Medical Center, Sacramento



The most notable visual change due to construction of the new WCC would be from 28th Street and Capitol Avenue, viewing the new building against the existing Old Tavern Building. Existing views consist of the Old Tavern parking structure and former medical office buildings, which are similar in scale to the Old Tavern Building (see Figure 6.1-5). The parking structure currently abuts and is lower than the Old Tavern Building and is lower than the four-story building. The new WCC would be separated from the Old Tavern Building with the private drive (Motor Court) and entryway between the two buildings, but it would be substantially taller, with a larger mass and scale (see Figure 6.1-12).

SMF Building

The SMF Building would replace existing views of surface parking lots, the House of Furs building, a single-story private medical office building, and the two-story MTI office buildings with a four-story above-grade, approximately 82-foot-high building (see Figure 6.1-6). The SMF Building exterior would include a combination of copper and horizontal siding with large windows on the second floor. The building would include ground-floor retail on L Street. The building would be stepped back from L Street and Sutter's Fort to reduce visual impacts on the historic Sutter's Fort complex and the adjacent Pioneer Church (see Figure 6.1-13). The SMF Building would also include the relocated Energy Center for the SMCS project. Most of the Energy Center facilities would be located below-grade on the southern portion of the building and would not be visible. Above-grade components would include extensions of the air intakes for combustion air and exhaust stacks along the west side of the roof of the Energy Center. An oxygen tank would be located just west of the above-grade air intake approximately mid-block. The cooling towers would be approximately 27 feet tall. The cooling towers would be located on the roof of the SMF Building in a location that would not be visible from street level.

The current view to the south from the Sutter's Fort entrance on L Street consists of Pioneer Church and the painted fence surrounding a surface parking lot on L and 28th Streets. Because the painted fence is less than one story tall, the current view to the south also includes the trees and office buildings on the southern half of the City block.

The new SMF Building would replace existing views from L Street that extend to the southern portion of the City block through to Capitol Avenue. Visitors to Sutter's Fort would no longer be able to see the upper portion of the Old Tavern Building. The new SMF Building would be stepped back from L Street and immediate views from ground level would appear as a two-story building. Views from farther to the north, including from Sutter's Fort, would be of a four-story building with ground-level landscaping. The scale and mass of the proposed SMF Building would be consistent with the existing Buhler Building to the east, and the height would be approximately the same as the existing Pioneer Church to the west.

The view of the west side of the proposed SMF Building would include screening walls around the Energy Center equipment (liquid oxygen tank and transformer yard) and the entrance to the underground parking area. A 22-foot tall metal, louvered wall would be constructed along the west side of the SMF motor court along the north and east sides of the oxygen tanks, while a 10-foot tall concrete wall would be constructed around the transformer yard, adjacent to the existing playground area. The screening wall adjacent to the existing playground may be visible from Capitol Avenue.



FIGURE 6.1-12
WCC Building, Entryway, and Motor Court adjacent to Old Tavern Building



FIGURE 6.1-13
SMF Building, North Elevation

10828-02 **Source:** KMD Architects 2005

Sutter Medical Center, Sacramento



Existing views of one- and two-story buildings from 28th Street and Capitol Avenue would be replaced with the east elevation of the SMF Building. Views north and south along 28th Street would also include the new pedestrian bridge from the SMF Building to the Buhler Building. The pedestrian bridge would be a glass enclosed structure that would connect the two buildings at the second floor. This view would also be consistent with the existing visual character of 28th Street, which includes the Buhler Building and SGH.

Ingress and egress into the SMF Building would be through a private drive located on the west side of the building, between the new SMF Building and Pioneer Church and senior housing. This driveway would also serve to set back the new building from Pioneer Church by approximately 30 feet.

Future Medical Office Building

The view of the existing St. Luke's Medical Office Building (MOB) would be replaced with the new Future MOB at the corner of Capitol Avenue and 26th Street that would be smaller in scale than the existing four-story building (see Figure 6.1-14). The existing 70,000-square foot building would be replaced with approximately 35,000 square feet of medical office space. Additional squarer footage for parking for the Future MOB would be below-grade and would not be visible. Ingress and egress to the parking garage would be either on the south side of the building, exiting onto the alley or along the west side exiting onto 26th Street. Future views of the MOB project site would be similar to views and would be in scale with the two-story residences to the west along 26th Street that would remain. Views onto the project site from Trinity Cathedral would also be similar to existing views of the St. Luke's building.

Community Parking Structure

The Community Parking Structure would replace views of surface parking lots with a seven-story above-grade building up to 83-feet high (see Figure 6.1-15). The Community Parking Structure would replace current views looking north from N Street of the senior housing and the EAP building, Trinity Apartment, vacant lot, Capitol Physical Therapy, Café Bernardo's, and the Monkey Bar. The Community Parking Structure would be located on the south side of the alleyway between Capitol Avenue and N Street and would replace existing views from the alleyway that currently extend across the parking lot to the residences and offices on N Street. The parking structure would include one-story ground floor retail or commercial development on the south side, facing N Street. Ingress and egress into the parking structure would be from 27th and 28th Streets. The parking structure would be across the street from the RT maintenance facility on 28th Street and residential, office, and restaurant uses to the south on N Street. While the new parking structure would be generally consistent with other types of uses in the project area, it would replace existing surface-level uses with a seven-story structure. In addition to replacing the existing views from both the residences on the south side of N Street and the existing business on 28th Street north of the alleyway, the parking structure could result in additional shadows across the street and alleyway that may extend onto the residences, offices, and Capitol Physical Therapy during specific times of the day and year.



3D Massing Concept



Site Context Photos

FIGURE 6.1-14
Future Medical Office Building

Not to Scale



FIGURE 6.1-15
Community Parking Structure – Visual Simulation

10828-02 **Source:** McCarthy Construction to SMCS 2005

Sutter Medical Center, Sacramento



Housing

The proposed residential development on N Street between 26th and 27th Streets would replace views of the existing three-story St. Luke's parking structure with two- to three-story residential town homes, approximately 36-feet high (see Figure 6.1-16). The existing two-story residential buildings on the east and west sides of the parking garage would remain. The proposed residential project would consist of separate multi-family units with parking that would be accessed from the alleyway to the north or N Street. The new housing units may be taller than the two-story buildings that would abut them on the east and west, but the overall scale and mass would be consistent with existing residential uses in the project area.

Theatre

The proposed Children's Theatre of California would be an approximately 50,000-square-foot building located on the corner of Capitol Avenue and 27th Street. The Theatre would replace existing views of the Trinity Apartment building, surface lots, and the EAP office building with one main 365-seat theatre and one additional theatre that would contain 200 seats. Similar to the SMCS components, design of the proposed Theatre would be required to comply with the Central City and Alhambra Corridor Design Guidelines.

Conclusion

As discussed above, all components of the SMCS project, as well as the Children's Theatre of California, would be subject to the Central City Neighborhood and Design Guidelines. In addition, all components of the SMCS project would be subject to a landscaping plan that would maintain and enhance existing streetscape by retaining existing trees, where feasible, and adding new trees, decorative paving, and new ornamental landscaping. Construction and operation of the WCC, SMF Building, and the Community Parking Structure would result in visual changes from existing residences and offices on N Street and from the historic Old Tavern Building. Also, because the size and massing of the Children's Theater is unknown at time, it may be visually incompatible with existing senior housing and residential uses to the north and west on Capitol Avenue.

The proposed SMCS project is subject to the City's Design Guidelines and the design of the project includes many elements that are consistent with these guidelines. For example, the proposed WCC includes a multi-planed facade to minimize the overall scale of the building's mass, and the proposed SMF Building includes a stepped-back design from L Street to reduce visual impacts. Additionally, the proposed Community Parking Structure includes single-story retail uses that would front N Street.

The proposed SMCS project would be consistent with planned uses for the project site and would undergo the City's design review process, which would regulate future development to conform to the City's vision; therefore, the alteration of the site would not be considered adverse, and this would be a ***less-than-significant impact***.

Mitigation Measures

None required.



FIGURE 6.1-16
Sutter Residential, Cross Section Along N Street

Although not required to mitigate a significant impact, the following mitigation measure is recommended for the SMCS project:

(SMCS)

6.1-1 *The north facade of the proposed Community Parking Structure, adjacent to the alleyway between 27th and 28th Streets, shall be designed to minimize visual impacts on the existing businesses along the alleyway, either through a building setback or wall treatments, including vegetation and/or artwork.*

Impact 6.1-2: Implementation of the SMCS project could create light or glare that could affect adjacent properties.		
	SMCS Project	Theatre
Significance Before Mitigation	Potentially Significant	Potentially Significant
Mitigation Measures	Mitigation Measure 6.1-2 (a) through (c)	Mitigation Measure 6.1-2 (a) and (b)
Significance After Mitigation	Less than Significant	Less than Significant

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.

SMCS Project

Lighting and Glare

The proposed SMCS project components would include exterior lighting, where appropriate, and new sources of internal light. New street lights are proposed around each of the new project building, which would conform to the City's lighting standards. The lights would be spaced approximately 70 to 80 feet apart. It is anticipated streetlights would be the acorn style lights found throughout the City.

Most of the components of the proposed SMCS project would not create significant sources of glare on surrounding areas. The SMF Building would be stepped back on its northern side, and the remaining facades would be a combination of copper and horizontal siding and windows. The WCC facades would be a combination of transparent and patterned or etched glass windows and bands of off-white metal panels. The building's base would be sheathed in copper and would be visible from north and southbound traffic on the elevated Capital City Freeway.

Hospital Lights and Signage

As mentioned above, the proposed SMCS project would include skyline signs, which consist of illuminated signs mounted at the parapet level of a building. Three skyline signs are proposed: one on the east side and one on the west side of the WCC and one on the east side of SGH. Skyline signs would be used as distance identification and wayfinding for the medical complex.

Two of the proposed skyline signs would be visible from the Capital City Freeway. The eastern skyline sign is intended to be seen along the route at a distance to help drivers identify the general site location and upcoming exits from both north and southbound approaches. The signs would be sized for distance recognition, with the east facade WCC sign at 5-foot high individual letters with an overall width of 100 feet. The letters and logo form would be illuminated 24 hours a day.

As described in the Environmental Settings, the SMCS project would also include monument-style signs that would be located at ground level and would display directional information. These four-sided signs would be placed at each major decision-making corner throughout the complex and would be internally illuminated for night viewing. Monument-style sign massing would be approximately 10 feet in height and five feet wide per side and would include multi-lingual text. In addition, vehicular-directional style signage would include two two-sided vehicular directional signs placed at individual driveways into the WCC and SMF Building. These signs would be illuminated and would stand 10 feet in height and five feet wide.

Building identification is proposed at first floor levels at main building entries to identify and reinforce destinations within the complex, such as "Buhler Building" or "EMERGENCY." These signs would be building-facade mounted individual letters that may be 12 inches to 24 inches in height, depending on the building name. These signs could be internally illuminated or lit with ambient lighting, with the exception of the Sutter General Emergency Room public entry, which must display red illuminated "EMERGENCY" signage at the entry doors.

Ground-level illuminated signs, either on the surface of buildings or mounted in the parking and driving areas, would not generate substantial spillover light onto existing uses. The signage that would be most visible to surrounding uses would be the skyline illuminated signs located near the tops of the proposed WCC and SGH. The skyline signs on the east sides of the WCC and Sutter General Hospital would be visible from cars driving on the Capital City Freeway and from the parking area located under the freeway between 29th and 30th Streets. These signs could also be visible from existing uses east of the freeway. The skyline sign on the west side of the WCC would be visible from the west.

The proposed WCC would include lighting on the top of the building associated with the proposed helistop. As previously discussed, the helistop would be used for periodic, but infrequent, scheduled transfers of seriously ill infants, children, and adults to the hospital. The helistop lighting would not be visible to the ground. However, floodlighting to illuminate the area for medical personnel may be visible. In addition, the helistop identification beacon would be visible from the ground, as would the red obstruction lights installed on various corners of the building.

Theater

The proposed Children's Theatre of California would also create additional lighting and signage. At this time there are no specific details available; however, it can be assumed that the project would create new sources of light that could affect day and nighttime views.

Conclusion

The proposed SMCS and Children's Theatre projects would introduce new sources of lighting to the project area. Existing conditions include office buildings, residences, surface parking, and some street lights, all of which include existing sources of light. The SMCS project would also introduce three new skyline-type illuminated signs that would be visible from locations west and east of SGH and the proposed WCC. Because the SMCS project and the Children's Theatre would introduce several new sources of light and potential glare, this would be a **potentially significant impact**.

Mitigation Measure

Implementation of Mitigation Measure 6.1-2(a) would ensure that project lighting would be directed internally to minimize spillover onto adjacent uses, and Mitigation Measure 6.1-2(b) would ensure that building facade material does not generate substantial glare. Mitigation Measure 6.1-2 (c) would ensure that the illuminated skyline on the WCC is not visible to sensitive receptors located within or adjacent to Sutter's Fort. Implementation of these mitigation measures would reduce the magnitude of this impact to a *less-than-significant level*.

(SMCS/Theatre)

- 6.1-2 (a) *The configuration of exterior light fixtures shall emphasize close spacing and lower intensity light that is directed downward in order to minimize glare on adjacent uses.*
- (b) *Highly reflective mirrored glass or metal walls shall be avoided as a primary building material for facades.*

(SMCS)

- (c) *To the extent feasible, the proposed illuminated skyline sign on the west side of the WCC shall be set back to a position where it is not visible from Sutter's Fort or residences along L Street or Capitol Avenue.*

Impact 6.1-3: Implementation of the SMCS project could create substantial shadows on adjacent properties.		
	SMCS Project	Theatre
Significance Before Mitigation	Less than Significant	Less than Significant
Mitigation Measures	None required	None required
Significance After Mitigation	N/A	N/A

Women’s and Children’s Center

The WCC would replace a surface valet parking lot, the Energy Center, the Old Tavern parking structure, and the (former) RAS medical office with an 8-story above-grade structure, approximately 167 feet high to the top of the mechanical penthouse. Construction of the WCC would create new shadows from a multi-story building and the shadows cast by this proposed element would extend farther than under current conditions. However, there are existing sources of shadow, including the parking structure next to the Old Tavern Building and the existing Energy Center. At times of the year when the sun is low in the sky, even shorter buildings cast shadows on sidewalks. For instance, in winter, the three-story parking structure will cast a shadow on the sidewalk on the south side of Capitol Avenue. Therefore, while the proposed WCC would create new shadow, most of the surrounding area already experiences frequent periods of shadow during the day from existing buildings in the midtown area.

SMF Building

As stated above, ingress and egress into the SMF Building would be through a driveway located on the west side of the building, between the new SMF Building and Pioneer Church and the existing playground. This driveway would also serve to set back the new building from Pioneer Church. Because the SMF Building would be set back by approximately 30 feet from the Pioneer Church and the playground and because the height of the building is not expected to exceed the height of the Church, it is not anticipated that the building would block sunlight into the church windows or create substantial shadow impacts on the playground.

Community Parking Structure

In addition to replacing the existing views from both the residences on the south side of N Street and the existing business on 28th Street north of the alleyway, the Community Parking Structure could result in additional shadows across the street and alleyway that may extend onto the residences and Capitol Physical Therapy Center during specific times of the day and year.

Theatre

The proposed Children’s Theater of California would place an approximately 50,000-square-foot building adjacent to the proposed parking structure. Although design details are not known, it is assumed that both the multi-story senior housing to the north across Capitol Avenue and the proposed seven-story parking structure would be taller than the future Theatre. It is not

expected that the Theatre would result in shadows that would significantly block sunlight on adjacent uses.

Conclusion

In addition to the specific elements discussed above, the rest of the SMCS project components would generate new shadows in the project area. The proposed Future MOB would replace an existing building with a new building on a smaller scale and would cast similar shadows as under existing conditions. Similarly, the proposed residential development would replace the existing St. Luke’s parking structure with two- to three-story residential town homes, which would most likely produce shorter shadows. In addition, existing uses on and around the project components currently create shadows on City streets and office, residential, restaurant, and public uses. Therefore, this would be considered a **less-than-significant impact**.

Mitigation Measure

None required.

Impact 6.1-4: Implementation of the SMCS project could conflict with applicable City policies or design guidelines.		
	SMCS Project	Theatre
Significance Before Mitigation	Less than Significant	Less than Significant
Mitigation Measures	None required	None required
Significance After Mitigation	N/A	N/A

SMCS Project

This impact discussion examines the proposed SMCS project’s consistency with City policies and design guidelines. This consistency analysis is intended to provide the reader with a general overview of the guidelines set forth in the City’s General Plan, the CCCP, the City Code, the Central City Neighborhood Design Guidelines and the Design Guidelines and to explain whether the project is essentially in harmony with the overall intent of these guidelines. It is within the purview of the City to interpret its own documents and to ultimately decide if the project is consistent or inconsistent with any adopted design guidelines.

The proposed SMCS project is subject to the Central City Neighborhood and Design Guidelines. As discussed in the Regulatory Setting, the Central City Neighborhood Design Guidelines are intended to articulate an urban design vision for Central City neighborhoods and corridors. The Design Guidelines are intended to ensure the proper relationship and connection with surrounding development between neighborhoods in the Corridor, East Sacramento, and Midtown.

The Design Guidelines include generalized goals and policies for residential, mixed-use, commercial, and industrial neighborhoods. The Design Guidelines also include a landscape element and address the Neighborhood Preservation Transition Buffer Areas. In general, the Buffer Area applies to any development in any zone that is located within 300 feet of a

residential zone (measured from the street centerline). The Buffer Areas require a 35-foot height limit. Within the SMCS project area, the Future MOB, Community Parking Structure, Residential Development, and Children's Theatre are all located in one of the Buffer Areas. The Future MOB, Residential Development and Theatre sites are designated High-Density Residential under the City's General Plan. The Community Parking Structure site contains High-Density Residential and Community/ Neighborhood Commercial and Office designations under the General Plan. The Future MOB is zoned Office and the Residential Development is zoned Multi-family Residential. The Theatre site is zoned Office and General Commercial, and the Community Parking Structure site is designated Multi-family Residential and Commercial. Development of the Future MOB, Community Parking Structure, Residential Development and Theatre components would require a variance for buildings that are proposed over 35 feet high.

The City's Design Review and Preservation Board would review the final design plans for consistency with the Design Guidelines.

The Central City Neighborhood Design Guidelines include design principles that represent the prescriptive or mandatory elements of project design that are used by the City's Design Review and Preservation Board and City staff to determine project compliance with the Design Guidelines. Design guidelines also suggest approaches to accomplish the design principles. The Central City project-design guidelines address the following design subjects that are relevant to the SMCS project: site planning; site design; building character and quality; lighting; signage; equipment, utilities and service access; energy efficiency; modifications to existing structures; special use structures; alley development; accessory structures; and flood-resistant design. The City Design Review and Preservation Board would review the SMCS project components' design plans for consistency with the Central City Neighborhood Design Guidelines. The City would also determine whether or not to allow construction of building elements that exceed the height limitations of the Neighborhood Preservation Transition Buffer Areas. Because the SMCS project elements are anticipated to be in context with existing surrounding uses, and the project design would be subject to approval by the City Design Review and Preservation Board, this would be considered a ***less-than-significant impact***.

Theatre

The proposed Children's Theatre of California has not yet been designed; therefore, it is not possible to determine if the project would be considered consistent with existing City policies or design guidelines. However, it is assumed the Theatre would be designed to be consistent with City policies and adopted design guidelines and would be subject to review and approval based on its consistency. Therefore, the impact is considered ***less than significant***.

Mitigation Measure

None required.

CUMULATIVE IMPACTS

The cumulative context for the evaluation of cumulative impacts on aesthetics is the surrounding area within the viewshed of the project area. The Central City Neighborhood and the Corridor area currently consist of built-out urban and residential neighborhoods. Future construction in the area would consist of on-going City of Sacramento redevelopment projects.

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 generated by the SMCS project.

Impact 6.1-5: Implementation of the SMCS project, in combination with cumulative development, could alter the visual character of the Central City.		
	SMCS Project	Theatre
Significance Before Mitigation	Less than significant	Less than significant
Mitigation Measures	None required	None required
Significance After Mitigation	N/A	N/A

SMCS Project and Theatre

Development of the various project components would result in the demolition of some existing buildings and the construction of new buildings. As discussed above, the Central City area, including the Corridor area, is predominantly built out with existing residential, commercial, office and municipal uses. Future projects in the area could include on-going redevelopment by the City of Sacramento, as well as private projects that may change the visual character of the area. Because the Central City area is predominately built out and future development would be required to comply with the Design Guidelines, the cumulative change to the visual character of the area would be a *less-than-significant impact*.

Mitigation Measure

None required.

Impact 6.1-6: Implementation of the SMCS project, in combination with cumulative development within the viewshed of the project site, could create light or glare that could affect adjacent properties.		
	SMCS Project	Theatre
Significance Before Mitigation	Less than Significant	Less than Significant
Mitigation Measures	None required	None required
Significance After Mitigation	N/A	N/A

SMCS Project and Theatre

As stated above, the Central City and Alhambra Corridor areas currently consist of built-out urban, commercial, and residential neighborhoods. The areas within the viewshed of the SMCS project currently contain small to mid-sized office and residential buildings and associated lighting. The project area also contains existing City street lights, and lighting for commercial

and public uses. Future redevelopment construction in the area would either construct new buildings on currently vacant lots and parking lots or replace existing buildings with new ones. It is not anticipated that future projects would contribute new sources of significant lighting or glare. In addition, future projects would be reviewed by the City's Design Review and Preservation Board for consistency with the City's design guidelines, including site lighting guidelines. The SMCS project would introduce new sources of lighting to the project area, which currently contains existing sources of light from office buildings, residences, surface parking, and street lights. Implementation of Mitigation Measure 6.1-2 would ensure that the project-specific light impact would be less-than significant. Therefore, the cumulative impact from light and glare would be ***less than significant***.

Mitigation Measures

None required.

6.2 Air Quality

6.2 Air Quality

INTRODUCTION

This section addresses impacts associated with implementation of the SMCS project on ambient air quality and the potential for exposure of people (especially sensitive individuals who consist of children, the elderly, acutely ill, and chronically ill) to unhealthful pollutant concentrations. Air pollutants of concern for Sacramento County include ozone (O₃), carbon monoxide (CO), and particulate matter 10 microns or less in size (PM₁₀). This section analyzes the type and quantity of emissions that would be generated by construction and operation of the SMCS project.

Two separate Notices of Preparation (NOPs) were circulated for the project, one in October 2003, and the second in January of 2004 (see Appendices A and C). Comments were received on each of the NOPs (see Appendices B and D). Comments received in response to the October 2003 NOP requested that an evaluation be performed of the dust generated by demolition and construction associated with the project. It was also noted that mitigation should be incorporated into the project to reduce the impact to air quality from increased traffic generated by the Sutter expansion, the proposed Children's Theatre, and the Trinity Cathedral project. Generally, it was recommended that mitigation measures be incorporated into the project to reduce the impacts to air quality caused by construction and operation of the SMCS project.

Comments received in response to the January 2004 NOP raised concerns about dust and particulates and asked that these issues be addressed, especially in relation to possible impacts to the Montessori school that is located west of the proposed SMF Building. Comments also requested that impacts from project construction be analyzed, and that standard construction mitigation provided by the Sacramento Metropolitan Air Quality Management District be required. Comments from the Air Quality Management District also requested that mitigation be incorporated into the project to achieve at least a 15% reduction in emissions from the operation of the project.

The comments noted above have all been addressed in this section of the EIR.

Sources reviewed for this section include the Sacramento Air Quality Management District (SAQMD) Guide to Air Quality Assessment in Sacramento County, the California Air Resources Board (CARB) website, and the City of Sacramento General Plan.

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 has a potential for high concentrations of regional and localized air pollutants.

Climate and Topography

The SMCS project area is located in the south Midtown area of the City of Sacramento, which is the major metropolitan area of Sacramento County. Sacramento County is located at the southern end of the Sacramento Valley, which is bounded by the Coast and Diablo mountain ranges on the west and the Sierra Nevada on the east. The county is fifty-five miles northeast of the Carquinez Strait, a sea-level gap between the Coast Range and the Diablo Range; the intervening terrain is flat. The prevailing wind is from the south, primarily because of marine breezes through the Carquinez Strait, although during winter, the sea breezes and winds from the north occur more frequently.

Between late spring and early fall, a layer of warm air often overlays a layer of cool air from the Delta and San Francisco Bay, resulting in stagnation of air called an inversion. Typical winter inversions are formed when the sun heats the upper layers of air, trapping below them air that has been cooled by contact with the colder surface of the earth during the night. Although each inversion type predominates at certain times of the year, both types can occur at any time of the year. Because inversions inhibit the mixing of air in the atmosphere, they can prevent air pollution from dispersing, contributing to higher pollutant concentrations.

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 O₃, CO, nitrogen dioxide (NO₂), sulfur dioxide (SO₂), and particulate matter less than 10 microns in size (PM₁₀), 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.¹

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 are not enough data available to determine whether the standard is exceeded in an area, the area is designated "unclassified". The ambient air quality standards, and the Sacramento Valley Air Basin's (SVAB) attainment status for the criteria pollutants are summarized in Table 6.2-1. Table 6.2-2 lists the health effects associated with these pollutants.

1 California Air Resources Board website: www.arb.ca.gov/app/emsinv/emssumcat_query. Accessed 2/13/04.

Table 6.2-1

State and Federal Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards ^a	National Standards ^b		Sacramento County State Status/ Classification	Sacramento County National Status/ Classification
		Concentrations ^c	Primary ^{c,d}	Secondary ^{c,e}		
Ozone	8-hour	--	0.08 ppm	Same as Primary	Nonattainment/ Serious	Nonattainment/ Severe
	1-hour ^f	0.09 ppm	0.12 ppm			
Carbon Monoxide	8-hour	9.0 ppm	9 ppm	Same as Primary	Attainment/ None	Attainment/ None
	1-hour	20.0 ppm	35 ppm			
Nitrogen Dioxide	Annual Mean	--	0.053 ppm	Same as Primary	Attainment/ None	Attainment/ None
	1-hour	0.25 ppm	--			
Sulfur Dioxide	Annual Mean	--	0.03 ppm	--	Attainment/ None	Attainment/ None
	24-hour	0.04 ppm	0.14 ppm	--		
	3-hour	--	--	0.5 ppm		
	1-hour	0.25 ppm	--	--		
Fine Particulate Matter (PM ₁₀)	Annual Mean	--	50 µg/m ³	Same as Primary	Nonattainment	Nonattainment
	Annual Geometric Mean	30 µg/m ³	--	--		
	24-hour	50 µg/m ³	150 µg/m ³	Same as Primary		
Fine Particulate Matter (PM _{2.5})	Annual Mean	--	15 µg/m ³	Same as Primary	Not Designated/ None	Not Designated/ None
	24-hour	--	65 µg/m ³			

Notes:

ppm = parts per million, µg/m³ = micrograms per cubic meter

a California standards, other than carbon monoxide, sulfur dioxide (1-hour), and fine particulate matter, are values that are not to be equaled or violated. The carbon monoxide, sulfur dioxide (1-hour), and fine particulate matter standards are not to be violated.

b National standards, other than ozone, the 24-hour PM_{2.5}, the PM₁₀, and those standards based on annual averages, are not to be exceeded more than once a year. The 1-hour ozone standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above the standard is equal to or less than one. The 8-hour ozone standard is attained when the 3-year average of the annual fourth highest daily maximum concentration is less than 0.08 ppm. The 24-hour PM₁₀ standard is attained when the 99th percentile of 24-hour PM₁₀ concentrations in a year, averaged over 3 years, at the population-oriented monitoring site with the highest measured values in the area, is below 150 µg/m³. The 24-hour PM_{2.5} standard is attained when the 98th percentile of 24-hour PM_{2.5} concentrations in a year, averaged over 3 years, at the population-oriented monitoring site with the highest measured values in the area, is below 65 µg/m³. The annual average PM_{2.5} standard is attained when the 3-year average of the annual arithmetic mean PM_{2.5} concentrations, from single or multiple community oriented monitors is less than or equal to 15 µg/m³.

c. All measurements of air quality are to be corrected to a reference temperature of 25° C and a reference pressure of 760 mm of mercury (Hg) (1013.2 millibar); ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

d National Primary Standards: The levels of air quality deemed necessary by the federal government, with an adequate margin of safety, to protect the public health.

e National Primary Standards: The levels of air quality deemed necessary by the federal government, to protect the public welfare from any known or anticipated adverse effects to a pollutant.

f The 1-hour ozone standard will be replaced by the 8-hour standard on an area-by-area basis when the area has achieved 3 consecutive years of air quality data meeting the 1-hour standard.

Source: CARB www.arb.ca.gov/adam, accessed 2/13/04.

Table 6.2-2

Health Effect Summary of the Major Criteria Air Pollutants

Air Pollutant	Adverse Effects
Ozone	Eye irritation Respiratory function impairment
Carbon Monoxide	Impairment of oxygen transport in the blood stream Aggravation of cardiovascular disease Impairment of central nervous system function Fatigue, headache, confusion, dizziness Can be fatal in the case of very high concentrations in enclosed places
Particulate Matter	May be inhaled and lodge in and irritate the lungs Increased risk of chronic respiratory disease with long exposure Altered lung function in children May produce acute illness with sulfur dioxide
Nitrogen Dioxide	Increased risk of acute and chronic respiratory disease
Sulfur Dioxide	Irritation of lung tissue Increased risk of acute and chronic respiratory disease

Source: Bay Area Air Quality Management District CEQA Guidelines, April 1996, Revised December 1999.

Monitors that collect air quality data are located throughout the SVAB. The closest monitoring station to the project area is the Sacramento, T Street station, located in downtown Sacramento at 1309 T Street. This monitoring station is operated by the CARB. Recent air quality data collected at this monitoring site is summarized in Table 6.2-3. Classifications for the key criteria pollutants in the SVAB are discussed below under Existing Attainment Status.

Existing Attainment Status

The criteria air pollutants most relevant to air quality planning and regulation in the SVAB include O₃, CO, and PM₁₀. Each of the relevant criteria pollutants is briefly described below in the context of the SVAB attainment status.

Ozone is a gas that is formed when volatile organic compounds (VOCs) and NO_x—both byproducts of internal combustion engine exhaust—undergo slow photochemical reactions in the presence of sunlight. Ozone concentrations are generally highest during the 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. The SVAB is currently classified as being in “severe” nonattainment for ozone, which means that the SVAB has exceeded the standard more than four times over the last three years. Currently, the SVAB has a deadline of 2005 for meeting the federal ozone standard.

Carbon Monoxide is a colorless, odorless gas produced by the incomplete combustion of fuels. CO concentrations tend to be the highest during winter mornings with little to no wind, when surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion engines—unlike ozone—and motor vehicles operating at slow speeds

Table 6.2-3

**Summary of Air Pollutant Data From T Street
Monitoring Station, Sacramento
(Compared to Federal and State Standards)**

Pollutant	2002	2003	2004
OZONE (1-hour)			
Highest 1-hour (ppm)	0.109	0.111	0.105
Days>0.125 ppm (Fed)	0	0	0
Days>0.09 ppm (Cal)	6	4	1
OZONE (8-hour)			
Highest 8-hour (ppm)	0.091	0.091	0.075
Days>0.08 (Fed) ¹	3	1	0
CARBON MONOXIDE			
Highest 8-hour (ppm)	4.31	3.40	2.96
Days>=9.5 ppm (Fed)	0	0	0
Days>=9.1 ppm (Cal)	0	0	0
PARTICULATE MATTER (PM₁₀)			
Highest federal Concentration	77	65	37
Highest State Concentration	81	66	40
Days>50 ug/m ³ (Cal)	3	0	0
Days>150 ug/m ³ (Fed)	0	0	0
PARTICULATE MATTER (PM_{2.5})²			
Highest 24-hour (ug/m ³)	73.0	49.0	41.0
Days>65 ug/m ³ (Fed)	4	0	0
NITROGEN DIOXIDE			
Highest 1-hour (ppm)	0.084	0.084	0.072
Days>.25 ppm (Cal) ³	0	0	0
Annual (Fed) > 0.053 ppm	0	0	0

Notes:

1. There is no State 8-hour ozone standard.
2. There is no State 24-hour PM_{2.5} standard.

Source: California Air Resources Board. www.arb.ca.gov site accessed 2/13/05.

are the primary source of CO in the SVAB, the highest ambient CO concentrations are generally found near congested transportation corridors and intersections. Additional traffic generated by a project may increase congestion at nearby intersections, and consequently increase the likelihood of creating high levels of CO.

Through control measures adopted by State, local and federal agencies, all areas of the SVAB have attained the California and federal CO standards.

Fine Particulate Matter (PM₁₀) consists of extremely small, suspended particles or droplets 10 microns or smaller in diameter. Some sources of PM₁₀, like pollen and windblown dust, are naturally occurring. However, in populated areas, most PM₁₀ is caused by road dust, diesel soot, combustion products, abrasion of tires and brakes, and construction activities. Particulates are of concern because they can be inhaled deep into the lungs and cause respiratory problems.

Monitoring data for the SVAB shows that the Basin currently is in attainment of the federal PM₁₀ standard. However, EPA has not officially changed the Basin's designation to attainment; therefore, the Sacramento region is officially in nonattainment for the federal standards. The Basin is also officially in nonattainment of the more stringent State PM₁₀ standard.

Other Criteria Pollutants: The Sacramento region is in attainment of State and federal standards for all other criteria pollutants. The region has not yet been classified for PM_{2.5}, for which there is a federal standard, but no State standard. PM_{2.5} consists of particles 2.5 microns or less in diameter. Although the Sacramento region is unclassified for PM_{2.5}, monitoring data is being collected for this pollutant. It is anticipated that EPA will make PM_{2.5} designations for areas in the near future.

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. Natural sources of emissions include windblown dust and wildfires. Farms, construction sites, and residential areas can also contribute to toxic air emissions. The CARB has recently identified diesel particulate matter as a toxic air contaminant.

Odors

Part of any air quality analysis includes an evaluation of whether odor impacts will result from implementation of the project. The apparent presence of an odor in ambient air depends on the properties of the substance emitted, its concentration when it is emitted from a source, and the dilution of emission between the emission point and the receptor. There are no major odor sources, such as landfills or wastewater treatment plants located in close proximity to the project site.

Sensitive Receptors

Sensitive receptors include individuals as well as specific land uses. Some individuals are considered to be more "sensitive" than others to air pollutants. The reasons for greater sensitivity than average include health problems, proximity to the emission source, or duration of exposure to air pollutants. 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 receptors 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.

Several sensitive receptors exist in the vicinity of the SMCS project area including residential uses to the north, south, and west, a Montessori school at Pioneer Church, and a senior housing project on Capitol Avenue. In addition, the existing Sutter General Hospital (SGH) and Buhler Building are also considered sensitive receptors. The existing SGH and Buhler Building would be affected during construction of the SMCS project, and the new Women's and Children's Center (WCC), once completed, would also be affected by emissions resulting from operation of the various project components included within the SMCS project.

Existing Emission Sources and Concentrations

There are many types of air pollutant sources in Sacramento County. These sources can be divided into two categories: mobile and stationary sources. The CARB maintains an emission inventory of air pollutants within the State's air basins and counties inside those air basins. Table 6.2-4 presents the latest emission inventory of reactive organic gases, nitrogen 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, and CO in Sacramento County. The "Miscellaneous Processes" category, which includes activities such as construction and farming operations, contributes almost all of the particulate matter generated in Sacramento County.

Table 6.2-4

2004 Estimated Annual Emissions Summary For Sacramento County (Tons/Day)

Source Category	ROG	CO	NO _x	PM ₁₀
Stationary Sources				
Fuel Combustion	0.58	3.02	3.20	0.93
Waste Disposal	0.24	0.14	0.04	0.01
Cleaning and Surface Coatings	5.34	-	-	-
Petroleum Production and Marketing	4.11	-	-	-
Industrial Processes	0.88	0.50	0.28	1.21
Total Stationary Sources	11.16	3.66	3.52	2.15
Area-Wide Sources				
Solvent Evaporation	13.46	-	-	0.01
Miscellaneous Processes	4.16	40.70	3.17	38.29
Total Area-Wide Sources	17.62	40.70	3.17	38.30
Mobile Sources				
On-Road Vehicles	29.32	276.06	54.88	1.75
Other Mobile	12.06	91.21	25.62	1.77
Total Mobile Sources	41.38	367.28	80.50	3.52
Natural (Non-Anthropogenic) Sources				
Total Natural Sources	-	-	-	-
TOTAL	70.16	411.64	87.18	43.96

Source: California Air Resources Board. www.arb.ca.gov/app/emsmv/emssumcat_query. Accessed 3/2/05.

Toxics

The CARB has conducted studies to determine the total cancer inhalation risk to individuals due to outdoor toxic pollutant levels. According to the map prepared by the CARB showing the

estimated inhalation cancer risk for TACs in the State of California, the project area has an existing estimated risk that is greater than 750 cancer cases per one million people.² This represents the lifetime risk that between 750 and 1,000 people in one million may contract cancer from inhalation of toxic compounds at current ambient concentrations. 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, buses, 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. Based on the CARB data, the existing ambient TAC risk within the project area already exceeds the 10 cancer cases per 1 million people risk threshold. Levels of TACs are likely exacerbated by the fact that the project site is located near a busy freeway interchange where Highway 50, State Route 99, Capital City Freeway and Interstate 5 all converge within a half mile of the project area.

REGULATORY SETTING

Air quality in the project area is regulated by the U.S. Environmental Protection Agency (U.S. EPA), the CARB, and the Sacramento Metropolitan Air Quality Management District (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 governments.

Since many air pollution problems are regional in nature, the federal government sometimes designates multi-county areas or areas consisting of several different air districts as "Nonattainment Areas". The "Nonattainment Area" designation for areas comprising more than one district 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

U.S. Environmental Protection Agency

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 emissions 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

² California Air Resources Board – Environmental Maps: Inhalable Cancer Risk. Accessed via CARB website: www.arb.ca.gov/toxics/cti/hlthrisk/hlthrisk.htm

and regulations to identify specific measures to reduce pollution in nonattainment areas, using a combination of performance standards and market-based programs.

Federal Clean Air Act

The Federal Clean Air Act (FCAA 42 USC 7401-7661), 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 will be met. The CARB approved the most recent plan in 1994 for the Sacramento ozone non-attainment area, and submitted it to the U.S. EPA. The plan was approved by the U.S. EPA in 1996. The SIP plan consists of a list of reactive organic gas and nitrogen oxide 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.

Eight-Hour Ozone Standard

The federal eight-hour ozone standard was established in response to human health studies indicating that longer ozone exposures at lower levels also resulted in adverse health effects, including coughing, increased asthma attacks, chronic lung inflammation, decreased lung function, and decreased lung defenses against bacterial infections. The eight-hour standard was established in order to complement, not replace, the existing one-hour standard. Both federal ozone standards now apply, along with California's own one-hour ozone standard.

Federal Ozone Attainment Plan

The SVAB is subject to a 1994 Federal Ozone Attainment Plan (the *Sacramento Area Regional Ozone Attainment Plan*). This plan was adopted by five air districts in the Sacramento area in order to build upon existing State and local air quality programs. The Plan contains adopted measures, implementation and adoption schedules for new measures, emission inventories, modeling results, contingency measures, and emissions reduction demonstrations that guide reduction of emissions in the Sacramento Region. Sacramento County needs to demonstrate attainment of federal ozone standards by 2005.

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.

State

California Clean Air Act

The State of California air quality standards are generally more stringent than the corresponding federal standards for the criteria air pollutants. The California Clean Air Act (CCAA) requires non-attainment areas to plan for the eventual attainment of the standards. Areas have been designated as attainment or non-attainment with respect to the ambient air quality standards. The timeframe given to meet state air quality standards would depend upon the severity of air quality problems. The California Health and Safety Code Section 40914(A) requires that air districts design a plan to achieve an annual reduction in district-wide emissions of five percent or more for each non-attainment criteria pollutant or its precursor, averaged every consecutive three-year period, beginning at base year 1987.

California Air Resources Board

The CARB, a part of the California Environmental Protection Agency, 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.

Toxic Air contaminants

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 in their 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.

The CARB has recently 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 the *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.

TAC impacts are assessed using a standard Maximally Exposed Individual (MEI) health risk of 10 in 1 million. The CARB and the local air district have determined that any source that poses a risk to the general population that is equal to or greater than 10 people out of 1 million contracting cancer as excessive. When estimating this risk, it is assumed that an individual is exposed to the maximum concentration of any given TAC, continuously for 70 years. If the risk of such exposure levels meets or exceeds the threshold of 10 excess cancer cases per 1 million people, then 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. This ensures that the toxics source is being controlled to the fullest extent possible using current technology.

Local

Sacramento Metropolitan Air Quality Management District

The SMAQMD is the primary agency responsible for planning to meet federal and State ambient standards in the SVAB. 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 Sacramento Air Basin's part of the SIP is a compilation of regulations that govern how the region and State will comply with the federal Clean Air Act 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 the *Sacramento Area Regional Ozone Attainment Plan*. The most recent update of the Plan was adopted on November 15, 1994. Currently, the region is working on an update to the 1994 Plan.

For PM₁₀, 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. Since monitoring data shows that the PM₁₀ standard is being met in practice, no PM₁₀ plan exists in the SMAQMD.

Sacramento County is also in nonattainment of certain State standards. These standards are either equally stringent, or more stringent than federal standards. Currently, the County does not attain the State PM₁₀, PM_{2.5}, or ozone standards, and is considered a maintenance area for CO.

Local Air District Rules

The SMAQMD rules that relate to development within the SVAB and are of relevance to the SMCS project are summarized below:

RULE 402 – Nuisance

Prohibits a person from discharging, from any source whatsoever, such quantities of air contaminants or other materials which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public or which endanger the comfort, repose, health or safety of any such person or the public or which cause or have a natural tendency to cause injury or damage to business or property.

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 volatile organic compound (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.

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 1988 General Plan, which will include an Air Quality Element.

Central City Community Plan

The City of Sacramento has also created plans for the various neighborhoods within the City. The SMCS project would fall under the Central City Community Plan. The Central City Community Plan does not contain any specific goals or policies that pertain to air quality.

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 SMCS project. Air pollutant emissions would result from construction activities, project operations, and increased traffic volumes. 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. Because a development application has not yet been submitted to the City for the B Street Theatre/Children's Theatre of California project, impacts associated with this component of the project are analyzed on a programmatic level.

The SMAQMD is the primary local agency responsible for air quality in the Sacramento Valley, and has published air quality thresholds of significance for use by lead agencies when making determinations 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.

Construction

Construction emissions were calculated by estimating the equipment that would be used during the most intensive periods of clearing and grading of the project area, excavation of the site, and construction of the proposed structures and their associated support facilities. The “worst-case” daily construction emissions associated with these activities were estimated using emission factors from the URBEMIS 2002 emissions model developed for CARB.

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 hospital patients and employees.

The average daily emission factors for operational emissions of criteria pollutants are estimated by using emission factors in the URBEMIS 2002 emissions model. 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.

Localized CO Concentrations

The CALINE 4 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.

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. The SMAQMD provides 1-hour CO background rollback values for various areas of the Sacramento Region and various analysis years. According to the background rollback table, the project area would experience CO 1-hour background levels of approximately 4.59 parts per million (ppm) in 2007. This value was used to model for possible exceedances of the 1-hour CO standard. For the 8-hour standard, to ensure an adequate margin of safety, the highest 8-hour CO reading for 2003 from the T Street station was used as the background concentration.

Standards of Significance

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

- Cause a predicted violation of the CO ambient air quality standards (1-hour and 8-hour State standards) due to project traffic on the local street network on both a project and a cumulative level;
- Create emissions of an ozone precursor or PM₁₀ exceeding the SMAQMD recommended thresholds of significance. The SMAQMD considers the following generation of emissions to represent a significant adverse impact:

Pollutant	Construction	Operation
ROG	None	65 lbs/day
NO _x	85 lbs/day	65 lbs/day
PM ₁₀	50 µg/m ³ *	50 µg/m ³ *

Notes:

* µg/m³ is the measurement of the concentration of particulate matter in a cube that is one meter on all sides.

Source: SMAQMD, 2002.

- Result in a net increase of any criteria pollutants, on a project specific and cumulative level, for which the project region is non-attainment under an applicable federal or state ambient air quality standard; or
- Create a risk of 10 in 1 million or more for TACs.

Impact 6.2-1: Increase in fugitive dust from demolition of existing buildings.		
	SMCS Project	Theatre
Significance Before Mitigation	Short-term Significant	Short-term Significant
Mitigation Measures	Mitigation Measure 6.2-1	Mitigation Measure 6.2-1
Significance After Mitigation	Less than Significant	Less than Significant

SMCS Project

As part of the SMCS project, a number of existing buildings would need to be demolished. The demolition process would generate fugitive dust. Significant amounts of fugitive dust (PM₁₀), even though they would be temporary in nature, could have health impacts on sensitive receptors.

There are ten buildings slated for demolition as part of the SMCS project, totaling over 114,000 square feet (sf). If not relocated, a small third party medical office and the House of Furs building would also be demolished as part of the SMCS project. It can be assumed that the largest fugitive dust impact from building demolition would occur when the largest building is demolished. The largest building scheduled for demolition is the four-story St. Luke's Medical Office Building, with approximately 70,000 sf. The medical office would be demolished and rebuilt with a smaller structure as part of the SMCS project. Construction of the WCC would require demolition of the Old Tavern parking structure, the (former) RAS medical office, and the Energy Center, as well as a surface parking lot. Construction of the SMF Building would require demolition of the MTI office buildings, the House of Furs building, a small third party medical office (if not relocated), and surface parking areas. Construction of the Community Parking Structure would not require any building demolition, but would require removal of a large surface parking lot. Construction of the residential component would require removal of the St. Luke's parking structure.

Using the URBEMIS 2002 modeling program, it was determined that fugitive dust associated with demolition of the St. Luke's Medical Office Building was calculated to be the largest area that would be demolished. A total of approximately 403.84 pounds per day of PM₁₀ was calculated to occur during building demolition. The SMAQMD's standard of significance for PM₁₀ is a concentration-based threshold of 50 µg/m³. To convert the mass emission pounds-per-day number to a PM₁₀ concentration would require the use of dispersion modeling software. Because no specific model exists for calculating PM₁₀ concentrations from demolition, the process would not be accurate. The SMAQMD does not provide any guidance for calculating PM₁₀ concentrations from demolition activities with a dispersion model. However, it can be assumed that the 403.84 pounds per day of dust from building demolition would exceed the SMAQMD's PM₁₀ concentration threshold at the property line during the most intensive demolition period. Consequently, this would be considered a **short-term significant impact**.

Theatre

The Children's Theatre of California project would be developed on land that is partially occupied by two existing buildings (EAP Building and Trinity Apartments). The Trinity Apartments are proposed to be demolished at the start of the SMCS project. The EAP building would be demolished at the end of the SMCS project. At this time, the Theatre has not yet submitted a formal application to the City for consideration of the Children's Theatre project. At the time an application is submitted to the City it is anticipated additional environmental review would be required. However, at this time, as with the SMCS project, demolition of these structures would generate fugitive dust that could cause the SMAQMD'S PM₁₀ concentration standard to be exceeded. This would be considered a **short-term significant impact**.

Mitigation Measures

Mitigation Measure 6.2-1 would apply to both the SCMS project and the Children's Theatre project. Compliance with Mitigation Measure 6.2-1 would substantially reduce the amount of PM₁₀ generated by building demolition for both the SMCS project and the Theatre. Keeping buildings wetted-down is a technique employed on a regular basis by demolition contractors. Although the SMAQMD does not have regulations for demolition that specify mitigation for this activity, other districts have regulations of this nature. Keeping buildings wetted during and after demolition is specified in these regulations as an effective dust control measure. The San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD), for instance, has adopted Regulation VIII – Control Measures for Construction Emission of PM₁₀. This regulation specifies measures that can be used to limit PM₁₀ during construction activities. The regulation includes the following measures that are applicable to demolition. These consist of the following:

- All land clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, and demolition activities shall be effectively controlled of fugitive dust emissions utilizing application of water or by presoaking.
- With the demolition of buildings up to six stories in height, all exterior surfaces of the building shall be wetted during demolition.
- When materials are transported off-site, all material shall be covered, or effectively wetted to limit visible dust emissions, and at least six inches of freeboard space from the top of the container shall be maintained.

This SJVUAPCD language, and the absence of any other measures for the control of demolition PM₁₀, indicate that demolition PM₁₀ can be effectively mitigated through the application of water during all demolition activity as indicated below in Mitigation Measure 6.2-1. This would mitigate the short-term fugitive dust impacts to a level that is *less than significant*.

(SMCS/Theatre)

- 6.2-1 (a) *The project applicant shall require in all construction contracts that the demolition contractors will ensure that all exterior surfaces of buildings are wetted during building demolition activities. The material from any building demolition shall be completely wetted during any period when the material is being disturbed, such as during the removal from the construction site.*
- (b) *All piles of demolished material shall be wetted and covered until removed from the site.*
- (c) *Maintain two feet of freeboard space on haul trucks.*
- (d) *All operations shall expeditiously remove the accumulation of mud or dirt from adjacent public streets at the end of each workday. (The use of dry brushes is expressly prohibited except where preceded by sufficient water or chemical stabilizer/suppressant).*
- (e) *Wheel washers for exiting trucks shall be installed, or all trucks and equipment leaving the site shall be washed off.*

Impact 6.2-2: Fugitive dust during grading of construction site(s).		
	SMCS Project	Theatre
Significance Before Mitigation	Short-term Significant	Short-term Significant
Mitigation Measures	Mitigation Measure 6.2-2	Mitigation Measure 6.2-2
Significance After Mitigation	Less than Significant	Less than Significant

SMCS Project

Prior to actual building construction, the building sites would have to be graded and prepared for development. Grading activities involve clearing and leveling the land using heavy equipment such as scrapers, bulldozers, and backhoes. Fugitive dust or PM₁₀ is generated during this process as the ground is disturbed. The total amount of PM₁₀ generated is normally determined by the size of the graded area. The larger the area, the more PM₁₀ is created. In the case of the SMCS project, the total area to be graded is approximately 6 acres. This estimate also includes grading for the future Children's Theatre of California. It is anticipated that grading would not occur on one large parcel of land, but on five separate parcels. Because of the staggered construction schedule, it is unlikely that these parcels would be graded simultaneously. Since the parcels are relatively small, it is assumed that each parcel would be completely graded during the course of a single day. The most fugitive dust would be generated during the grading of the largest parcel. The largest individual parcel is the approximately 1.7 acre Community Parking Structure site.

The SMAQMD recommends a PM₁₀ threshold of significance that is equal to the CAAQS for PM₁₀ of 50 µg/m³. The SMAQMD's *Guide to Air Quality Assessment in Sacramento County* (Guide) specifies a methodology for evaluating whether a project would exceed this PM₁₀ standard during construction. Appendix B of the Guide contains Table B.1 – Particulate Matter Screening Level for Construction Projects. This table lists various acreages and mitigation associated with the various acreage ranges which would reduce PM₁₀ impacts to less-than-significant levels. As long as a project's maximum acreage graded per day falls into one of the acreage ranges, and the appropriate mitigation measures are applied, the project would be considered to have a less than significant PM₁₀ impact during construction, and no concentration modeling is required.

Since the entire area to be graded is 6 acres, a worst-case scenario would be if all 6 acres were graded in one day resulting in a **short-term significant impact**.

Theatre

Grading that is associated with the Children's Theatre component is included in the total 6 project acres because it is assumed this site would be graded during construction of the SMCS project. Therefore, the impact would be considered a **short-term significant impact**.

Mitigation Measures

As noted above, the SMAQMD requires specific mitigation for projects of different sizes to ensure that PM₁₀ thresholds are not exceeded. According to Table B.1 of the SMAQMD Guide, the SMCS project would have to implement Level One mitigation to ensure that PM₁₀ levels do not exceed the SMAQMD threshold. Level One mitigation includes such things as watering exposed soil and ensuring that there is freeboard space on haul trucks that transport dirt and other material. For projects between 5.1 and 8 acres, the SMAQMD requires the following mitigation. According to the SMAQMD Guide, compliance with Mitigation Measure 6.2-2 would decrease fugitive dust (PM₁₀) impacts from grading associated with the SMCS project and the Theatre to a level that is considered *less than significant*.

(SMCS/Theatre)

6.2-2 *The following measures are required by the SMAQMD for level one mitigation, and shall be implemented during grading at all project sites:*

- (a) *Water exposed soil twice daily.*
- (b) *Maintain two feet of freeboard space on haul trucks*

In addition, the following measures shall be implemented to further reduce the PM₁₀ impact during construction activity:

- (c) *All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at the end of each workday. (The use of dry brushes is expressly prohibited except where preceded or accompanied by sufficient water or chemical stabilizer/suppressant.)*
- (d) *Wheel washers for all exiting trucks shall be installed, or all trucks and equipment leaving the site shall be washed off.*
- (e) *Excavation and grading activity shall be suspended when winds exceed 20 mph.*

Impact 6.2-3: Increase in NO_x emissions generated by construction equipment.		
	SMCS Project	Theatre
Significance Before Mitigation	Short-term Significant	Less than Significant
Mitigation Measures	Mitigation Measure 6.2-3	None required
Significance After Mitigation	Short-term Significant and Unavoidable	N/A

SMCS Project

Various pieces of construction equipment would be used during the grading and construction of the various SMCS project components. Much of this equipment is diesel-fueled, and emits NO_x as part of the fuel-combustion process. The number and type of equipment used for construction on any one day would determine whether SMAQMD thresholds for NO_x would be exceeded. As discussed in Impact 6.2-1 and Impact 6.2-2, it is not anticipated that the project sites for the various SMCS project components would be graded simultaneously. However, actual construction of the buildings would overlap. Consequently, for calculating daily emissions of NO_x, the site(s) with the most pieces of equipment being used at any one time would have the highest daily NO_x amounts. According to the construction schedule, there would be periods where a number of different project components would have overlapping construction activities in 2007. These would be the WCC (398,400 square feet), the SMF Building (203,382), the Future MOB (35,000 square feet), and the residential component (32 units approximately 1,250 sf in size).

Construction of the WCC is scheduled to begin in early spring 2007 and be completed by late 2010. Construction of the SMF Building is scheduled to begin in the fall of 2006 and be completed by the spring of 2008. The Future MOB would begin construction in early summer 2006 and be completed by late summer 2007. The residential units would be constructed throughout 2007. These project components would have construction periods that overlap by four to six months, from the spring of 2007 to the middle or end of summer 2007. This period would be when the most construction equipment would be operating simultaneously, and consequently, when the greatest daily amounts of criteria air pollutants would be generated by construction activities.

The URBEMIS 2002 modeling program was used to calculate NO_x emissions from the construction phases of these buildings during this overlapping period. The SMAQMD recommends that construction impacts be analyzed using Table 3.1 of the SMAQMD Guide. This table specifies types and numbers of construction equipment that would typically be used for projects of different sizes. Equipment as specified in Table 3.1 was used in the URBEMIS 2002 model. This modeling showed that construction associated with the WCC would generate approximately 35.97 pounds per day of NO_x in spring 2007, construction associated with the SMF Building would generate 107 pounds per day of NO_x during this same period, the Future MOB would also contribute 107 pounds per day, and construction of the residential units would contribute 73.89 pounds per day. These emissions would combine for a total maximum of approximately 323.86 pounds of NO_x per day during the portion of 2007 where construction overlaps. This would be in excess of the SMAQMD construction NO_x threshold of 85 pounds per day and would be a **short-term significant impact**.

Theatre

The Children's Theatre of California proposes to build a 565-seat theatre that would include an approximately 50,000-square-foot building to house the B Street Theatre and the Children's Theatre of California. As with the SMCS project, Table 3.1 of the SMAQMD guide was used to determine the type and amount of equipment that would be used during the construction period. Using these assumptions, NO_x emissions were calculated for a building this size when built over a one year period. Maximum daily NO_x construction emissions were estimated to be approximately 60.87 pounds per day. This would not exceed the SMAQMD standards of significance for construction NO_x and would result in a **less-than-significant impact**.

Mitigation Measures

The SMAQMD requires that certain mitigation measures be implemented for all construction projects. Mitigation Measure 6.2-3 (a-c) fulfills this SMAQMD requirement and would reduce the NO_x impact from construction activities associated with the various SMCS project components. In addition, Mitigation Measure 6.2-3 (d-g) would further decrease the emissions of NO_x from construction activities by at least 20 percent resulting in maximum NO_x levels of approximately 259 pounds per day. Using alternative fueled equipment could reduce NO_x emissions by another 14%, resulting in maximum NO_x levels of 213 pounds per day. This would not reduce the amount of NO_x generated daily to below the level of significance, and this would remain a *short-term significant and unavoidable impact*. Heavy duty NO_x reduction is limited by available technology. Mitigation in addition to that listed below, and that would achieve substantially more NO_x reductions is not available at this time.

(SMCS)

6.2-3 *The following measures recommended by the SMAQMD shall be incorporated into construction practices:*

- (a) *The project applicant shall require the project developer or contractor to 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, will 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 project applicant shall require the project developer or contractor to submit to SMAQMD a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that will 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 representative shall provide SMAQMD with the anticipated construction timeline including start date, and name and phone number of the project manager and on-site foreman.*
- (c) *The project applicant shall require the project developer or contractor to 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 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.*

In addition to the above, the following NO_x reducing measures shall be incorporated in all construction contracts:

- (d) Construction equipment shall be kept in optimum running condition at all times.
- (e) Minimize idling time (10 minute maximum).
- (f) When appropriate, use alternative fueled (such as aqueous diesel fuel) or catalyst equipped diesel construction equipment.
- (g) When appropriate, replace fossil-fueled equipment with electrically driven equivalents (provided they are not run via a portable generator set).

Impact 6.2-4: Generation of ROG and NO_x (criteria pollutants) associated with project operation.		
	SMCS Project	Theatre
Significance Before Mitigation	Significant	Less than Significant
Mitigation Measures	Mitigation Measure 6.2-4	None required
Significance After Mitigation	Significant and Unavoidable	N/A

SMCS Project

Operation of the SMCS project would generate an increase in criteria pollutants associated with hospital operation. ROG and NO_x are the primary criteria pollutants of concern in Sacramento County because they react to form ozone, which is considered a criteria pollutant. The County is currently in nonattainment of the federal and State ozone standards. As discussed in the Standards of Significance section, the SMAQMD has developed thresholds of significance for these pollutants. PM₁₀, while an issue in Sacramento County, is not typically produced in high amounts by project operation. The SMAQMD sets no standards for PM₁₀ for the long-term operational phase of a project.

Emissions would be created by the SMCS project in two ways; 1) Stationary equipment used to operate the facilities (industrial boilers, water heaters), would create ozone precursors of ROG and NO_x, and 2) the increase in traffic generated by the project would also contribute ROG and NO_x.

The project component that is expected to contain most of the large fuel-fired equipment would be the proposed Energy Center. Equipment at the new Energy Center would, for the most part, replace older equipment at the existing Energy Center. The horsepower or capacity of some of the equipment may be increased to account for the larger size of the expanded SMCS facilities. Equipment would include natural gas boilers for heat, electric chillers, and diesel-fueled backup generators. Five evaporative cooling towers would also be included. All new equipment would require a permit from the SMAQMD prior to operation. This would ensure that the equipment achieves the lowest achievable emission rate for its equipment class. Consequently, the newer equipment may actually be held to more stringent emission standards than existing equipment.

The amount of ROG and NO_x pollutants that would be generated by operation of the project was calculated using the URBEMIS 2002 modeling program. The modeling was performed using the methodology described in the "Methods of Analysis" portion of this section. For this analysis, instead of modeling all the project components as a whole, it is more accurate to model each building separately and then add the emissions together to determine the total impact. Table 6.2-5 shows the anticipated emissions from each building, as well as the combined impact. Operational emissions for each new building includes emissions from vehicle trips generated by the building occupants.

Table 6.2-5

Operational Emissions of the SMCS and Theatre Projects

Building	ROG Emissions (lbs/day)	NO_x Emissions (lbs/day)
Women's and Children's Center	44.64	53.20
SMF Building	60.51	76.86
Community Parking Structure and Commercial/Retail	2.79	3.28
Future Medical Office Building	10.16	12.83
Residential	3.93	2.73
Combined SMCS Emissions	122.03	148.9
Theatre	15.62	2.04
Total Emissions	137.65	150.94

Source: EIP Associates, 2005.

As shown in Table 6.2-5, the combined impact from operation of all the SMCS buildings would exceed the SMAQMD thresholds of 65 lbs/day for ROG and NO_x. This would create a **significant impact**.

Theatre

The Children's Theatre project is smaller in size than most of the SMCS project components, and would therefore likely generate fewer emissions. In addition, because the Theatre would function as a rehearsal and performance space, its use is less intensive than any of the SMCS components, where numerous activities occur on a more or less continuous basis. Stationary source emissions from the Theatre would be limited to those generated by heating and cooling units. The majority of emissions from the project would be generated by the traffic that would travel to and from the theatre for performances. The intermittent nature of the traffic generated by the theatre is reflected in the traffic study prepared for the project, and is consequently reflected in the URBEMIS modeling. The modeling showed that, on average, the theatre would generate 15.62 pounds per day of ROG and 2.04 pounds per day of NO_x, as shown in Table 6.2-5. This would be less than the SMAQMD thresholds of significance, and would consequently be a **less-than-significant impact**.

Mitigation Measures

The SMAQMD recommends that lead agencies require projects to reduce their ozone precursor emissions by 15%. The SMAQMD Guide provides a list of measures that can be used to achieve this 15% reduction. Each measure has an associated percentage point value. The

SMCS project has many of the listed measures built into its project design, and by virtue of the fact that it is located in downtown Sacramento where there is easy access to public transit.

The following measures are built into the SMCS project design:

- Project site is located within ½ mile of an existing Class I or Class II bike lane and provides a comparable bikeway connection to that existing facility. (1 point)
- Bus service provides headways of 15 minutes or less for stops within ¼ mile. (1 point)
- High density residential, mixed, or retail/commercial uses within ¼ mile of existing transit, linking with activity centers and other planned infrastructure. (1 point for bus only)
- Office floor area ratio is 0.75 or greater within ¼ mile of an existing transit stop. (1.5 points for bus only)

Compliance with Mitigation Measure 6.2-4 would provide the additional ozone precursor reductions needed to achieve the 15% recommended by the SMAQMD. However, this reduction would not reduce operational impacts to a level that is less than significant, since most emissions associated with the project are the result of vehicle trips, there are no other feasible mitigation measures available. This impact would remain a *significant and unavoidable impact*.

(SMCS)

6.2-4 *After approval by the SMAQMD, SMCS shall institute the following measures:*

- (a) *Exceed Title 24 energy standards for cooling energy by 50% at non-residential buildings. (1 point)*
- (b) *Install low NO_x hot water heaters.*
- (c) *Install ozone destruction catalyst on air conditioning systems in consultation with SMAQMD or local district. (2.5 points)*
- (d) *Provide preferential parking for carpools and vanpools.*
- (e) *To the extent that loading docks are incorporated into the project, equip all truck loading and unloading docks with one 110/208 volt power outlet for every two dock doors. Diesel trucks shall be prohibited from idling more than five minutes and shall be required to connect to the 110/208 bolt power to run any auxiliary equipment. Signage addressing these requirements shall be provided at the loading docks.*
- (f) *Provide showers and lockers for use by employees that bike to work. (0.5 points)*

- (g) *Provide secure bicycle storage at public parking facilities. (0.5 points)*
- (h) *The project applicant shall implement permanent TMA membership funding. (2.5 points)*
- (i) *The project applicant shall provide employees with a transit pass subsidy and/or a commute alternative allowance. (1.5)*
- (j) *Provide electric vehicle charging facilities. (1 point)*
- (k) *Increase parking lot shading by 20% over code. (1 point)*

Impact 6.2-5: Increase in CO concentrations from project-related traffic.		
	SMCS Project	Theatre
Significance Before Mitigation	Less than Significant	Less than Significant
Mitigation Measures	None required	None required
Significance After Mitigation	N/A	N/A

SMCS Project

While passenger vehicles emit ozone precursors such as ROG and NO_x, these precursors do not have localized impacts. However, motor vehicles also generate CO, which is a directly emitted pollutant. CO levels are highest at intersections where there is congestion and traffic is slow. The SMCS project would add traffic to existing roadways. To the extent that increases in traffic volumes lower level of service (LOS) rates, busy intersections could experience higher concentrations of CO. LOS “D” or below results in conditions where traffic is no longer “free flow.” The traffic section (see section 6.7, Transportation and Circulation) identifies seven intersections where LOS would be “D” or lower in future years under project build-out conditions. CO modeling results for existing “No-Project” and existing “With-Project” conditions for these intersections can be found in Tables 6.2-6 and 6.2-7.

As shown in Table 6.2-7, although CO concentrations would increase at some of these intersections as a result of the SMCS project when compared to No Project conditions, the modeling showed that 1-hour and 8-hour CO concentrations would not exceed the CAAQS. Since the federal standard for CO is 15 ppm higher than the CAAQS, concentrations would also be below the federal standard. This would consequently be considered a **less-than-significant impact**.

Table 6.2-6

**Localized Carbon Monoxide Concentrations
(Existing Conditions)**

Intersection	Maximum CO Concentrations in Parts per Million (ppm)		
	LOS (AM/PM)	25 Feet	50 Feet
		8-Hour/1-Hour	8-Hour/1-Hour
27 th /Capitol Avenue	A/A		
28 th /Capitol Avenue	B/B	4.8/5.3	4.7/5.2
28 th /N Street	B/B	4.8/5.2	4.6/5.1
29 th /N Street	C/C	5.3/6.0	5.1/5.7
Alhambra/Capitol Avenue	C/C	5.1/5.7	4.9/5.4
Alhambra/J Street	C/C	5.3/6.0	5.1/5.7
Alhambra/L Street	A/B	5.0/5.6	4.8/5.4

Source: EIP Associates 2004. Calculation sheets are provided in Appendix F.

Table 6.2-7

**Localized Carbon Monoxide Concentrations
(Existing Plus Project Conditions)**

Intersection	Maximum CO Concentrations in Parts per Million (ppm)		
	LOS (AM/PM)	25 Feet	50 Feet
		8-Hour/1-Hour	8-Hour/1-Hour
27 th /Capitol Avenue	A/D		
28 th /Capitol Avenue	B/C	5.0/5.6	4.9/5.4
28 th /N Street	C/C	4.9/5.4	4.8/5.2
29 th /N Street	C/C	5.3/6.1	5.1/5.7
Alhambra/Capitol Avenue	C/C	5.0/5.6	4.9/5.4
Alhambra/J Street	C/C	5.3/6.0	5.1/5.7
Alhambra/L Street	B/B	5.0/5.6	4.9/5.4

Source: EIP Associates 2004. Calculation sheets are provided in Appendix F.

Theatre

According to the traffic section prepared for the SMCS project, the Children’s Theatre would generate very few trip rates in the peak hour. The trip rate was calculated to be approximately 0.02 per seat in the peak hour. This low number of trips would not add traffic to the surrounding roads and intersections that could substantially increase CO levels. Consequently, the impact of the Theatre to surrounding CO concentrations would be *less than significant*.

Mitigation Measures

None required.

Impact 6.2-6: Increase in exposure of sensitive receptors to toxic air contaminants.		
	SMCS Project	Theatre
Significance Before Mitigation	Less than Significant	Less than Significant
Mitigation Measures	None required	None required
Significance After Mitigation	N/A	N/A

SMCS Project

The SMCS project could generate TACs associated with both project construction and operation.

Construction

Grading, and building construction would involve the use of diesel-fueled construction equipment. As this equipment burns diesel fuel, it will produce diesel particulate matter, which has been classified by the CARB as a TAC. The CARB determined that the chronic impact of diesel particulate was of more concern than the acute impact in its *Risk Management Guidance for the Permitting of New Stationary Diesel-Fueled Engines* (CARB, 2000). In this document, the CARB noted that "Our analysis shows that the potential cancer risk from inhalation is the critical path when comparing cancer and noncancer risk. In other words, a cancer risk of 10 per million from the inhalation of diesel PM will result from diesel PM concentrations that are much less than the diesel PM or TAC concentrations that would result in chronic or acute noncancer hazard index values of 1 or greater."³ Consequently, any analysis of diesel TAC should focus on the long-term, chronic cancer risk posed by the diesel exhaust. As mentioned above, chronic cancer risk is normally measured by assessing what the risk to an exposed individual from a source of TAC would be if the exposure occurred over 70 years.

Since the construction activity associated with the SMCS project would occur over the course of approximately four years. During this time, receptors in the vicinity of the SMCS project area would be exposed to diesel emissions intermittently. These receptors would not be subject to continuous TAC exposure during construction, and the duration of the construction period would be far less than the 70-year time-frame normally used to assess chronic TAC impacts.

Operation

Sources of TACs associated with project operation include boilers as part of daily operations. The exact nature of TAC sources associated with the SMCS project is not currently known. TACs are regulated through the local air districts by the Air Resource Board as a result of the Air Toxics "Hot Spots" information and Assessment Act (AB 2588). Under AB 2588, once the new SMCS buildings and facilities are operational, SMCS would be required to report any new

³ Risk Management Guidance for the Permitting of New Stationary Diesel-Fueled Engines, p. 22-23. CARB, October 2000.

emissions sources to the SMAQMD. The SMAQMD would then make a determination as to whether a Health Risk Assessment (HRA) would be required as a result of the expansion. If a HRA is required, the SMAQMD would use the assessment to determine the significance of the SMCS for TACs.

The SMCS has not been required to perform a HRA since the 1980's, when the facility operated a special sterilizer that produced TACs. Sutter has since removed the sterilizer and is no longer required to perform HRA's. If expansion triggers the preparation of a HRA, however, and the HRA shows that there is a significant TAC impact, AB 2588 requires that the impact be reduced by the facility to a level that is less than significant.⁴

Although it is not known whether TAC sources would actually develop as part of the SMCS project, it is not expected that the construction of these new uses would create significant new TAC sources. The SMCS project is adding hospital space, building a new Energy Center, and adding a medical office building, additional parking, housing, and commercial/retail space. No new equipment would be included that could produce significant amounts of TAC. The equipment included in the newly expanded Energy Center would for the most part replace existing equipment, with possible increases to the horsepower of certain equipment. Almost all of the equipment would run on fuels other than diesel. Diesel-fueled backup generators would be included, for emergency situations. Use of these generators would only be allowed during emergency situations and for limited times during the year for testing purposes. Aside from new equipment, no new processes or activities would occur that could produce significant TAC. Consequently, the future uses would not be expected from current uses in the amount of TAC's produced. Even if new TAC sources did develop in the future, the required HRA would determine the TAC effect, and the TAC source would be required to reduce the impact.

Since the impact from construction equipment would be temporary and minimal, and since stationary TAC sources are expected to be minimal as well, the project's TAC impact would be considered ***less than significant***.

Theatre

The proposed Children's Theatre of California would be a rehearsal and performance space. The operations of this type of facility do not typically generate TACs. It is not expected that the theatre would have any TAC generating equipment. Consequently, the theatre is not expected to create any TACs; therefore, this would be considered a ***less-than-significant impact***.

Mitigation Measures

None required.

CUMULATIVE IMPACTS

In addition to impacts that are created by the project alone, the project's impact must be evaluated when combined with other unrelated projects that would occur in the same area. This

4 ARB "Overview of the Air Toxics "Hot Spots" Information and Assessment Act. ARB website – www.arb.ca.gov/ab2588/overview.hm. Accessed 4/26/2004.

analysis is known as a cumulative impact analysis. The analysis takes into account only the additional emissions resulting from expansion of the current facilities.

The cumulative air quality context is the SVAB, which is currently designated as non-attainment for State PM₁₀ standards and nonattainment for State and federal ozone standards. The emission inventory and the SIP for the SVAB is currently being updated. Due to the substantial amount of growth and an unplanned increase in vehicle emissions from sport utility vehicles, the current SIP is outdated and underestimates vehicle emissions that are generated within the air basin.

The cumulative context for CO impacts is other traffic passing through the study intersection(s) where a project-specific violation has occurred. The cumulative context for TACs is other generators in the vicinity of the project site that could contribute to the specific TAC risk.

Impact 6.2-7: The SMCS project, in combination with other projects proposed within the SVAB, could result in a significant temporary cumulative impact from construction activities.		
	SMCS Project	Theatre
Significance Before Mitigation	Short-term, Significant	Short-term, Significant
Mitigation Measures	Mitigation Measures 6.2-5 and 6.2-6	Mitigation Measures 6.2-5 and 6.2-6
Significance After Mitigation	Less than Significant	Less than Significant

SMCS Project

The SMCS project would temporarily generate emissions for the duration of the construction activity. These construction-related emissions of pollutants would combine with other emission sources in the vicinity of the SMCS project area. Criteria pollutants normally associated with construction are particulate matter and NO_x. ROG, an ozone precursor, is not normally generated in large amounts by heavy-duty construction equipment. Diesel particulate matter is also generated by construction equipment's diesel fuel combustion and is a TAC issue.

The area surrounding the project area is a high-density urban area. As such, there are few existing sources of particulates. However, data from the closest SMAQMD monitoring station shows that the State standard for PM₁₀ was exceeded eight times in the last three years, so PM₁₀ concentrations could be an issue in the vicinity of the SMCS project area. As discussed in Impact 6.2-2, because of the relatively small size of the graded area, fugitive dust generated by construction could be reduced to levels that are less than significant. Any remaining dust would be in amounts small enough that the effect would not be cumulatively considerable.

While PM₁₀ is a criteria pollutant that has impacts in the area where it is generated, NO_x is an ozone precursor that can add to ozone impacts regionally. Since ozone is a regional problem in the Sacramento area and the SVAB is in an ozone nonattainment area, any NO_x that is generated by project-related construction activity could conceivably contribute to one or more

violations of the ozone standard. While the project's construction NO_x impact may appear to be small when viewed in context with all other NO_x sources in the region, its impact would be considered cumulatively considerable. Most large stationary sources of NO_x in the County have been regulated and have limited their emissions, and mobile sources make up an increasing percentage of the NO_x inventory. With this in mind, the NO_x problem is not caused primarily by large sources, but a combination of many smaller sources. Consequently, for the duration of the SCMS construction period, NO_x emissions from heavy-duty equipment would be generated in amounts that are cumulatively considerable. Therefore, the project would be considered to be contributing to a significant cumulative impact.

As discussed in Impact 6.2-6, construction activity would also produce TAC emissions. These emissions would be temporary, and there are no other substantial sources of TACs in the project vicinity that could combine with construction TACs to produce any significant impacts.

Because of the SMCS' cumulatively considerable construction NO_x impact, the SMCS project's construction would cause a ***short-term, cumulatively significant impact***.

Theatre

As with the SMCS project, construction emissions of NO_x from the Children's Theatre project would combine with other emission sources and could contribute in the short-term to an ozone impact. The impact would be cumulatively considerable because the NO_x inventory for Sacramento County is not dominated by large sources, but by many individual small sources. Consequently, this would be a ***short-term, cumulatively significant impact***.

Mitigation Measures

The following mitigation measure would reduce the cumulative effect of NO_x generated during construction of the SMCS and the Theatre project to a *less-than-significant level*. This is because prohibiting construction on high AQI days would keep project construction activities from contributing to any exceedance.

(SMCS/Theatre)

6.2-5 *Construction activity shall halt when the Air Quality Index (AQI) is forecast to be in excess of 150 (Unhealthy). Construction activity shall halt two days in advance of, and extend through, the day that is forecast to be 150 or greater on the AQI chart. AQI forecasts can be found at www.sparetheair.org.*

Also, mitigation measures applied in Impact 6.2-3 would help reduce cumulative NO_x from construction activities.

(SMCS/Theatre)

6.2-6 *Implement Mitigation Measure 6.2-3.*

Impact 6.2-8: The SMCS project, in combination with other projects in the SVAB could result in a cumulative impact on criteria pollutants associated with project operation.

	SMCS Project	Theatre
Significance Before Mitigation	Significant	Less than Significant
Mitigation Measures	Mitigation Measure 6.2-7	None required
Significance After Mitigation	Significant and Unavoidable	N/A

SMCS Project

As discussed in Impact 6.2-4, operations of the SMCS project would be significant according to the SMAQMD's published thresholds for project impacts. The SMAQMD's 1994 Air Quality Thresholds of Significance guidance document also has standards for cumulative impacts that differ from the thresholds for project-alone impacts. The guidance states that development would be cumulatively significant if the project requires a change in the existing land use designation (i.e., general plan amendment, rezone)⁵, and the new land use is more intensive than the existing use. A land use that is more intensive generates more area source and motor-vehicle emissions as a result of more overall activity. The SMCS projects would require a change to existing general plan designations and a zoning change. Approximately 1.5 blocks currently designated in the General Plan as "High-Density Residential" would be changed to a "Community/Neighborhood Commercial and Offices" designation. Six parcels currently zoned as "Office", and three parcels currently zoned "Multi-Family Residential" would be rezoned to "General Commercial". In both cases, the new land use would be more intensive than the existing land use, in that more vehicle-trips would be generated. Because this new activity would not be accounted for in the Sacramento Regional Ozone Attainment Plan, the impact from project operations would have a **significant cumulative impact**.

Theatre

As discussed above, the SMAQMD considers a project's operational emissions to be cumulatively considerable if the project would require a change in land use designation, and the proposed use is more intensive than the existing land use. Since the Children's Theatre would require no such change, the impact is less than significant and would be a **less-than-significant cumulative impact**.

Mitigation Measures

The following mitigation measures implemented in Impact 6.2-4 would also reduce the proposed project's cumulative impact. However, the impact would remain **cumulatively significant and unavoidable**.

5 SMAQMD Guide to Air Quality Assessment in Sacramento County. July, 2004, page 7-3.

(SMCS)

6.2-7 Implement Mitigation Measure 6.2-4.

Impact 6.2-9: Cumulative impact of CO concentrations from project-related traffic.		
	SMCS Project	Theatre
Significance Before Mitigation	Less than Significant	Less than Significant
Mitigation Measures	None required	None required
Significance After Mitigation	N/A	N/A

SMCS Project

In a cumulative analysis, project-related CO impacts are evaluated in combination with CO emissions from other existing and future development. The traffic study prepared for the proposed project predicts future (2025) traffic volumes at nearby intersections for both project and no-project scenarios. This evaluation also takes into account traffic from other sources that would be in existence at this future date. Maximum CO concentrations were determined by conducting modeling at the intersections that would have LOS of "D" or below in 2025. Tables 6.2-8 and 6.2-9 show the LOS and expected maximum one-hour and eight-hour CO concentrations for these intersection in 2025 under both project and no-project scenarios. The City of Sacramento may also implement a traffic calming "smart plan" that would change traffic patterns in the project vicinity. Consequently, CO concentrations in 2025 under "smart plan" conditions for both project and no-project scenarios were modeled as well. The results of this modeling are shown in Tables 6.2-10 and 6.2-11. As shown on Tables 6.2-8 and 6.2-9, even though LOS may be degraded in the future, CO levels under any scenario would not exceed the CAAQS for CO. This would be a *less-than-significant cumulative impact*.

Theatre

The 2025 traffic volumes predicted in the traffic study include trips generated by the Children's Theatre of California. As discussed above, modeled CO levels at the most congested intersections would not be in excess of the CAAQS. Consequently, theatre-related traffic would not contribute to CO concentrations that would violate SMAQMD thresholds of significance. This would be a *less-than-significant impact*.

Mitigation Measures

None required.

Table 6.2-8**Localized Carbon Monoxide Concentrations
(Future Conditions)**

Intersection	Maximum CO Concentrations in Parts per Million		
	LOS (AM/PM)	25 Feet	50 Feet
		8-Hour/1-Hour	8-Hour/1-Hour
27 th /Capitol Avenue	A/A		
28 th /Capitol Avenue	B/C	4.4/4.8	4.4/4.7
28 th /N Street	B/C	4.4/4.8	4.4/4.7
29 th /N Street	C/C	4.6/4.9	4.5/4.9
Alhambra/Capitol Avenue	D/D	4.5/4.8	4.4/4.8
Alhambra/J Street	C/C	4.5/4.9	4.5/4.8
Alhambra/L Street	B/C	4.5/4.8	4.4/4.7

Source: EIP Associates 2004. Calculation sheets are provided in Appendix F.

Table 6.2-9**Localized Carbon Monoxide Concentrations
(Future Plus Project Conditions)**

Intersection	Maximum CO Concentrations in Parts per Million		
	LOS (AM/PM)	25 Feet	50 Feet
		8-Hour/1-Hour	8-Hour/1-Hour
27 th /Capitol Avenue	B/F		
28 th /Capitol Avenue	D/F	4.5/4.8	4.4/4.8
28 th /N Street	E/D	4.5/4.8	4.4/4.8
29 th /N Street	C/D	4.6/4.9	4.5/4.9
Alhambra/Capitol Avenue	D/D	4.5/4.8	4.4/4.8
Alhambra/J Street	C/D	4.5/4.9	4.5/4.8
Alhambra/L Street	B/D	4.5/4.8	4.4/4.8

Source: EIP Associates 2004. Calculation sheets are provided in Appendix F.

Table 6.2-10

**Localized Carbon Monoxide Concentrations
(Future “Smart Plan” Conditions)**

Intersection	Maximum CO Concentrations in Parts per Million		
	LOS (AM/PM)	25 Feet	50 Feet
		8-Hour/1-Hour	8-Hour/1-Hour
27 th /Capitol Avenue	A/A		
28 th /Capitol Avenue	B/B	4.4/4.8	4.4/4.7
28 th /N Street	B/B	4.4/4.8	4.4/4.7
29 th /N Street	D/D	4.6/5.0	4.5/4.9
Alhambra/Capitol Avenue	C/D	4.5/4.8	4.4/4.8
Alhambra/J Street	D/D	4.5/4.9	4.5/4.8
Alhambra/L Street	A/C	4.4/4.8	4.4/4.7

Source: EIP Associates 2004. Calculation sheets are provided in Appendix F.

Table 6.2-11

**Localized Carbon Monoxide Concentrations
(Future Plus Project “Smart Plan” Conditions)**

Intersection	Maximum CO Concentrations in Parts per Million		
	LOS (AM/PM)	25 Feet	50 Feet
		8-Hour/1-Hour	8-Hour/1-Hour
27 th /Capitol Avenue	A/B		
28 th /Capitol Avenue	B/C	4.5/4.8	4.4/4.8
28 th /N Street	B/D	4.5/4.8	4.4/4.8
29 th /N Street	D/F	4.6/5.0	4.5/4.9
Alhambra/Capitol Avenue	C/E	4.5/4.8	4.4/4.8
Alhambra/J Street	D/D	4.5/4.9	4.5/4.8
Alhambra/L Street	A/B	4.5/4.8	4.4/4.7

Source: EIP Associates 2004. Calculation sheets are provided in Appendix F.

Impact 6.2-10: Cumulative impact of project-generated TACs.		
	SMCS Project	Theatre
Significance Before Mitigation	Less than Significant	Less than Significant
Mitigation Measures	None required	None required
Significance After Mitigation	N/A	N/A

SMCS Project

As discussed in “Existing Emissions Sources and Concentrations”, the SMCS project area is located in an area that the CARB has identified as having a background cancer risk of between 750 and 1000 in one million. These background levels are already in excess of the TAC significance standard of 10 in one million. The high TAC level is mainly due to heavy-duty diesel trucks. The Sutter facilities would be subject to the requirements of AB 2588 that mandates that facilities report their emissions and reduce their TACs to levels that are less than significant. Consequently, the SMCS contribution to overall TAC levels would not be cumulatively significant because it would generate very small amounts of TAC, and other sources play a much larger role in creating the high cancer risk in Sacramento County. The SMCS would have a ***less-than-significant cumulative impact***.

Theatre

The Children’s Theatre of California is not expected to produce any TACs. In any case, the Theatre would be subject to AB 2588 that requires facilities to reduce their TAC emissions to less than significant levels. The background TAC level is already high, and is mostly caused by diesel truck traffic. Consequently, the Theatre would have little to no impact, and would not be cumulatively considerable when viewed with other TAC producing sources. This would be a ***less-than-significant cumulative impact***.

Mitigation Measures

None required.

6.3 Cultural Resources

6.3 Cultural Resources

INTRODUCTION

This section describes known prehistoric and historical resources in the SMCS project area. Historical resources in the project area include properties that are listed or have been determined eligible for individual listing on the National Register of Historic Places (NRHP) or the California Register of Historical Resources (CRHR), and historic districts that are listed or have been determined or appear to be eligible for listing on the NRHP or CRHR. The CRHR includes properties listed or determined eligible for listing under the NRHP and/or CRHR. The effect of the SMCS project on existing historical resources, either by modification or demolition of eligible buildings or by altering the context of the historical resources is evaluated. The effect of the SMCS project on archeological resources through earthmoving activities, which could destroy subsurface resources and/or disturb the context of these resources, is also described.

Comments received during the two NOP comment periods raised concerns associated with the potential loss and/or damage of known or unknown prehistoric resources, potential impacts to the historical neighborhood as well as individual NRHP and CRHR eligible structures, impact on the historic context of the area, and the physical impact of construction on surrounding structures with un-reinforced brick or early cement construction, such as Sutter's Fort (see Appendices B and D).

Information in this section was obtained from the *Cultural Resources Report: Sutter Medical Center, Sacramento, Master Plan Projects and the Trinity Cathedral Project* prepared by Roland-Nawi Associates in June 2004 (see Appendix G), which includes previously published studies, a records search of previous cultural resource surveys and recorded resources in the project vicinity, correspondence with the Native American Heritage Commission, and a field survey of the project site.

ENVIRONMENTAL SETTING

Archaeological Resources

Archaeological Context

The Sacramento Valley was likely occupied and used by humans during the late Pleistocene and early Holocene periods (14,000 to 8000 B.P.); however, the archaeological record of such use is sparse. It is likely that Paleo-Indian populations occupied the area with villages located near watercourses. The creeks in the vicinity were filled or diverted in the late 19th century. Historically, during Sutter's Era, however, Burn's Slough passed Sutter's Fort on the north side, flowing southwest. Another small creek or slough may have passed on the south side of the Fort according to Stephen Beck. Recent excavations undertaken in Sacramento provide credible evidence that the Sacramento area was occupied at a very early time. Several villages have been identified near the confluence of the Sacramento and American Rivers.

Previous Archaeological Research

Archaeological investigations within or adjacent to the project area have been undertaken. The primary focus of these studies was historical; however, some prehistoric components were encountered. Investigations and excavations have occurred over the years at Sutter's Fort and in the project vicinity. The first excavations at Sutter's Fort were undertaken in 1989 (prior to its reconstruction in 1992) to determine the location of the original fort walls and buildings. Block studies have also been completed on a number of blocks in the project area. Studies of block occupation and use over time are invaluable tools for determining an area's potential to contain important cultural deposits. These studies take into consideration the activities that occurred on the block, the likelihood that such activities would have formed a cultural deposit, and whether or not the deposit continues to exist. This information aims only to provide a context for the types of artifacts and features that may be encountered during subsurface construction activities.

Historical Resources

Historical Context of the Sacramento Valley

Spanish exploration into the Sacramento Valley began as early as the early 1800s. 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 what was at the time Nisenan Indian 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. In an era before the automobile, development often followed streetcar lines and this appears to have been the case with the project area.

Project Area Context

The project area lies within the original Sutter grid. In the 1860s there were only two buildings within the project vicinity – Sutter's Fort and the Sacramento Brewery (The Old Tavern). Sutter's Fort is located adjacent to the project area to the north and the Old Tavern is located within the boundaries of the project area (see Figure 2-1 in Chapter 2, Project Description). While the brewery appears to have been thriving in this period, the fort was suffering from progressive deterioration. The Brewery was constructed in the 1840's as a warehouse and distillery for Sutter's Fort. Located on the northeast corner of 28th Street and Capitol Avenue (formerly M Street), the brewery underwent a number of alterations and expansions during its lifetime. The area had a distinctly industrial character in the 19th century.

Even by 1895 the area in which the project is situated remained sparsely populated and was dominated primarily by agricultural activities. With the extension of the streetcar line, the neighborhood became quite fashionable and a number of large, palatial houses were constructed along Capitol Avenue by 1915. Many of these are now within the boundaries of the City's Capitol Mansions Historic District.¹ By 1915, the character of the neighborhood had shifted to urban. In addition, a number of associational and religious buildings were constructed between 1900 and 1930.

Along with the restored Sutter's Fort, the eastern-most blocks of the neighborhood had, by the 1920s, taken on a heavily institutional composition while the blocks west of 27th Street were predominantly residential. This pattern of land use has remained essentially the same.

Previous Historic Resource Surveys and Documentation

The City of Sacramento has undertaken several historic building surveys in the area of Sutter's Fort and the proposed SMCS project area. In the 1980s, a survey was conducted and the Sutter's Fort Preservation Area historic district was formed (this district no longer exists). The district boundaries formerly extended from 21st Street on the west, to 29th Street on the east, from the center alley between K and L Streets on the north and from R Street on the south. Contributing buildings were identified, and survey forms were completed by Historic Environmental Consultants.

National Register nominations and City Landmark designations also provided additional documentation of historic properties in or adjacent to the project area. These include a report and architectural drawings prepared by Bob McCabe, historical architect, in 1982 for the Old Tavern Building, a National Register Nomination for the Eastern Star Hall prepared by Thomas Winter, historic architect, in the late 1990s, and a City Landmark Nomination prepared by Historic Environmental Consultants that provided historic and architectural information regarding Pioneer Congregational Church. As a part of the SMART Plan Project in 2003 JRP identified a total of 15 historic street features within the plan area. One of these features falls within the SMCS project area, a historic cut-stone curb from the 1870s associated with the Old Tavern. This cut stone curb is situated along the east side of 28th Street north of Capitol Avenue. "It appears to meet the criteria for listing in the National Register as a contributing element of the National Register listed property at 2801 Capitol Avenue"² and also "appears to be significant under Criterion A"³ for the California Register.

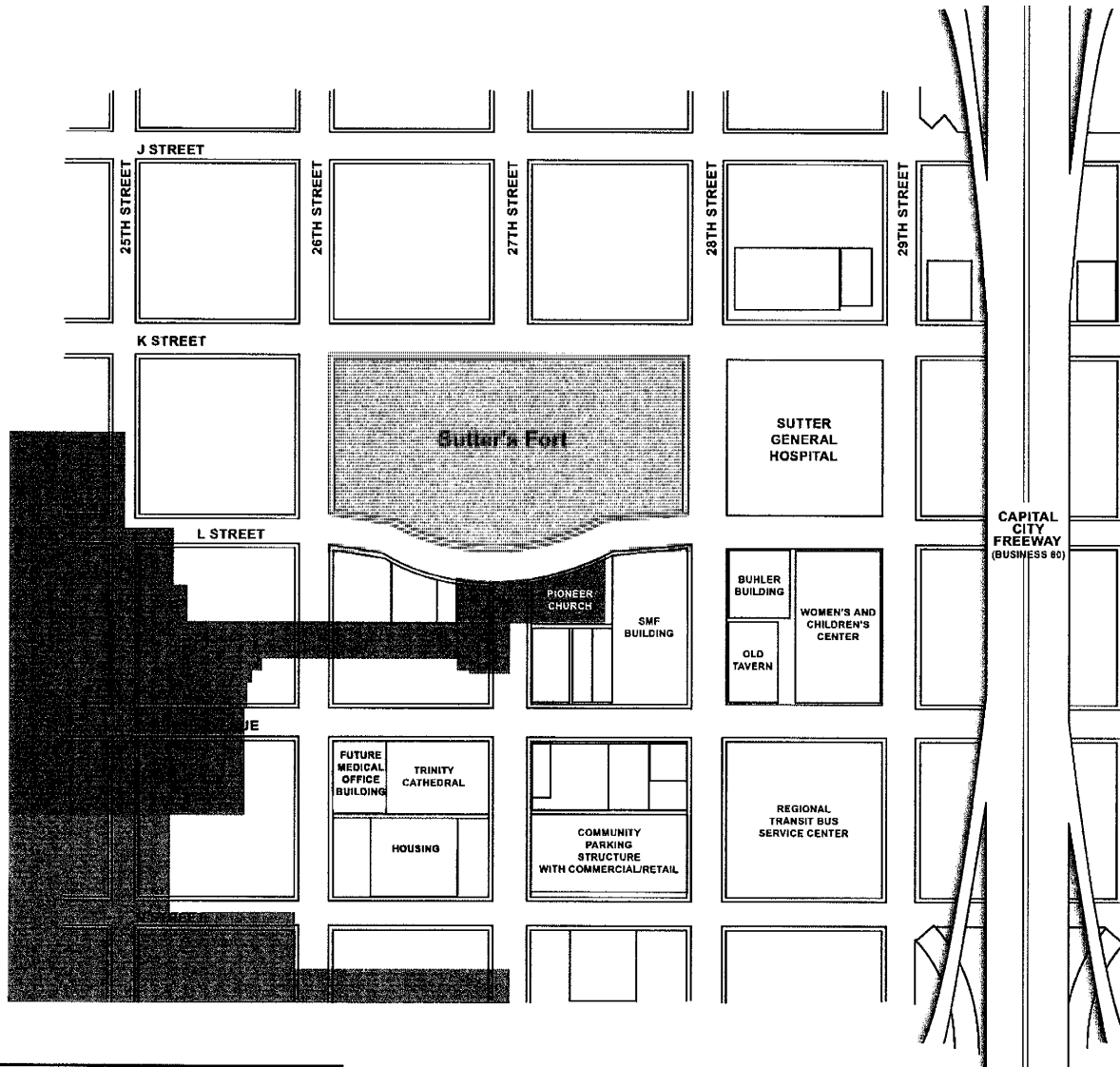
City of Sacramento Historic Districts

There are no City historic districts within the SMCS project area. There are, however, three locally designated historic districts in the vicinity, as shown in Figure 6.3-1. These include the Sutter's Fort Historic District, which encompasses the two block area of Sutter's Fort; the Capitol Mansions Historic District, a cohesive group of large, stately single-family residences concentrated along Capitol Avenue; and the Winn Park Historic District, which contains a variety of architectural styles that reflect the residential evolution of Sacramento from the late

1 The Capitol Mansions Historic District has meandering boundaries that extend from 27th Street in the north to 21st Street in the south, from L and K Street alleys on the north to the N Street alley on the south.

2 EIP Associates, *South Midtown Area Revitalization and Transportation (SMART) Plan Project Draft EIR* (SCH #2002092069), June 2003, page 6.6-12.

3 EIP Associates, *South Midtown Area Revitalization and Transportation (SMART) Plan Project Draft EIR* (SCH #2002092069), June 2003, page 6.6-12.



LEGEND	
	Sutter's Fort Historic District
	Capitol Mansions Historic District
	Winn Park Historic District



FIGURE 6.3-1
Historic Districts

Not to Scale

nineteenth century through the 1940s. Because there are no historically significant, contributory buildings in the Winn Park Historic District in close proximity to the SMCS project area, this district will not be discussed further. The project will not affect the Winn Park district.

Sutter's Fort and Sutter's Fort Historic District

The most significant historical resource in the vicinity of the project area is Sutter's Fort. It is a nationally significant historic site associated with John Sutter, the gold rush, American emigration to California, the Mexican period of California history, and the founding of the City of Sacramento. Sutter's Fort is a unique example of a fortified private settlement in the West. It is a National Historic Landmark, listed on the National Register of Historic Places, a City of Sacramento Landmark, and part of the Sutter's Fort Historic District, as well as a State Historic Park. It is both an historic building complex and an archeological site with both surface and subsurface resources. The Sutter's Fort Historic District is bounded by 28th Street on the east, 26th Street on the west, K Street on the north, and L Street on the south.

Physical Description

Sutter's Fort consists of four adobe brick walls 18 feet tall and 2 ½ feet thick, enclosing an area of approximately three acres. Square, hip-roofed defensive towers intersect the wall at the southeast and northwest corners. Large wooden gates are found on the south, east and north walls, with the principal entry on the south facing L Street. A two-story central adobe building and a number of smaller buildings and structures arranged around the interior of the walls occupy the inner courtyard. The central building is the only original building to survive from the 1840 fort constructed by John Sutter. It was first restored by the Native Sons of the Golden West beginning in 1891. It was subsequently restored in the 1950s by the California Department of Parks and Recreation in accordance with documentary and archeological information regarding the original fort. The central building is a restoration, while the walls and other interior structures are historic reconstructions. In addition to the Fort, the Sutter's Fort Historic District includes two buildings outside the Fort walls, the California Indian Museum and a comfort station. The California Indian Museum is an adobe building constructed in 1941. The building lies within the boundaries of the National Landmark District and the City-designated Sutter's Fort Historic District. The museum building may be eligible for individual listing in the California Register of Historical Resources, and it contributes to the Sutter's Fort Historic District. The Comfort Station is a circa-1940s restroom with later additions to the rear. It does not appear to contribute to the Fort's significance. The building grounds, originally unlandscaped, were converted in 1904 into a designed urban park under the supervision of John McLaren, one of the principal architects of Golden Gate Park and its long-time superintendent. The existing grounds have not been evaluated for historical significance.

Capitol Mansions Historic District

The Capitol Mansions Historic District has boundaries that roughly extend from 27th Street in the east to 21st Street in the west, from the L and K Street alleys on the north to the N Street alley on the south (see Figure 6.3-1). While much of the district is well outside the SMCS project area, the eastern district boundary abuts the proposed SMF Building, and the Trinity Cathedral project lies directly across the street from the 2600 block of Capitol Avenue, which includes five residences that contribute to the historic district. The proposed Future MOB also is located across 26th Street from two contributory buildings.

Buildings and structures that contribute to the district and are immediately adjacent to the SMCS project area include 2530 Capitol Avenue, 2631 Capitol Avenue, 2621 Capitol Avenue, 2615 Capitol Avenue, 2609 Capitol Avenue, 1322 27th Street, and Pioneer Congregational Church as shown in Figure 6.3-2.

Significant Historic Buildings

In addition to Sutter's Fort there are three historically significant buildings in the project area (see Figure 6.3-2) that have been recognized as eligible for or by individual listing in the National Register of Historic Places, and/or the California Register of Historical Resources, and/or have been designated as City Landmarks under the City's preservation ordinance, or have been deemed eligible for local listing.

The following significant resources are within the SMCS project area:

- Old Tavern Building (formerly the Sacramento Brewery),
- Pioneer Congregational Church, and
- Capitol Commercial Building (3730 Capitol Avenue).

Old Tavern Building

The Old Tavern Building is listed in the National Register of Historic Places and is a City Landmark. It is also listed in the California Register of Historical Resources.

Built in the 1840s, originally a hipped roof, brick brewery building, the "Tavern" was extensively remodeled in the 1920s in the Arts and Crafts style with Tudor Revival details. Over three stories in height, the complex-plan building presents prominent decorative facades to both 28th Street and Capitol Avenue.

The first story is visually separated from the upper stories by a widely projecting canopy, which supports a continuous railing with slatted balusters. Arched openings and display cases punctuate the street-level walls. At the south end of the building, the second and third floors have slanted two-story bays with faux timbering and windows with decorative muntins. On the west façade there are two banks of wood trimmed windows beneath a projecting gable end.

Bracketed dormers and chimneys punctuate the gabled roof. A feature of this building is the cut stone curb located on 28th Street.

It is the only large commercial building of its style in Sacramento. The building is one of the oldest surviving buildings in the city and one of its most significant.

Pioneer Congregational Church

The Pioneer Congregational Church building is a City Landmark and a contributor to the Capitol Mansions Historic District. It is also eligible for listing in the California Register of Historical Resources.

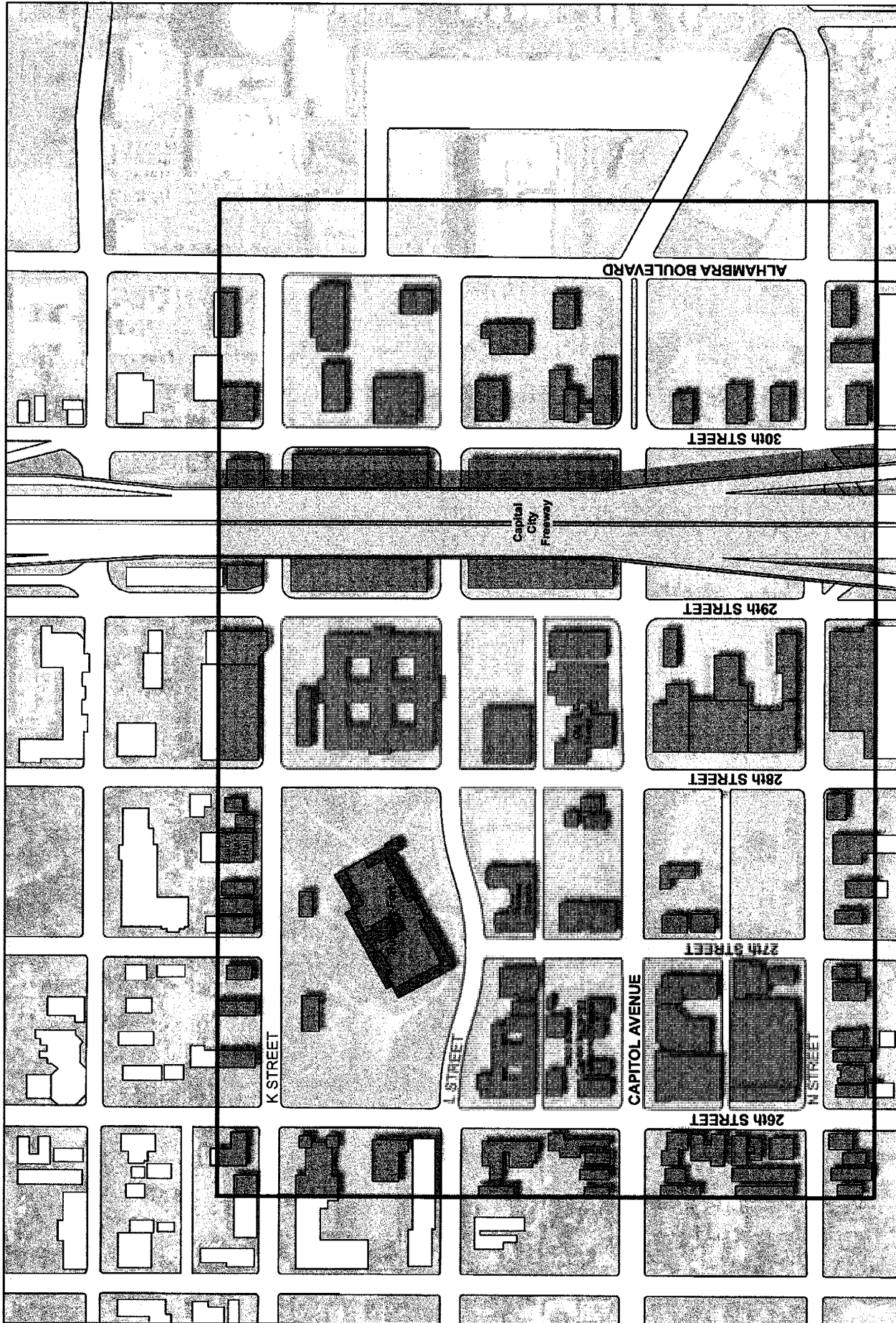


FIGURE 6.3-2

Historic Resources

Source: KMD Architects 2004

Not to Scale



The Pioneer Congregational Church is a reinforced concrete building comprised of several elements and rising two to three-and-one-half stories in height. It was built in 1926. Gothic Revival in style, the building is U-shape in plan. Intersecting-gable roofs surmount the three principal wings of the building. The east wing of the building houses the sanctuary with numerous stained glass windows on the front and side facades. The primary (north) façade of the chapel has a crenulated gable; a large arched central window and double entry portals with arched openings. A tall bell tower is located to the rear of the chapel and was derived from the design of an earlier bell tower on the 1850s Congregational church building, which this building replaced. The tower is joined on its west side with the central wing of the building. The tower has a crenulated parapet with gothic arched openings on all four facades and houses a bell brought around the horn in 1849. The central and west wings are lower in height and less extensively detailed than the chapel wing, but exhibit a pattern of gothic fenestration and arched entries. The building was originally unpainted.

2730 Capitol Avenue – Capitol Commercial Building

The Capitol Commercial Building was surveyed in 1996 as a part of the downtown survey, but it was not evaluated. In a subsequent evaluation by a survey review committee appointed by the City Design Review and Preservation Board, the building was deemed eligible for local listing. It is a good example of a small scale, early 20th century commercial building and is potentially eligible for listing in the California Register of Historical Resources.

This brick faced, stucco commercial building was constructed in 1926. It is a late example of the “Brick Front” store type, one of the most common and longest lasting styles of vernacular commercial building in the United States. Often located in larger cities in residential or semi-residential neighborhoods, buildings like this one, mirrored the residential scale of adjacent dwellings. In the two-story buildings, the first floor often had large display windows which were devoted to retail business while the second story contained office or apartment uses. The Capitol Commercial Building has a typical flat roof with overhanging eaves and brick veneer. Upper story fenestration consists of alternating tri-partite center windows with sidelights and single one-over-one double hung windows. On the lower story the commercial units are divided into three slightly asymmetrical bays, each with an entry door, flanked by three-quarter length display windows. On the eastern most bay the entry door is angled on the corner of the building. A centrally located arch with a recessed entry door provides access to the upper story apartments. The building is a good example of its vernacular commercial type, of which there are few remaining examples in Sacramento. Although the building has been adaptively reused, it retains its major characteristic features and is clearly recognizable as to its style, period and former use retaining its integrity.

The following individually significant resources are directly adjacent to the project area:

- Eastern Star Hall, and
- The Nusbaum House.

Eastern Star Hall

The Eastern Star Hall building is listed in the National Register of Historic Places and is a City Landmark. It is listed in the California Register of Historical Resources.

This brick structure was built in 1925 and is over three stories in height with the façade divided into three asymmetrical bays by a projecting central bay. The sloped roof is gabled with projecting chimneys on both gable ends. The terra cotta faced entrance bay contains a banding of corbelled arches beneath the eave line. Three large entry arches contain double doors with glass panes and are supported by modified Corinthian columns with capitals. Above the repeated arch forms is a wide band with decorated panels in relief and capital banding above the entry. A series of columns support a terra cotta arched banding above the entry. Terra cotta frames two pairs of windows with keystones, corbelled arches and paneled spandrels. Bands of terra cotta of varying width cover the ground floor façade interrupted by pairs of slender windows. The structure is an outstanding design and a fine representation of its style. The Sacramento architectural firm of Coffman, Sahlberg and Stafford designed the building.

Nusbaum House

The Nusbaum House, located at 2627 Capitol Avenue in the Capitol Mansions Historic District, is a contributor to the City's Capitol Mansions Historic District. The district and its contributing elements are eligible for listing in the California Register of Historical Resources.

This two-story, four-square, built in 1907, is an example of a typical house design that was built throughout the country between the 1870s and 1930s. Also known as a "hipped cottage," it is characterized by a classic box shape and compact massing. The style lent itself to a variety of period embellishments, but in this case is presented in its most straightforward form. A low-hipped roof with overhanging eaves and exposed rafters surmounts the house. The most prominent architectural feature of the house is the extended, single story porch with a hipped roof supported on Tuscan columns. Fenestration is symmetrical and consists of one-over-one double hung windows, with a hip roofed and canted bay on the west façade. It retains a high degree of integrity.

Native American Consultation

On March 10, 2004, a letter was sent to the Native American Heritage Commission (NAHC) to inform them of the proposed SMCS project and request that they review their Sacred Lands file for any cultural resources within the project area. A list of names of local Native American individuals and organizations that may have knowledge of cultural resources in the project area was requested in order to provide them with the opportunity to express any concerns they might have about the project. In a letter dated April 7, 2004, Debbie Pilas-Treadway, Environmental Specialist III, from the NAHC reported that a review of their Sacred Lands file found a sacred site within the project area, a burial site recorded with the California Historical Resources Information System (CHRIS). She also included a list of individuals to contact regarding the project. Letters were sent to the individuals listed, informing them of the projects and proposed plans for limited archaeological testing. Copies of Native American correspondence are included in Appendix H. Consultation with Native Americans is continuing with the goal of drafting an Unanticipated Discovery Plan that will establish procedures for the treatment of Native American burials and associated grave goods, and ensure coordination between the City of Sacramento, SMCS, the archaeological consultant, and the Most Likely Descendant, if human remains are discovered. The Unanticipated Discovery Plan is to be completed prior to the start of construction.

REGULATORY CONTEXT

The treatment of cultural resources is governed by federal, State, and local laws and regulations. There are specific criteria for determining whether prehistoric or historic sites or objects are protected under these laws and regulations.

Federal

Federal regulations for cultural resources are governed primarily by Section 106 of the National Historic Preservation Act (NHPA) of 1966, which applies to federal or federally assisted undertakings. Section 106 of NHPA requires federal agencies to take into account the effects of their undertakings on historic properties and affords the Advisory Council on Historic Preservation a reasonable opportunity to comment on such undertakings. The Council's implementation regulations "Protection of Historic Properties" are found in 36 Code of Federal Regulations (CFR) Part 800. The definition of historic properties includes "any prehistoric or historic district, site, building, structure or object included in, or eligible for inclusion in the National Register." The U.S. Department of the Interior regulations describes the National Register criteria for listing as the following:

The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and (a) that are associated with events that have made a significant contribution to the broad patterns of our history; (b) that are associated with the lives of persons significant in our past; or (c) that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or (d) that have yielded or may be likely to yield, information important in prehistory. [36 CFR § 60.4]

State

The State Historic Preservation Office (SHPO) maintains the CRHR. A historic resource is deemed to be a significant resource if it is listed on the CRHR. Properties listed on the NRHP are automatically listed on the CRHR. However, the CRHR can also include properties designated under local ordinances or identified through local historical resource surveys.

An "historical resource" includes, but is not limited to, any object, building, structure, site, area, place, record, or manuscript, which is historically or archaeologically significant (Public Resources Code Section 5020.1). Section 15064.5 of the CEQA Guidelines specifies criteria for evaluating the historical significance of cultural resources, including:

- The resource is associated with events that have made a contribution to the broad patterns of California history;
- The resource is associated with the lives of important persons from our past;
- The resource embodies the distinctive characteristics of a type, period, region or method construction, or represents the work of an important individual or possesses high artistic values; or
- The resource has yielded, or may be likely to yield, important information in prehistory or history.

While there is no specified age limit in the above criteria, it is a generally accepted practice to evaluate all resources that are 50 years or older for historical significance. The PRC does provide for resources less than 50 years old to be included on the CRHR in certain circumstances.

Section 21084.1 of the Public Resources Code (PRC) states that a project that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment. Historical resources are defined in Section 5020.1(k) of the PRC and criteria for identification of a historical resource are identified in Section 5024.1(g), as stated below. For purposes of this section, a historic resource is a resource listed, or determined to be eligible for listing, in the CRHR. Historical resources included in a local register of historical resources, as defined in subsection (k) of Section 5020.1, are presumed to be historically or culturally significant for purposes of this section, unless the preponderance of the evidence demonstrates that the resource is not historically or culturally significant. The fact that a resource is not listed, or determined to be eligible for listing, in the CRHR, not included in the local register of historical resources, or not deemed significant pursuant to criteria set forth in subdivision (g) of Section 5024.1 of the PRC does not preclude a lead agency from determining whether the resource may be a historic resource for purposes of this section.

Relevant provisions of these statutes are set out as follows:

Section 5020.1(k)

“Local register of historic resources” means a list of properties officially designated or recognized as historically significant by a local government pursuant to a local ordinance or resolution.

Section 5024.1(g)

A resource identified as significant in a historical resource survey may be listed in the CRHR if the survey meets all the following criteria:

- The survey has been or will be included in the State Historic Resources Inventory.
- The survey and the survey documentation were prepared in accordance with office procedures and requirements.
- The resource is evaluated and determined by the office [of Historic Preservation] to have significance rating of Category 1 to 5 on DPR Form 523.
- If the survey is five or more years old at the time of its nomination for inclusion in the CRHR, the survey is updated to identify historical resources which have become eligible or ineligible due to changed circumstances or further documentation and those which have been demolished or altered in a manner that substantially diminishes the significance of the resource.

California Senate Bill 297 (1982)

This bill addresses the disposition of Native American burials in archaeological sites and protects such remains from disturbance, vandalism, or inadvertent destruction; establishes procedures to be implemented if Native American skeletal remains are discovered during construction of a project; and establishes the Native American Heritage Commission to resolve disputes regarding the disposition of such remains. It has been incorporated into Section 15064.5(e) of the State CEQA Guidelines.

California Environmental Quality Act

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.” Section 21083.2 requires agencies to determine whether proposed projects would have effects on “unique archaeological resources.”

“Historical resource” is a term of art with a defined statutory meaning. (See Public Resources Code, § 21084.1; CEQA Guidelines, § 15064.5, subds. (a), (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 purposes of CEQA unless a preponderance of evidence indicates otherwise (Public Resources Code, § 5024.1; Cal. Code Regs., tit. 14, § 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 to historical resources (Public Resources Code, § 21084.1; CEQA Guidelines, § 15064.5, subd. (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.

(CEQA Guidelines, § 15064.5, subd. (a)(3).) Archaeological resources can sometimes qualify as “historical resources.” (*Id.*, subd. (c)(1).) Additionally, Public Resources Code 5024 requires consultation with the Office of Historic Preservation when a project may impact historical resources located on State-owned land.

For historic structures, § 15064.5(b)(3) of the State CEQA Guidelines 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, subdivision (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, § 21083.2, subd. (g).)

Treatment options under § 21083.2 of CEQA include activities that preserve such resources in place in an undisturbed state. Other acceptable methods of mitigation under § 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 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 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 § 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 Native American Heritage Commission must be contacted within 24 hours. At that time, the lead agency to consult with the appropriate Native Americans as identified by the Native American Heritage Commission 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.

As of March 1, 2005, SB 18 will require that preparation of City and County General Plans include a requirement to consult with Native American tribes for the preservation of, or the mitigation of impacts to specified Native American places, features, and objects. SB 18 also requires that if an amendment to a general plan is proposed that native American tribes be consulted prior to amending the city and/or county general plan, for the purpose of preserving specified places, features, or objects located within that jurisdiction.

Local

City of Sacramento

City of Sacramento General Plan

The City of Sacramento General Plan contains the following goal and policy that pertain 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.

Section 10 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 SMCS 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 purpose of Sacramento's Historic 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 City's attraction to tourists; foster civic pride in the City's resources; and encourage new development to be aesthetically compatible.⁴ The Historic 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 preservation areas.

IMPACTS AND MITIGATION MEASURES

Methods of Analysis

The cultural resources assessment involves several phases. First, pre-field research establishes a cultural history for the project area so that any resources identified in the project area could be evaluated in a regional context. The primary document used to prepare this section was the *Cultural Resources Report: Sutter Medical Center, Sacramento, Master Plan Projects and the Trinity Cathedral Project* prepared by Roland-Nawi Associates in June 2004 (see Appendix G). This report includes an archeological investigation that was completed by Tremaine & Associates, Inc. The North Central Information Center of the California Historical Resources Information System was consulted for information on previous studies and recorded sites, and the Native American Heritage Commission was contacted to determine if sites listed on their sacred lands inventory were present in or near the project area and to obtain a list of

4 City of Sacramento, Historic Preservation Ordinance, Chapter 15.124, 2000.

knowledgeable Native Americans to contact for additional information. Letters were written to these individuals asking for any information they could contribute regarding past Native American use of the project area. Upon completion of the research tasks, a complete reconnaissance survey of the project was undertaken to identify any cultural resources, and their significance, within the project area. Resources in the vicinity of the SMCS project area that could potentially be affected by the project, either by construction activities or the altering of the context of the area, were also investigated.

Standards of Significance

For the purposes of this EIR, impacts to historic or cultural resources are considered significant if the SMCS project would:

- Create a substantial adverse change in the significance of a historic or archaeological resource, pursuant to § 15064.5 of the State CEQA Guidelines; or
- Directly or indirectly destroy a unique paleontological resource or unique geologic feature, or disturb human remains.

Impact 6.3-1: Construction of the SMCS and Theatre projects could adversely affect known and/or previously unidentified prehistoric or historic archaeological resources.		
	SMCS Project	Theatre
Significance Before Mitigation	Potentially Significant	Potentially Significant
Mitigation Measures	Mitigation Measure 6.3-1	Mitigation Measure 6.3-1
Significance After Mitigation	Less than Significant	Less than Significant

SMCS Project

The only previous archaeological investigations in the area are associated with Sutter’s Fort and with the construction of Sutter General Hospital in the early to mid-1980s. The original structures associated with Sutter’s Fort stretched far beyond the current block associated with the Fort today. This, along with the continued historical use of the area, has created an area of archaeological sensitivity. Prehistoric components were also found during the previous investigations increasing the likelihood that more prehistoric resources may be found in the area. During the construction of Sutter General Hospital previously undiscovered cultural resources were found. The proposed SMCS project is in close proximity to these known archeological resources that could be adversely affected by construction of the project. Previously undiscovered archeological subsurface material could also be present within the SMCS project area due the previously described sensitivity of the area. Proposed construction for the SMCS project includes several subsurface components; some areas could be excavated as much as 35 feet below the surface. Subsurface construction activities such as excavation, drilling for new building pilings, etc. have the potential to impact unknown buried cultural resources. The use of necessary equipment to conduct such activities could damage or destroy these subsurface resources. An Unanticipated Discovery Plan is being prepared in consultation with the Native American groups to establish procedures for the treatment of Native American burials and associated grave goods. This plan would ensure coordination between the City of

Sacramento, SMCS, the archaeological consultant, and the Most Likely Descendant, if human remains are discovered. The plan would be completed prior to the start of any construction activities.

The SMCS project area is also considered sensitive for subsurface prehistoric deposits; historical resources sensitivity is even greater. Due to the extensive historical use of the area and the fact that original Sutter's Fort structures were located outside of the present day park and block boundaries, there is also a strong potential for encountering historic subsurface features (e.g., privy pits, refuse dumps, and architectural foundations) associated with the earliest pre-Gold Rush and Gold Rush-era settlers, as well as material remains of later era residents. Due to the potential for the presence of sub-surface artifacts, this would be considered a ***potentially significant impact***.

Theatre

The site of the proposed Theatre project, as is also true of the SMCS project, is in close proximity to known archeological resources that could be adversely affected by implementation of the project and is in an area of high archaeological sensitivity. Previously undiscovered archeological subsurface material could also be present within the Theatre site. Specific plans for the Theatre project are not known at this time; however, once an application is submitted to the City, the Theatre would be subject to additional environmental review during the processing of development entitlements.

The overall project area, including the Theatre site, is considered sensitive for subsurface prehistoric deposits and historical resources associated with the earliest pre-Gold Rush and Gold Rush-era settlers, as well as material remains of later era residents. Due to the potential for the presence of sub-surface artifacts, this would be considered a ***potentially significant impact***.

Mitigation Measures

The following mitigation measure would reduce impacts to known and previously undiscovered archaeological resources that could be caused by construction of the SMCS and Theatre projects to a *less-than-significant level* by ensuring that proper procedures are followed in the event any known or unknown resources are unearthed during project construction.

(SMCS/Theatre)

- 6.3-1 (a) *The project applicant shall hire a qualified professional to prepare a formal research design and testing strategy with regard to sub-surface cultural resources during construction. Testing shall include geophysical mapping of the near-surface, ground-truthing using both the geophysical maps and historic maps, and evaluation of discovered resources for CRHR eligibility. All testing shall be conducted prior to initiation of construction for the project. Based on the results of testing, recommendations shall be provided, which may include additional testing, data recovery, future construction monitoring, etc. All recommendations shall be submitted to the City of Sacramento's Historic Preservation Director for approval.*

- (b) *The project applicant shall hire a professional archeologist to perform archaeological monitoring during ground-disturbing construction activities for the duration of the project. If resources are discovered during construction, the procedure laid out in the Unanticipated Discovery Plan will be followed.*

Impact 6.3-2: Construction of the SMCS and Theatre projects could adversely affect the significance of any or all of the following historical resources: Old Tavern, Pioneer Congregational Church, Sutter’s Fort, Eastern Star Hall, Capitol Commercial Building, and the residence on the 2600 Block of the Capitol Mansions Historic District.

	SMCS Project	Theatre
Significance Before Mitigation	Potentially Significant	Potentially Significant
Mitigation Measures	Mitigation Measures 6.3-2 and 6.3-3	Mitigation Measure 6.3-2
Significance After Mitigation	Less than Significant	Less than Significant

SMCS Project

The proposed SMCS project area is in close proximity to known historical resources that could be adversely affected by the project. Buildings within the SMCS project area and those in the vicinity that could be affected by development of the various project components were evaluated for significance.

The SMCS project would involve construction immediately adjacent to two designated historical resources:

- Old Tavern building, and
- Pioneer Congregational Church.

The project would also involve construction in the vicinity of the following historical resources:

- Sutter’s Fort,
- Eastern Star Hall,
- Capitol Commercial Building, and
- the 2600 Block of the Capitol Mansions Historic District.

If the SMCS project would cause a substantial adverse change to any of these listed and/or any eligible resources, a significant environmental impact would result. No designated building, or building which has been evaluated as eligible for listing on the California Register of Historical Resources, or any contributor to a historic district, would be demolished as a result of the project. However, demolition or physical damage of a resource is not the only way to significantly affect a resource. The alteration of the context of the area could constitute an adverse affect resulting in a significant impact. If contributing structures to a historic district

were affected this would also result in a significant impact. Pioneer Church is the only building in a historic district that could be affected by the SMCS project through construction occurring in close proximity to the Church.

Construction of the Women's and Children's Center (WCC) would also require new building foundations that would be constructed using drilling equipment for new piles. The building foundations would not be constructed using pile drivers. The proposed construction method would be drilling and insertion of piles at specific locations. Drilling, as opposed to pile driving, would cause less ground vibration. However, vibration associated with drilling activities could result in potentially significant adverse effects to historical resources adjacent to and in the vicinity of the project area. As stated in the Noise section of this EIR, structures over 50 feet away from drilling activities would not be significantly impacted by vibration caused by construction activities. This limits the number of historic buildings that could be affected by SMCS project construction to the Old Tavern and Pioneer Congressional Church and only during the construction of the WCC and the SMF Building.

Old Tavern Building

The SMCS project would require removal of existing non-historic structures that are adjacent to the Old Tavern building to clear the site for construction of the WCC. This may result in potentially significant adverse effects from construction activities associated with demolition activities.

The exposed eastern wall of the Old Tavern building would require rehabilitation after the removal of the adjacent parking structure, which is a component of the SMCS project. At a minimum it is likely that stabilization and repainting would be necessary. New openings for doors and windows could also be added. The rehabilitation proposes to reflect the current design of the Old Tavern building and draw from existing design elements in order to match the design.

Pioneer Congregational Church

Vibrations from construction activities associated with the SMCS project could have significant adverse effects on existing stained glass windows in the Pioneer Congregational Church. Stained glass windows could be vulnerable to damage from vibration from drilling or demolition activities associated with the project. In addition, damage to historic properties could result from the operation of equipment, excess vibration levels or lack of knowledge regarding proper safeguards for protecting and monitoring historic properties. Drilling was used during the construction of the SGH in the mid-1980s and no damage occurred to surrounding properties at that time.

Sutter's Fort

The Fort consists of four adobe brick walls 18 feet tall and 2 ½ feet thick, enclosing an area of approximately three acres (2 city blocks). The inner courtyard is occupied by a two-story central adobe building and a number of smaller buildings and structures arranged around the interior of the walls. The central building is the only original building to survive from the original 1840 Fort constructed by John Sutter. The adobe brick walls are not reinforced and are therefore vulnerable to outside influences such as construction in the area. The Department of Parks and

Recreation has expressed concerns over construction activity within close proximity to the Fort and the potential damage that could result to these adobe structures.

The SMCS project would use drilling instead of pile driving during the construction of proposed buildings, which would reduce potential impacts. The potential for significant adverse effects from vibration could potentially have more impact on the adobe brick construction of Sutter's Fort than it would on other structures in the area. However, as discussed above and in Section 6.6, Noise, the vibration effects from construction are not significant over 50 feet away. Sutter's Fort is not located within 50 feet of any proposed construction; therefore, it is not anticipated that it would be affected. However, Mitigation Measure 6.2-3 (a), detailed below, requires that a study be prepared to assure the nearby structures, such as Sutter's Fort, are not adversely impacted by vibration associated with project construction activities.

Historic Context and Features

The construction of an 8-story hospital building (WCC) to the east and a 4-story, medical office building (SMF Building) to the west across 28th Street from the Old Tavern Building would alter the setting of the tavern building and separate it from the historic streetscape and adjacent neighborhood. The historic cut-stone curb that exists along 28th Street could be damaged by construction equipment. The design plans for the WCC establish a wide separation between the new construction and the historic Tavern building. This separation is further enhanced by the planned transparency of the first floor/lobby elevation minimizing the visual interaction of the two buildings. As discussed above, construction could adversely impact the Old Tavern building and/or the Pioneer Congregational Church. Due to the close proximity of these historic structures to the SMCS project area this would be considered a ***potentially significant impact***.

Theatre

As discussed above, there are a variety of historical resources in the vicinity. The Old Tavern building is located less than one block from the theatre site and approximately one block from Sutter's Fort. Depending on the method of construction that is used this could create vibrations which could damage these and other historic structures in the area.

Vibrations from construction activities associated with the Theater construction could have significant adverse effects on existing stained glass windows in the Trinity Cathedral if it is not demolished prior to the beginning of Theatre construction. Stained glass windows could be vulnerable to damage from construction or demolition activities associated with the project. In addition, damage to historic properties could result from carelessness in the operation of equipment, excess vibration levels or lack of knowledge regarding proper safeguards for protecting and monitoring historic properties.

The Theatre project site is also considered sensitive for subsurface prehistoric deposits and historical resources. Due to the extensive historical use of the area, there is also a strong potential for encountering historic subsurface features (e.g., privy pits, refuse dumps, and architectural foundations) associated with the earliest pre-Gold Rush and Gold Rush-era settlers, as well as material remains of later era residents. Due to the potential for the presence of sub-surface artifacts, along with the potential for impacts associated with project construction, this would be considered a ***potentially significant impact***.

Mitigation Measures

The following mitigation measures would reduce impacts to historical resources that could be caused by demolition and drilling during construction, excavation under or adjacent to existing foundations of the Old Tavern building and Pioneer Congregational Church, or restoration/rehabilitation of the east wall of the Old Tavern building to a *less-than-significant level*.

(SMCS/Theatre)

- 6.3-2 (a) *The project applicant shall hire a qualified geologist or other professional with expertise in ground vibration effects on existing structures to prepare a study of the potential of vibrations caused by construction activities. Based on the results of the study, incorporate into contract specifications restrictions on, and monitoring of construction. A copy of the study, contract specifications, and monitoring reports shall be provided to the City of Sacramento's Historic Preservation Director.*
- (b) *The project applicant shall incorporate into the construction contract with a provision for establishing a training program for construction workers identifying the historical resources and features in the area and emphasizing the importance of protecting historical resources. Included shall be directions on working around and operating equipment near historic buildings and features taking means to reduce vibrations from demolition and drilling, being aware of and reporting any potential problems that could affect the historical resources in the area. The location of the historic street feature (cut-stone curb) shall be disclosed in the construction contract. Construction crews shall be made aware of this historic street feature location, and the feature shall be flagged or fenced off as to prevent accidental damage or removal. The contract provisions shall be reviewed and approved by the City of Sacramento's Historic Preservation Director.*

(SMCS)

- 6.3-3 (a) *The project applicant shall hire a registered structural engineer, with a minimum of five years of experience in the rehabilitation and restoration of historic buildings, to investigate the existing relationship of the Old Tavern's foundation along the eastern elevation, including at the location of the elevator pit, to the western foundation of the garage. Any required test excavations shall be performed only in the presence of the structural engineer. The structural engineer shall prepare a report of findings, recommendations, and any related design modifications necessary to retain the structural integrity of the Old Tavern. The structural engineer (in consultation with a historic preservation architect, with a minimum of five years of experience in the rehabilitation and restoration of historic buildings, as well as meeting the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation, Professional Qualifications Standards, if necessary) shall prepare designs and specifications for protective barriers required to protect the exposed Old Tavern wall from potential damage caused by construction activities. The structural engineer (with geotechnical consultation as necessary) shall also determine, due to the nature of the excavations, soils, and method of soil removal, and*

given the existing foundation of each building (the Old Tavern and Pioneer Congregational Church), the potential for settlement and whether the buildings would require underpinning and/or shoring. All documents prepared in accordance with this Measure shall be reviewed and approved by the City of Sacramento's Historic Preservation Director.

Prior to demolition, the project applicant shall hire a historic preservation architect and a structural engineer to undertake an existing condition study of the identified historical resources identified in the Cultural Resources Report. The purpose of the study shall be to establish the baseline condition of the buildings prior to construction. The documentation shall take the form of written descriptions and visual illustrations, including those physical characteristics of the resources that convey their historic significance and that justify their inclusion on, or eligibility for inclusion on, the California Register of Historical Resources and local register. The documentation shall be reviewed and approved by the City of Sacramento's Historic Preservation Director.

The structural engineer shall make periodic site visits to monitor the condition of the properties, including monitoring of any instruments, such as crack gauges. The structural engineer shall consult with the historic preservation architect, especially if any problems with character defining features of a historical resource are discovered. If, in the opinion of the structural engineer, in consultation with the historic preservation architect, substantial adverse impacts to historic resources related to construction activities are found during construction, the monitoring team shall so inform the project sponsor or sponsor's designated representative responsible for construction activities. The project sponsor shall adhere to the monitoring team's recommendations for corrective measures, including halting construction in situations where construction activities would imminently endanger historical resources. The monitoring team shall prepare site visit reports.

The project applicant shall respond to any claims of damage by inspecting the affected property promptly, but in no case more than five working days after the claim was filed and received by the project sponsor's designated representative. Any new cracks or other changes in the structures will be compared to pre-construction conditions and a determination made as to whether the proposed project could have caused such damage. In the event that the project is demonstrated to have caused any damage, such damage shall be repaired to the pre-existing condition.

Site visit reports and documents associated with claims processing shall be provided to the City of Sacramento's Historic Preservation Director.

- (b) *The historic preservation architect and structural engineer shall specifically include the stained glass windows in their survey and monitoring of historical resources (see Mitigation Measure 6.3-1(a)). Included in the team's evaluation of the windows shall be consideration of whether it would be necessary to remove any of the windows. If such a recommendation is made, it should address methods for removal, transportation, storage and reinstallation.*

- (c) *The project applicant shall hire a historic preservation architect with a minimum of five years of experience in the rehabilitation and restoration of historic buildings as well as meeting the Secretary of the Interior’s Standards and Guidelines for Archeology and Historic Preservation, Professional Qualifications Standards, to prepare proposed treatments of the Old Tavern wall for conservation purposes and designs for new openings. Such treatments and designs shall be reviewed and approved by the City of Sacramento’s Historic Preservation Director.*

Impact 6.3-3: The SMCS project could directly or indirectly destroy a unique paleontological resource or unique geologic feature.		
	SMCS Project	Theatre
Significance Before Mitigation	Less than Significant	Less than Significant
Mitigation Measures	None required	None required
Significance after Mitigation	N/A	N/A

SMCS Project and Theatre

Paleontological resources have been discovered in the greater Sacramento area in the recent past. Therefore, while there are no known resources in the project area the sensitivity for these types of resources has increased due to these recent discoveries. The Sacramento Valley was likely occupied and used by humans during the late Pleistocene and early Holocene periods (14,000 to 8000 B.P). Few sites have been excavated and there is a general lack of knowledge concerning the area. The SMCS project area is located in a developed urban environment. The various project components would be developed on urban lots, all of which have been developed with either existing buildings and/or previously contained structures. All of the blocks slated for construction have all been previously disturbed and there are no unique geologic features present at the surface. The abundance and diversity of fossils can potentially vary widely from place to place, with paleontological resource sensitivity likewise varying according to geologic rock unit. However, there are no known paleontological resources within the SMCS project area. Therefore, this would be a **less-than-significant impact**.

Mitigation Measures

None required.

CUMULATIVE IMPACTS

The cumulative context for the evaluation of potential cumulative impacts on historical resources is the buildout of the City of Sacramento General Plan. Artifacts and other cultural resources have been recorded during prior surveys near the project area and throughout the City and County of Sacramento indicating that the area is rich in resources.

<p>Impact 6.3-4: The SMCS project, in combination with other development in the City, could substantially adversely alter archaeological resources, which could result in a significant cumulative impact.</p>		
	SMCS Project	Theatre
Significance Before Mitigation	Potentially Significant	Potentially Significant
Mitigation Measures	Mitigation Measure 6.3-4	Mitigation Measure 6.3-4
Significance After Mitigation	Less than Significant	Less than Significant

SMCS Project and Theatre

Cumulative development in the City could result in the damage or destruction of known and unknown archaeological resources. Based upon previous surveys and research, Sacramento has been inhabited by prehistoric and historic peoples for thousands of years.

While cumulative development throughout Sacramento would be anticipated to impact resources, it must be noted that many of the areas that are proposed for development are urban in character and have been build upon previously. Earlier development may have destroyed sites, resulting in the inadvertent dispersal or reduction in quality of artifacts or resources.

Artifacts and other cultural resources have been recorded during prior surveys near the SMCS project and Theatre areas and throughout the City and County of Sacramento. Therefore, development of the SMCS project or the Theatre project, in combination with other development in the City of Sacramento, could contribute to the potential loss of significant archaeological and prehistoric resources due to the location near Sutter’s Fort and Indian settlements.

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. The loss of any one archaeological site affects all others in a region because these other properties are best understood completely in the context of the cultural system of which they (and the destroyed resource) were a part. The boundaries of an archaeologically important site could extend beyond the property boundaries. Therefore, this considered a ***potentially significant impact***.

Mitigation Measure

The following mitigation measure would ensure that in the event that subsurface resources are discovered, they would be preserved and their treatment would be consistent with professional standards for cultural resources. Therefore, neither the SMCS project nor the Theatre project would contribute to the loss of archeological or paleontological resources, and the contribution of either to the cumulative loss would be *less than significant*.

(SMCS/Theatre)

6.3-4 Implement Mitigation Measure 6.3-1.

<p>Impact 6.3-5: The proposed SMCS project could, in combination with other development in the City, substantially adversely alter historical resources, which could result in a significant cumulative impact.</p>		
	SMCS Project	Theatre
Significance Before Mitigation	Potentially Significant	Potentially Significant
Mitigation Measures	Mitigation Measure 6.3-5	Mitigation Measure 6.3-5
Significance After Mitigation	Less than Significant	Less than Significant

SMCS Project and Theatre

The cumulative context for the evaluation of potential cumulative impacts on historical resources is the buildout of the City of Sacramento General Plan. Cumulative development in the city could result in the damage or destruction of known historical resources. Sacramento has an array of historical resources. General Plan goals and policies as well as the City’s Historic Preservation Ordinance work to prevent the loss of historical resources.

It would be fair to speculate that due to Sacramento’s rich regional history, there is a strong potential for the presence of historic structures eligible for California Register designation within the City’s General Plan area. Although we cannot quantify the number of historical resources present within the footprint of the City’s development area, historic surveys performed within the SMCS project area concluded that designated and/or eligible buildings were located both within and adjacent to the project area. Despite the potential for the cumulative loss of historic structures upon buildout of the Sacramento General Plan, development of the SMCS project would not result in the loss of significant historical resources or structures.

However, as previously stated, the SMCS project could damage, either directly or indirectly, historic structures and could alter the context of historic structures. This would be considered a **potentially significant** contribution to the cumulative alteration of historical resources in the City of Sacramento.

Mitigation Measure

Implementation of Mitigation Measure 6.3-3 would ensure that precautions are taken during construction to avoid damage to historic structures, that restoration of the Old Tavern is performed to ensure that it retains its unique character, and that the proposed development is designed such that it does not alter the context of the historic districts. Therefore, this measure would ensure that the project’s contribution to cumulative alterations in the character of historical resources would be *less than significant*.

(SMCS/Theatre)

6.3-5 Implement Mitigation Measures 6.3-2 and 6.3-3.

<p>Impact 6.3-6: The SMCS project, in combination with other development in the City, could substantially adversely alter paleontological resources, which could result in a significant cumulative impact.</p>		
	SMCS Project	Theatre
Significance Before Mitigation	Potentially Significant	Potentially Significant
Mitigation Measures	Mitigation Measure 6.3-6	Mitigation Measure 6.3-6
Significance After Mitigation	Less than Significant	Less than Significant

SMCS Project and Theatre

Cumulative development in the City could result in the damage or destruction of unknown paleontological resources. Paleontological resources have been discovered in the greater Sacramento area.

While cumulative development throughout Sacramento would be anticipated to impact paleontological resources, many of the areas that are proposed for development are urban in character and have been built upon previously. Earlier development may have destroyed sites, resulting in the inadvertent dispersal or reduction in quality of resources. The development of the proposed project, in combination with other developments in Sacramento, could contribute to the potential for loss of significant paleontological resources.

Because all paleontological resources are unique and non-renewable members of finite classes, all adverse effects or negative impacts erode a dwindling resources base. The loss of any one site affects all others in a region because these other properties are best understood completely in the context of the region of which they (and the destroyed resource) were a part. The boundaries of an important site could extend beyond the property boundaries resulting in a *potentially significant impact*.

Mitigation Measure

The following mitigation measure would ensure that in the event that subsurface resources are discovered, they would be preserved and their treatment would be consistent with professional standards for cultural resources. Therefore, the SMCS project would not contribute to the loss of paleontological resources, and its contribution to the cumulative loss would be less than considerable resulting in a *less-than-significant cumulative impact*.

(SMCS/Theatre)

6.3-6 Implement Mitigation Measure 6.3-1.

6.4 Hazardous Materials and Public Safety

6.4 Hazardous Materials and Public Safety

INTRODUCTION

This section describes the types of environmental hazards that would be associated with construction and operation of the SMCS project. Hazards evaluated are those associated with existing identified or suspected contaminated sites, potential exposure to hazardous materials used, generated, stored, or transported during project construction and operation, potential safety hazards associated with helistop operations, and effects on emergency response or evacuation routes due to roadway modifications. Included in this section is a summary of applicable hazardous materials and public safety laws and regulations and agencies responsible for implementation. Potential hazards and associated impacts related to toxic air contaminant (TAC) emissions are discussed in Section 6.2, Air Quality, in this EIR.

This section describes the types of hazardous materials that would be handled at the SMCS medical center complex, the regulatory setting applicable to such activities, SMCS's established health and safety policies and procedures, and the potential increase in the generation of hazardous waste associated with the SMCS project.

No specific comments pertaining to hazardous materials or public safety were received in response to either NOP. The Initial Study (see Appendix E) prepared for the SMCS project and Trinity Cathedral project determined that the project is not located in an area which is included on a list of hazardous materials sites, is not located within an airport land use plan or within the vicinity of a private airstrip, and would not expose people or structures to a significant risk of loss, injury or death involving wildland fires. These issues will not be discussed further in this EIR.

Information referenced to prepare this section includes a variety of city planning documents, agency correspondence, and published technical information available through various websites and documents, which are referenced in this section. Additional sources include the following documents: *Phase One Environmental Assessment, House of Furs building* (Cunningham Engineering Corporation, July 30, 1999); *Phase One Environmental Site Assessment, St. Luke's* (Charles Lockwood Consulting Engineer, Inc., November 14, 2000); *Pre-Demolition Asbestos Survey Report for Sutter Health Buildings, EAP Building at 2710 Capitol Avenue and MTI Building at 2707 Capitol Avenue* (Reliance Environmental Services, April 2, 2003).

Definitions

The term "hazardous materials" is defined in different ways by different regulatory programs. For the purposes of this EIR, "hazardous materials" are defined as those with "physical, chemical, or other characteristics, [that] may pose a risk of endangering human health or safety or of degrading the environment."¹

1 California Health and Safety Code, Section 25260.

“Hazardous waste” is a subset of hazardous materials. For the purposes of this EIR, “hazardous waste” is defined as the “quantity, concentration, or physical, chemical, or infectious characteristics, [that] may either cause, or significantly contribute to an increase in mortality or an increase in serious illness, or pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed”.²³

In addition to chemicals, which are most commonly associated with the term “hazardous materials,” other categories of hazardous materials include radioactive materials and biohazardous materials, which are described below:

- Radioactive materials, which contain atoms with unstable nuclei that spontaneously emit ionizing radiation to increase their stability;
- Radioactive wastes, which are radioactive materials that are discarded (including wastes in storage) or abandoned;
- Biohazardous materials, which include materials containing certain infectious agents (microorganisms, bacteria, molds, parasites, viruses) that normally cause or significantly contribute to increased human mortality, or organisms capable of being communicated by invading and multiplying in body tissues; and
- Medical waste, which includes both biohazardous wastes (byproducts of biohazardous materials) and sharps (i.e., devices capable of cutting or piercing, such as hypodermic needles, razor blades, and broken glass) resulting from the diagnosis, treatment, or immunization of human beings, or research pertaining to these activities.

ENVIRONMENTAL SETTING

The SMCS project area is located in the Midtown area of Sacramento (see Figure 2-2) and consists of a mix of medical-related and office uses, residences, a church, retail/commercial, surface parking lots and garages, and vacant lots. Some structures are vacant. The site includes an existing Energy Center, which provides all primary and emergency systems, including heating and cooling, to Sutter General Hospital (SGH) and other SMCS facilities. Table 2-1 in the Project Description lists the specific uses for each building or lot within the project area.

Land uses adjacent to the SMCS project area are primarily residential and office. There are also churches, a restaurant, and the Sacramento Regional Transit bus maintenance facility. The SMCS project area is located within one-quarter mile of four schools; Saint Francis Elementary School at 25th and K Street, Sutter Middle School at 3150 I Street, Fremont School for Adults at 2420 N Street, and a Montessori school located at 27th and L Street in Pioneer Church. The closest of these is the Montessori school, approximately 150 feet from the west side of the proposed SMF/Energy Center building. The Montessori school site includes an outdoor play area for children.

Hazardous materials are routinely used, stored, and transported to and from a number of facilities within the project area. These include the existing hospital, cancer center, medical

2 California Health and Safety Code, Section 25141.

3 California Code of Regulations, Title 22, Section 66261.3.

offices, and the Energy Center. The following discussion describes the locations where hazardous materials are used, the kinds of materials present, and their uses.

Because of the age of some of the structures in the multi-block area, another potential source of hazardous materials is asbestos and lead-based paint in structures, which could be encountered when those buildings are demolished. Hazardous materials also have the potential to be present in soil or groundwater under existing buildings or lots, primarily as a result of underground fuel tanks. This discussion also includes information regarding testing that has been done to date to determine the likelihood of occurrence of hazardous materials in buildings and soil/groundwater.

Existing Hospital and Buhler Building Hazardous Materials Use

Hazardous materials are currently and routinely used at SGH and the Buhler Building (Sutter Cancer Center). Table 6.4-1 summarizes this information. These materials generally consist of acids, bases, flammable liquids, various organic and inorganic reagents, various stains and dyes, compressed gases, pharmaceuticals, and radioactive materials. With few exceptions, most of the bulk hazardous materials are stored and used in small quantities, generally a few gallons or less. Hazardous materials used and stored in larger quantities that are subject to Hazardous Materials Plan (HMP) reporting under Section 25503.3(c) of the California Health and Safety Code (see Regulatory Setting) are limited to water treatment chemicals and diesel fuel used in the Energy Center, the operation of which is described in more detail below; compressed gases stored in cylinders (nitrogen, oxygen, acetylene, and ethylene oxide) that are used in the hospital; and liquid oxygen and liquid argon. The quantities of these materials varies. The water treatment chemicals range from 65 to 125 gallons, while liquid oxygen is 6,000 gallons.⁴ Some of the activities generate hazardous chemical, radioactive, and chemotherapeutic wastes.

SMCS implements applicable federal, State, and local hazardous materials management regulations through protocols contained in Sections C.1 – C.13, the *Hazardous Materials and Waste Management Plan*, of Sutter's *Environment of Care Manual*. The *Hazardous Materials and Waste Management Plan* contains detailed operation and plans for the notification, training, use, transport and disposal of hazardous materials that occur regularly within all SMCS facilities.

Chemical Materials and Hazardous Waste

Hospital Sterilization System

Hospital and medical office items such as medical instruments, equipment, and surgical linens are sterilized in a special system that uses steam and a hydrogen peroxide solution.⁵ High-strength solutions containing hydrogen peroxide are considered a hazardous material because exposure can result in respiratory, skin, or eye irritation. However, the use of hydrogen peroxide in combination with steam does not require any special handling or disposal techniques because of the solution strength and because the byproducts of the process are non-hazardous (carbon dioxide and water).

4 Sutter General Hospital, Hazardous Materials Plan (HMP) Annual Renewal Certification Form submitted to Sacramento County Environmental Management Department, March 1, 2005.

5 Farias, Cynthia, personal communication with EIP, 6/4/04.

Table 6.4-1

Summary Of Hazardous Materials At SMCS Facilities¹

Type of Material (Examples)	Typical Uses
Chemical Compounds	
Acids and bases (acetic acid, hydrochloric acid, ammonia, sodium hydroxide)	laboratory, pathology, some patient care and surgery
Alcohol (isopropyl [rubbing alcohol], methanol)	laboratory, pathology, patient care
Aldehydes (e.g., formalin and formaldehyde)	laboratory, pathology
Oxidizers (e.g., bleach, hydrogen peroxide)	laboratory, patient care, housekeeping/maintenance, sterilizing equipment
Calibration solutions for analytical instruments, buffer solutions	laboratory, pathology
Stains, dyes, test kits, fixatives	laboratory, pathology
Compressed Gases	
Argon Carbon Dioxide Ethylene Oxide Nitrogen Helium Nitrogen and Nitrous Oxide	patient care, diagnostics, surgery
Maintenance and Operations	
Diesel fuel	back-up generators
Water treatment chemicals	Energy Center
Argon and acetylene gases	Maintenance
Paints, solvents, degreasers, oils and lubricants	maintenance/housekeeping
Radioactive Materials²	
Cobalt 57, Cobalt 60	calibration, gamma knife (surgery)
Cesium 137	blood irradiation
americium 241, barium 133, europium 152	nuclear medicine, calibration

Notes:

1. This table does not include ordinary products associated with the routine operation and maintenance of a medical facility, which may contain hazardous constituents (e.g., cleaners, and disinfectants, batteries, pesticides, some office products) or pharmaceuticals.

2. Sealed sources used for surgical procedures and equipment calibration. Non-sealed sources (radiopharmaceuticals for diagnostics and treatment) are not stored at SMCS facilities.

Sources: Sutter Health, Safety and Environmental Health Office, March 2005; Sutter General Hospital, Medical Physics Center, March 2005.

Hospital Laboratories, Morgue, and Pathology

Many diagnostic laboratory procedures involve the use of small quantities of chemicals. Most of the hospital's laboratory analytical needs are currently provided by on-campus laboratories and would continue to be provided by the laboratory at SGH after project completion.

Aqueous solutions containing formaldehyde are used extensively in pathology and the morgue as a preservative. Potential health effects associated with exposure to formaldehyde include skin, eye, and respiratory irritation. Formaldehyde is also regulated as a carcinogen, and its use and disposal of waste solutions is strictly controlled.

Biohazardous Materials and Medical Waste

Items that might cause illness, such as biohazardous materials and medical waste, are currently created and disposed of at SGH and the Buhler Building. Biohazardous materials include (1) materials containing certain infectious agents (microorganisms, bacteria, molds, parasites, viruses) that normally cause or significantly contribute to increased human mortality, or (2) organisms capable of being communicated by invading and multiplying in body tissues. Regulated medical wastes (RMW) include both biohazardous wastes (byproducts of biohazardous materials, pathological waste, waste from chemotherapy, and pharmaceutical waste) and sharps (i.e. devices capable of cutting or piercing, such as hypodermic needles, razor blades, and broken glass) resulting from the diagnosis, treatment, or immunization of human beings, or research pertaining to these activities. Biohazardous materials and medical waste are normal byproducts associated with hospital uses. SGH and the Buhler Building currently separate biohazardous and medical waste from other waste at the point of generation. Collection of these materials occurs seven days a week and the materials are treated on site. After treatment the materials is rendered non-infectious.⁶

Radioactive Materials and Chemotherapeutic Waste

Radioactive materials and chemotherapeutic materials are used at both SGH and the Buhler Building. Only radioactive materials used for surgical procedures and equipment calibration ("sealed sources") are stored at SMCS facilities (see Table 6.4-1). Sources of ionizing radiation from X-rays to radioactive iodine used in patient treatment are regulated as a radioactive material and radioactive waste. Radioactive materials contain atoms with unstable nuclei that spontaneously emit ionizing radiation to increase their stability. Although radiation has beneficial uses in health care, it is hazardous. Exposures to ionizing radiation increase the risk of cancer; high exposures can cause "radiation sickness" (with symptoms such as nausea and hair loss) and even death.

Use of these materials also generates radioactive and chemotherapeutic wastes. SGH and the Buhler Building currently handle, store, and dispose of radioactive waste in accordance with federal and State regulations. Disposal of radioactive waste occurs in one of three ways: either directly into the sewer, if the material is suitable for such disposal; through regular trash or sewer after the material has reached safe levels of radioactivity; or burial in an approved facility by a licensed contractor. Federal and State regulations govern which type of disposal method is used for specific radioactive materials and mandate specific record-keeping requirements for documenting the types and amounts of radioactive materials disposed.

Chemotherapeutic wastes are defined as those materials produced in storage, handling, and preparation of chemotherapeutic agents (an agent that kills or prevents the reproduction of malignant cells). SGH and the Buhler Building currently have a segregated and secured storage area for chemotherapeutic waste. This waste is stored until transported by Stericycle, a hauler licensed by the State of California Health Department, to an off-site facility for treatment and disposal.

6 Sutter Health, *Hazardous Materials & Waste Management Policies & Procedures*, Section C.5.

Energy Center

The existing Energy Center for SMCS is located on the northwest corner of Capitol Avenue and 29th Street. The Energy Center consists of a chilled water system and a steam system. The center was constructed in 1986 and consists of one level below-grade and one level with a mezzanine above-grade. The basement level houses mechanical pumps, electrical switch gear and panels, and storage areas. The ground level houses the sanitary compactor chillers, boilers and energy generators. The mezzanine level houses the Energy Center control center and employee lockers.

A 6,000-gallon liquid oxygen (LOX) tank and a 500-gallon reserve tank are located in an adjacent alley to the west of the Energy Center. Liquid oxygen is odorless and non-toxic. It is also non-flammable but can accelerate combustion, particularly if combustible materials are present and levels are high enough (e.g., in an enclosed room). For that reason, it must be stored in a well-ventilated area, which the current outdoor location provides. Pressure in an oxygen container can also build up due to heat, which could cause the container to rupture, so the container is designed to vent the contents when exposed to elevated temperatures.

Oxygen is not a listed substance for which the State of California requires a warning under Proposition 65, but it is a substance that must be reported in a facility HMP, as noted above. Bulk oxygen storage at the existing SMCS site is inspected by the City of Sacramento Fire Department and the Sacramento County Environmental Management Department (SCEMD).

Two fuel tanks are located below-grade on the south side of the existing Energy Center, approximately under the sidewalk. These fuel tanks consist of two 12,000-gallon tanks containing diesel oil. Diesel oil is the secondary fuel source for boilers and primary sources for emergency generators. Natural gas is used as a fuel source used by the Energy Center.⁷

Water is used to generate chilled water and steam at the Energy Center, and chemicals are used to maintain proper water chemistry to ensure optimum operating conditions. These chemicals include biocides and algicides to inhibit the growth of organic matter in the water, products to minimize scale build-up, and chemicals to control the pH (a measure of acidity/alkalinity) and conductivity. These products, which are stored on-site in reportable quantities under the HMP regulations, pose little environmental or health risk when used according to manufacturers' directions in the normal course of plant operations. Wastewater produced during the process contains small amounts of residual chemicals. The wastewater is discharged to the City's Combined Sewer System (CSS), but the characteristics of the wastewater are not of the type that require pretreatment or a special wastewater discharge permit for industrial wastewater.⁸

Hazardous Materials Transport and Disposal

SMCS currently transports and disposes of hazardous materials in accordance with applicable federal and State regulations. Sutter contracts the transportation of hazardous materials to the SMCS facility through two independent companies: Clean Harbor is the hauler of hazardous chemicals, and Stericycle is the hauler for medical waste (biohazardous, trace

⁷ Existing Energy Center, document received from Sutter on 4/1/04.

⁸ John Lionakis, Capital Engineering Consultants, personal communication, February 22, 2005.

chemotherapeutic, pharmacological, and pathological waste streams).⁹ These companies dispose of hazardous materials in accordance with federal and State regulations.

Existing Buildings and Site Conditions

Hazardous Materials in Soil and Groundwater

Contaminated soil and groundwater have been identified at numerous locations within the City of Sacramento. Site studies in the form of Phase I Environmental Site Assessments (ESA) or other specialized studies are used to identify the presence or likelihood of soil and groundwater contamination at a specific site. The American Society for Testing and Materials (ASTM) has developed standards for Phase I ESAs. The ASTM standards are used routinely in preparation of Phase I ESAs 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 a Phase II ESA is usually recommended. A Phase II investigation typically includes collection and analysis of soil and water samples. Based on the results, the Phase II ESA may recommend additional testing, remediation, or other controls to address contamination.

Phase I ESAs were prepared for the House of Furs building property and the St. Luke's property when SMCS purchased the land. The results of those investigations are summarized below.

House of Furs Building

Cunningham Engineering Corporation (CEC) prepared a Phase I ESA in July 1999 for a 3,200 - square-foot parcel (APN 007-0171-007) located at 2727 Capitol Avenue, within the project site. A three-story structure currently occupies the north portion of the site with living quarters on the second and third floors, a fur business space and garage on the first floor, and storage in the basement. The south portion of the site is occupied by sidewalks, driveways, and landscaping.

A database review performed by VISTA in July 1999, found locations of businesses and properties that handle hazardous materials, or are a known location of a hazardous materials release into the soil or groundwater. This review was conducted in accordance to the Phase I ESA prepared by CEC. Within a 1-mile radius of the House of Furs building, Vista reported 31 known locations and four unknown locations of hazardous materials spills or handlers. CEC determined at the time of the report that no known hazards pertaining to soil or groundwater contamination exist within the site.

The ESA for the House of Furs building reported there is no evidence of Underground Storage Tanks (USTs) or Aboveground Storage Tanks (ASTs) present on the site. No stains or apparent environmental hazards were observed in the building or on the site. Asbestos and lead sampling, however, did reveal the presence of asbestos-containing building materials (ACBM) and lead based paint in the building. The results of ACBM and lead-based paint testing are discussed separately under the "Asbestos and Lead" subheading, below.

9 Hurd, Gloria, personal communication with EIP, 5/17/04.

St. Luke's Medical Office Building

A Phase I ESA was prepared by Charles Lockwood Consulting Engineer, Inc. in November 2000 for an approximately 70,000-square-foot building at 2600 Capitol Avenue, known as the St. Luke's Medical Office Building, and, St Luke's parking garage, a three-level parking structure at 2613 N Street. The office building was constructed in 1961 and consists of four stories and a basement. The office building is currently vacant with the exception of three tenants that occupy only a small space in the building. The parking structure consists of a 3-story concrete structure.

The ESA reported that potential hazards identified in the building included hazardous materials use and storage generated from the medical offices (e.g., biological wastes, fluids from X-ray film processing). One film processing system was connected to the sewer system. Three 55-gallon drums were located in the storage area of the parking structure; one such drum was labeled as containing a corrosive poison, another contained urethane.

According to the ESA, there was no evidence of water wells, septic tanks, USTs, or ASTs present on the site.

Asbestos and Lead in Building Materials

Asbestos

Asbestos, a naturally-occurring fibrous material, was used as a fireproofing and insulating agent in building construction before such uses were banned by EPA in the 1970s. Because it was widely used prior to the discovery of its health effects, asbestos may be found in a variety of building materials and components including sprayed-on acoustic ceiling materials, thermal insulation, walls and ceiling texture, floor tiles, and pipe insulation. Friable (easily crumbled) materials are particularly hazardous because inhalation of airborne fibers is the primary mode of asbestos entry into the body. Asbestos-related health problems include lung cancer and asbestosis. Non-friable asbestos and encapsulated friable asbestos do not pose substantial health risks.

Asbestos exposure is a human respiratory hazard. Cal-OSHA considers asbestos containing building materials a hazardous material when a bulk sample contains more than 0.1 percent asbestos by weight. Cal-OSHA requires that a qualified contractor licensed to handle asbestos materials handle any material containing more than 0.1 percent asbestos by weight. Asbestos is classified into two main categories, "friable" and "non-friable". Friable asbestos can release asbestos fibers easily when disturbed and is considered Regulated Asbestos Containing Material (RACM). Non-friable asbestos will release fibers less readily than RACM and is referred to as Category I or Category II non-friable.

Lead

Among its numerous uses and sources, lead can be found in paint, water pipes, solder in plumbing systems, and in soils around buildings and structures painted with lead-based paint. In 1978, the federal government required the reduction of lead in house paint to less than 0.06 percent (600 parts per million (ppm)). However, some paints manufactured after 1978 for

industrial or marine uses legally contain more than 0.06 percent lead.¹⁰ Excessive exposure to lead (even low levels of lead) can result in the accumulation of lead in the blood, soft tissues, and bones. Children are particularly susceptible to potential lead-related health problems because it is easily absorbed into developing systems and organs.

Results of Asbestos and Lead Testing in Existing Structures

House of Furs Building

High levels of asbestos were found in the following materials at the House of Furs building property: Grey fireplace liner; linoleum and backing; roof sealant; roofing material; 9x9 floor tiles; floor tile mastic; and grey paper duct wrap. Prior to any planned demolition or renovation that may disturb these materials, the Phase 1 ESA recommended that ACMB be removed and disposed of by a licensed and certified Asbestos Abatement Contractor.

In addition, high levels of lead were recorded in some older parts of the building. These levels could be hazardous to children and untrained workers. Detectable levels of lead indicate the need for air monitoring during any demolition or renovation that may disturb such painted surfaces.

The ESA recommended that prior to any planned demolition or renovation that may disturb ACMB or lead-based paint, these materials must first be removed and disposed of by a certified contractor.

St. Luke's Medical Office Building

Because of the age of the building, the Phase 1 ESA indicated that asbestos appeared likely on pipes coming from a boiler in the basement. Other likely sources identified in the ESA were ceiling tiles, vinyl floor coverings, wall joint compound, texture coats, and roofing materials. The ESA noted that lead shielding could be present in X-ray areas.

National Analytical Laboratories, Inc. (NAL) conducted an asbestos inspection in May 1999 for the St. Luke's Office Building. The report identified the presence of asbestos in green elbow insulation taken from the boiler room, yellow pipe insulation taken from the boiler room, pipe elbow insulation from the atrium, floor tile in the boiler room, floor tile in the basement, and gray roof mastic taken from the roof. NAL recommended that a certified asbestos abatement contractor be retained to remove the non-friable and friable material prior to any demolition or renovation work at the facility. NAL stated that once a certified asbestos contractor has removed the ACMB, pursuant to EPA and Occupational Safety and Health Administration (OSHA) requirements, and air clearance sampling has been completed and cleared, the demolition or renovation work can be started by a general contractor.¹¹

Raney Geotechnical Inc. (RGI) conducted an asbestos survey of the St. Luke's Medical Office Building in May 2002 to help predict possible hazards during demolition. RGI conducted a visual survey and collected bulk samples of suspect ACMB, in accordance with EPA guidelines. RGI identified asbestos in a number of locations within the St. Luke's Medical Office Building.

10 California Department of Real Estate, *Environmental Hazards: Guide for Homeowners and Buyers*.

11 National Analytical Laboratories, Inc., Building Inspection Report For: St. Luke's Medical Center, May 13, 1999.

Friable asbestos containing material include spray-on acoustic ceiling material, spray-on fire retardant material, thermal insulation material surrounding the boiler tank and associated piping, and linoleum flooring. Non-friable asbestos containing materials found included nine-inch floor tiles and underlying black mastic located at various locations on each of the building's floor levels. The grey roof mastic previously identified by NAL as containing asbestos is believed to not become friable during typical demolition. RGI advised that the demolition contractor be notified of its presence to avoid unusual disturbance and consider proper disposal. RGI also found trace (less than 0.1 percent asbestos by weight) amounts of asbestos in sheetrock samples.

EAP Building and MTI Building

Reliance Environmental Services (Reliance) conducted a pre-demolition asbestos survey of the EAP Building at 2710 Capitol Avenue and MTI Buildings at 2731 Capitol Avenue to help predict possible hazards during demolition. Reliance conducted a visual survey and collected bulk samples of suspect ACBM, in accordance with EPA guidelines.

Reliance found ACBM in the black roof mastic, tan roof paper and white TSI located above the ceilings and in the walls of the EAP Building.

Within the MTI Building (Main Building), ACBM was found in the white drywall/joint compound, black floor tile mastic, 12x12 inch floor tiles, white texture material, and white TSI located on pipes. No asbestos containing materials were observed within or on the MTI Building (Mail Room Building). Reliance also found ACBM in the orange 12x12 floor tiles, black floor tile mastic, and the white drywall/joint compound of the MTI Building (IT Building).

Mercury and PCBs

Spent fluorescent light tubes, thermostats, and other electrical equipment contain heavy metals such as mercury. Elemental mercury can also be found in many electrical switches. Due to accidental spills and historic disposal practices before the adoption of more stringent disposal regulations, it is possible elemental mercury may be present in hospital, medical office, or laboratory sink traps and plumbing. Mercury liquid evaporates slowly if exposed to air, and, at certain levels of exposure, mercury vapors are toxic and can cause kidney and liver damage.

Polychlorinated biphenyl (PCBs) is an organic chemicals, usually in the form of an oil, that were historically used in electrical equipment. PCBs are most commonly associated with pole-mounted electrical transformers, but they were also used in insulators and capacitors in building electrical equipment. PCBs are deemed to be hazardous waste when concentrations exceed 5 parts per million (ppm) in liquids or 50 ppm in non-liquids. Fluorescent light ballasts may contain PCBs, and if so, they are regulated as hazardous waste and must be transported and disposed of as hazardous waste. Ballasts manufactured after January 1, 1978, should not contain PCBs and are required to have a label clearly stating that PCBs are not present. PCBs are highly persistent in the environment, and exposure to PCBs can cause serious liver, dermal, and reproductive system damage. PCBs are also a suspected human carcinogen.

Underground and Above-Ground Storage Tanks

Underground Storage Tanks (USTs)

Underground Storage Tanks (USTs), which are potential sources of soil and groundwater contamination, typically contain petroleum products that could severely degrade water quality or emit hazardous gases when exposed to air. As of 2000, over 30 sites within the vicinity of the project area had been identified by the Regional Water Quality Control Board as containing leaking underground storage tanks (LUST). There are currently no known LUSTs within the project area boundary. All sites under regulatory oversight outside the project area were determined to be downgradient of the SMCS project area, and were not considered to represent an adverse groundwater condition for the SMCS site.¹²

The Energy Center USTs are currently registered and permitted by the City of Sacramento Fire Department. The tanks are subject to Uniform Fire Code requirements to minimize the potential for fire and explosion. In accordance with federal, State and local regulations and standards, all USTs are double-walled and equipped with leak detection devices and anti-corrosion features. No currently leaking USTs have been identified within the complex, and no UST-related cleanup work is currently being performed on the campus.

The potential exists for old tanks to be present at locations that would be disturbed by project construction, as evidenced by previous development projects within the site in which a previously unknown tank was uncovered during construction. When this tank was discovered, it was partially removed and protocol regarding the remediation and testing of contaminants were followed as outlined by the Sacramento County Environmental Management Department.

Above-Ground Storage Tanks (ASTs)

Above-ground storage tanks (ASTs) are currently used within the project area for the storage of liquid oxygen and diesel, as discussed above.¹³ There are no other ASTs within the project area.

Public Safety

Helicopter Operations

Helicopters routinely fly in the vicinity of the existing SGH and the Buhler Building. Helicopter operations in the downtown area are a combination of law enforcement, medical emergency/transport, news and traffic helicopters, and commercial/business and other aviation based in the Sacramento metropolitan area and more distant locations.

The project area is not located within an airport land use plan or within two miles of a public- or private-use airport. The Sacramento Executive Airport is approximately 5 miles away and is the closest airport to the project area. There are 14 helicopters based at Sacramento Executive Airport. Helicopters are also based at Mather Field (37 based helicopters) and McClellan Park

12 Charles Lockwood Consulting Engineer, Inc., *Phase I Environmental Site Assessment, St. Luke's Office Building*, November 14, 2000.

13 Hurd, Gloria, personal communication with EIP, 5/17/04.

(4 based helicopters). The majority of helicopter based at Mather Field are military (California Air National Guard and Army National Guard).

There are currently no private or public helicopter operations at existing SMCS facilities within the project area, but there is a heliport and helipad at the UC Davis Medical Center, approximately a mile southeast of the project area. This is the closest heliport/helipad operation to the project area. Other heliports and helistops in Sacramento are associated with private businesses (Lake Park and Cima) and medical transport (Mercy San Juan Hospital). A helistop for a local television station (KQVR) is located in West Sacramento.¹⁴

Data maintained by the National Transportation Safety Board (NTSB) show that helicopter accidents in Sacramento are infrequent. Since 1962, there have been only 10 accidents, none of which resulted in any fatalities, and none of which involved collisions or near-misses in the air. Only one incident involved hitting an object (a power line).¹⁵

Emergency Routes

Emergency response vehicles travel on all roadways in downtown Sacramento, but only seven of the major streets have been designated as emergency evacuation routes in the downtown area. Within the project area, only Capitol Avenue (eastbound) is a designated evacuation route. None of the numbered streets within or adjacent to the site are designated routes, nor are L or N Streets. In case of evacuation, traffic on these local streets would be directed to the designated routes.¹⁶

Off-Site (Adjacent) Hazardous Materials Use

According to Sacramento County EMD records, there are several businesses adjacent to the project area that use small quantities of hazardous materials. However, none of the businesses use either the types or amounts of hazardous materials that are subject to California Accidental Release Prevention (CalARP) program regulations governing accidental release of regulated substances (CCR Title 19, Division 2, Chapter 4.5).

REGULATORY SETTING

The following discussion summarizes the federal, State, and local regulations pertinent to hazards and hazardous materials and helistops.

Federal

Several federal agencies regulate hazardous materials. These include the U.S. EPA, the U.S. Nuclear Regulatory Commission, Occupational Safety and Health Administration (OSHA), and the Department of Transportation (DOT). Applicable federal regulations and guidelines are

14 California Department of Transportation, Division of Aeronautics, Heliports in California, www.dot.ca.gov/hq/planning/aeronaut/htmlfile/heliport-list.php, accessed March 14, 2005.

15 National Transportation Safety Board, Aviation Accident Database and Synopses, www.nts.gov/ntsb/query, accessed March 15, 2005.

16 Angela Shook, City of Sacramento Fire Department, personal communication, March 10, 2005.

contained primarily in Titles 10, 29, 40, and 49 of the Code of Federal Regulations (CFR), and lead exposure guidelines provided by the U.S. Department of Housing and Urban Development.

Worker Safety

The U.S. OSHA's Bloodborne Pathogen Standard was designated primarily to protect workers from exposure to blood and bodily fluids. Exposure to these materials is the primary route for transmittal for the most harmful infectious agents. The Bloodborne Pathogen Standard ensures that infectious materials, such as patient laboratory samples, are handled, stored, and transported in manners that prevent worker, community and environmental exposure. The California Department of Health Services (DHS), Division of Occupational Safety and Health (DOSH), enforce the Bloodborne Pathogen Standard.

Title 29, Part 1910 of the CFR describes the Hazard Communication Standard, which requires that workers be informed of the hazards associated with the materials they handle. Training in chemical work practices must include methods in the safe handling of hazardous materials, use of emergency response equipment, and an explanation of the building emergency response plan and procedures. Material Safety Data Sheets (MSDS) must be available in the workplace, and containers must be appropriately labeled.

Hazardous Waste Handling

The U.S. EPA has authorized the California Department of Toxic Substances Control (DTSC) to enforce hazardous waste laws and regulations in California. Requirements place "cradle-to-grave" responsibility for hazardous waste disposal on the shoulders of hazardous waste generators. Generators must ensure that their wastes are disposed of properly, and legal requirements dictate the disposal requirements for many waste streams (e.g., banning many types of hazardous wastes from landfills).

Hazardous Materials Transportation

The U.S. DOT has developed regulations pertaining to the transport of hazardous materials and hazardous wastes by all modes of transportation. The U.S. Postal Service (USPS) has developed additional regulations for the transport of hazardous materials by mail. DOT regulations specify packaging requirements for different types of materials. EPA has also promulgated regulations for the transport of hazardous wastes. These more stringent requirements include tracking shipments with manifests to ensure that wastes are delivered to their intended destinations.

Asbestos Regulations

The federal government considers asbestos a toxic air contaminant. Several federal laws and regulations have been created to control the use, removal and disposal of asbestos containing materials. Such laws and regulations include the Toxic Substance Control Act (15 U.S.C. § 2601 et seq.), Clean Air Act (42 U.S.C. § 7401 et seq.), and Title 40 CFR Part 763 and 61.

Helistop

The Federal Aviation Administration (FAA) regulates the design of heliports and helipads (which includes helistops) and flight paths to and from those facilities. Heliport design standards are specified in Chapter 4 of the FAA Advisory Circular 150/5390-2B (September 2004). Federal Aviation Regulations (FARs) contain prescriptive standards for flight paths and other safety requirements.

Flight paths must meet Federal Aviation Regulations (FAR) Part 77 obstruction clearance standards. Part 77 of the FARs specifies a series of “imaginary surfaces” in the airspace surrounding landing areas. These surfaces include a “primary surface” (a horizontal plane at landing pad elevation), “approach surfaces” (shallow, inclined planes along each designated flight path), and “transition surfaces” (steeper inclined planes to the sides of flight paths). These standards are designed to provide adequate maneuvering room for pilots using the facility. Flight paths are reviewed by the FAA when conducting airspace studies for landing sites. This evaluation takes into account the airspace of other existing facilities (e.g., the helipad and heliport at the UC Davis Medical Center, Sacramento Executive Airport), and whether there are any conditions (e.g., tall buildings or structures) that would new a new landing site infeasible. The product of FAA’s study is an airspace determination letter. Rather than an explicit approval of the helistop or flight operations, this is a letter expressing no objection to the use of the airspace for operation to and from the site. While the FAA reviews flight paths, it seldom lists specific paths as a condition of its finding.

Title 49, Part 157 of the CFR establishes standards and notification requirements for the proposed construction of helistops. Sutter is required to submit FAA Form 7480-1 to the FAA in no less than 90 days prior to construction. Additional information required to Form 7480-1 include; a city map identifying the exact location of the helistop, a hospital layout plan that depicts the landing pad in relation to buildings and other obstacles/structures in the vicinity.¹⁷

State

The California Environmental Protection Agency (Cal/EPA) has overall authority governing the use of hazardous materials in the State. The California Highway Patrol (CHP) and Caltrans are the enforcement agencies for hazardous materials transportation regulations. Transporters of hazardous materials and waste are responsible for complying with all applicable packaging, labeling, and shipping regulations. The Office of Emergency Services (OES) provide hazardous materials incident response services.

Within Cal/EPA, the DTSC has primary regulatory responsibility for hazardous waste management and cleanup. Enforcement of regulations has been delegated to local jurisdictions that enter into agreements with DTSC for the generation, transport, and disposal of hazardous materials under the authority of the Hazardous Waste Control Law.

State regulations applicable to hazardous materials are contained in the California Code of Regulations (CCR). Title 22 and 26 of the CCR pertain to hazardous materials and the management of hazardous materials. Title 8 contains Construction Safety Orders pertaining to asbestos and lead.

¹⁷ Federal Aviation Administration, *Notice of Construction, Alteration, Activation and Deactivation of Airports; Federal Aviation Regulation 157*, Website: <http://www.faa.gov/arp/ace/part157.htm>, 12/26/01, Accessed on 6/29/2004.

In January 1996, Cal/EPA adopted regulations implementing a “Unified Hazardous Waste and Hazardous Materials Management Regulatory Program” (Unified Program). The six program elements of the Unified Program are hazardous waste generators and hazardous waste on-site treatment, underground storage tanks, above-ground storage tanks, hazardous material release response plans and inventories, risk management and prevention program, and Uniform Fire Code hazardous materials management plans and inventories. The program is implemented at the local level by a local agency – the Certified Unified Program Agency (CUPA). The CUPA is responsible for consolidating the administration of the six program elements within its jurisdiction. The Sacramento County Environmental Management Department (SCEMD) is the CUPA for Sacramento County.

State and federal laws require detailed planning to ensure that hazardous materials are properly handled, used, stored, and disposed of, and, in the event that such materials are accidentally released, to prevent or to mitigate injury to health or the environment. California’s Hazardous Materials Release Response Plans and Inventory Law, sometimes called the “Business Plan Act,” aims to minimize the potential for accidents involving hazardous materials and to facilitate an appropriate response to possible hazardous materials emergencies. The law (Section 25503.3(c) of the California Health and Safety Code) requires businesses that use hazardous materials to provide annual inventories of those materials to designated emergency response agencies, to illustrate on a diagram where the materials are stored on site, to prepare an emergency response plan, and to train employees to use the materials safely. SGH has prepared the required annual Hazardous Materials Plan (HMP). The most recent submittal is 2005, which is on file at the Sacramento County Environmental Management Department.

Radioactive Materials Management

The Radiologic Health Branch of the California Department of Health Services administers the federal and State radiation safety laws that govern the storage, use, and transportation of radioactive materials and the disposal of radioactive wastes. The Radiologic Health Branch licenses institutions that use radioactive materials and radiation-producing equipment, such as X-ray equipment. To maintain a radioactive materials license, an institution must meet training and radiation safety requirements and be subject to routine inspections.

Medical Waste Handling

The Bloodborne Pathogens Standard, enforced in California by the California Department of Health Services (DHS), Division of Occupational Safety and Health (DOSH), requires worker safety training to minimize releases and exposures to potential hazards. The standard also requires employees to follow “Universal Precautions,” which call for the handling of all human blood and body fluids as if they contain infectious agents.

The California Department of Health Services Medical Waste Management Program enforces the California Medical Waste Management Act and related regulations. Medical waste is generally regulated in the same manner as hazardous waste, except that special provisions apply to storage, disinfections, containment, and transportation. The law imposes a cradle-to-grave tracking system and a calibration and monitoring system for on-site treatment. Facilities that treat medical wastes must obtain permits to do so and are subject to annual audits.

The Medical Waste Management Act requires that all hospitals develop and implement a *Medical Waste Management Plan*. The purpose of the plan is to successfully guide the proper handling of medical waste throughout the facility, including the storage, transport and disposal.

California Accidental Release Prevention Program

The CalARP program (CCR Title 19, Division 2, Chapter 4.5) covers certain businesses that store or handle more than a certain volume of specific regulated substances at their facilities. The list of regulated substances is found in Article 8, Section 2770.5 of the CalARP program regulations. The use of hazardous materials at existing Sutter facilities has not required a Risk Management Plan be prepared, and the proposed project does not include any new hazardous materials use that would be subject to these requirements.

Hazardous Materials Worker Safety

Occupational safety standards exist in federal and State laws to minimize worker safety risks from both physical and chemical hazards in the workplace. The California Division of Occupational Safety and Health (Cal/OSHA) is responsible for developing and enforcing workplace safety standards and assuring worker safety in the handling and use of hazardous materials. Among other requirements, Cal/OSHA obligates many businesses to prepare Injury and Illness Prevention Plans and Chemical Hygiene Plans. The Hazard Communication Standard requires that workers be informed of the hazards associated with the materials they handle. For example, manufacturers are to appropriately label containers, Material Safety Data Sheets are to be available in the workplace, and employers are to properly train workers.

Cal/OSHA also requires that a qualified contractor licensed to handle asbestos materials handle any material containing more than 0.1 percent asbestos by weight.

Helistops

Laws set forth in the California Public Utilities Code Section 21001 *et seq.* and regulations in Title 21, Sections 3525 through 3560 of the CCR regulate heliport/helipad design and operations in the State. Under State law, the Caltrans Division of Aeronautics is responsible for ensuring compliance with FAA standards at the State level pertaining to these activities. The helistop proposed by the SMCS project is required to be permitted by the Division of Aeronautics. Before deeming a permit application complete, a number of items must be submitted to the Division of Aeronautics for review. Among these items, in the case of the proposed project, there must be a local area map indicating the location of schools, places of gatherings, and residential areas within 1,000 feet of the center of a proposed "final approach and take-off" (FATO) area, documentation from the Sacramento City Council approving the helistop, documentation of action by the Sacramento Airport Land Use Commission, documentation of compliance with CEQA, and an FAA Airspace Determination.

Local

Sacramento County Environmental Management Department (SCEMD)

The SCEMD is responsible for promoting a safe and healthy environment in the County. As the CUPA, the SCEMD monitors the proper use, storage and clean up of hazardous materials, monitoring wells, removal of leaky underground storage tanks, and permits for the collection, transport, use or disposal of refuse.

Hazardous Materials Management Plan (HMP)

Hazardous waste laws and regulations are enforced locally by SCEMD. SCEMD requires that businesses who store, handle and use reportable quantities of hazardous materials, generate any amount of hazardous waste, or have an UST, complete a HMP ("Business Plan") and relevant permits. HMPs are normally updated when there is a substantial change in operations.¹⁸

Area Plan for Emergency Response to Hazardous Materials Incidents in Sacramento County (Area Plan)

The Area Plan for Emergency Response to Hazardous Materials Incidents (Area Plan), developed by SCEMD, provides information for agencies involved in hazardous material response within Sacramento County. The local agencies that may be called upon during an emergency are SCEMD, Sacramento County Sheriff's Department, and the Sacramento City Fire Department. Other agencies, such as the State OES, Sacramento County Health Department, Public Works, and the CHP, may be called upon if additional resources are necessary to respond to a hazardous materials incident.

Sacramento Metropolitan Air Quality Management District (SMAQMD)

The SMAQMD works with local, state and federal government agencies, the business community, and private citizens to achieve and maintain healthy air quality for Sacramento County. SMAQMD has rules that pertain to the abatement of asbestos and related fees.

Rule 902 implements the U.S. EPA's National Emission Standard for Hazardous Air Pollutants for Asbestos (40 C.F.R. § 61.140 et.seq.), which is intended to limit the emission of asbestos to the atmosphere.

Rule 304 charges a fee to emission sources to cover the estimated reasonable costs of evaluation plans required by law, rule or regulation. A fee schedule is listed within this rule specifically for asbestos renovation and demolition projects that are subject to rule 902.

18 County of Sacramento, Environmental Management Department, *Introduction to the New Hazardous Materials Plan*, August 6, 2001.

Sacramento City Fire Department

The Sacramento City Fire Department, a first-responder to emergency calls, maintains a Hazardous Materials Response Team (HMRT). Through contractual agreement, the HMRT provides emergency response to hazardous materials incidents within the City of Sacramento.¹⁹ The Sacramento City Fire Department also maintains updated records of the emergency response or evacuation routes for the City.

City of Sacramento General Plan

The City of Sacramento General Plan adopted the following community safety goal, policies, and implementation measures that pertain to the management of hazardous materials:²⁰

Health and Safety Element – Hazardous Materials

Goal: Provide for the health and safety of the citizens of Sacramento and for the protection of the environment by reducing, and where possible eliminating, exposure to hazardous materials and waste.

Policy3: Encourage “clean industry” to operate in the City of Sacramento.

Circulation Element – Airports

Goal: Promote general, commercial and military aviation facilities within the parameters of compatible surrounding land uses.

Policy4: Limit helicopter usage to existing and designated areas determined by the Helicopter Ordinance for the city of Sacramento.

Sacramento City Code

The City of Sacramento has adopted the following implementation measures that pertain to hazards and hazardous materials within the City.

Implementation Measures

8.64.040. The City has adopted a hazardous materials disclosure code requiring handlers of hazardous materials file a disclosure form within fifteen (15) days of a significant change to the handling, use, and/ or location of hazardous materials. (Sacramento City Code 8.64.040)

8.92.090. The City has adopted an underground storage tank code to regulate the operation of USTs within the City. (Sacramento City Code 8.92.090)

The City has also adopted regulations pertaining to helistops with the City. Section 12.92 of the Sacramento City Code lists acceptable locations for helistops, approach zone requirements,

19 Sacramento City Fire Department, Hazardous Materials, <http://www.cityofsacramento.org/fire/hazardousmaterials.html>, 2001.

20 City of Sacramento, *City of Sacramento General Plan*, adopted January 19, 1988, Pages 8-20, 8-21.

dimensions of touchdown areas, and other design and safety requirements. The regulations, which were enacted by ordinance (“Helicopter Ordinance”) in 1966, pre-date the current FAA standards for heliport/helipad design.

Sacramento Central City Community Plan

There are no hazardous materials or public safety measures applicable to the proposed project.

SMCS Policies and Procedures

SMCS facilities currently comply with the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) standards, even though this is voluntary. Because the Center for Medicare and Medicaid Services (CMS) and many third-party payers require hospitals to be accredited as a condition of participation in health insurance reimbursement programs, this accreditation would allow the proposed medical complex to serve the City of Sacramento. By SMCS policy, the proposed medical complex would comply with JCAHO standards. Compliance with these standards is required in order for the medical complex to be awarded and sustain hospital accreditation. The JCAHO standards include an entire Chapter entitled “Managing the Environment of Care” (EOC). The EOC standards include seven required programs: Safety, Security; Hazardous Materials and Waste; Emergency Management (hospital and community disasters); Fire Life Safety; Medical Equipment Management; and Utilities Management.

As accredited hospitals, the WCC, and SMF Building are required to be surveyed every three years by JCAHO and the California Department of Health Services (Licensing & Certification) to attain compliance with JCAHO standards and CCR Title 22 (Hospital Licensing and Certification) regulations.

Sutter currently maintains an Environment of Care Manual that contains policies and procedures that pertain to hazardous materials and waste management of all Sutter hospitals within Central California. The new facilities created by the project would be required to comply with this manual.

IMPACTS AND MITIGATION MEASURES

Methods of Analysis

The qualitative analysis of the potential public safety and hazards impacts is based on review of the SMCS project area design and intended uses and information presented in existing documentation (summarized below) to establish existing conditions and to identify potential environmental effects, based on the standards of significance presented in this section. In determining the level of significance, the analysis assumes that the SMCS projects would comply with applicable ordinances and regulations.

The existing hazardous materials found in the SMCS project probably reflect the range of hazardous materials types that could be found in the future, and the nature of the hazards associated with future materials. Future changes in medical technology, diagnostics, and treatment could result in different hazardous materials and hazardous waste; however, the

changes in health care delivery are so fast-paced, it would be speculative to assume a range and nature of hazards substantially different than current conditions. In the absence of this information, the EIR assumes that increases in hazardous materials use and hazardous waste generation would be roughly proportional to the change in gross square feet at the SMCS project site. The actual increase in hazardous materials handling could be somewhat more or less than that, however, because not all changes in hazardous materials use and hazardous waste generation would necessarily be proportional to the projected increase in floor area. Nonetheless, newer technologies to reduce hazardous materials and hazardous waste generation would be included in the systems and services for the new hospital so that the increase assumed for the proposed project in the future may be greater than actual use.

The analysis of potential effects related to emergency access/evacuation routes is based on the results and conclusions of the Traffic Impact Study, which is presented in Section 6.7, Traffic and Circulation.

Preliminary operational information developed by the hospital's helistop planner, which is presented in the Project Description, was reviewed to qualitatively evaluate potential helistop operations public safety impacts. The evaluation takes into account the permitting process, in which a number of State and local approvals would be required. The analysis assumes the required permits and land use approvals would be obtained, should the SMCS project be approved, and additional mitigation would not be needed with respect to permitting. Helicopter accident data compiled by the National Transportation Safety Board and risk estimates presented in professional publications were used to qualitatively characterize the potential for helistop use to result in a substantial safety hazard at the project site.

Standards of Significance

For the purposes of this EIR, impacts related to hazardous materials and public safety are considered significant if the SMCS project would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- Emit any hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within ¼ mile of an existing or proposed school;
- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks; or
- Impair implementation of or physically interfere with an adopted emergency response plans or emergency evacuation plan.

Impact 6.4-1: Existing buildings demolished to accommodate the SMCS project are known to contain or may contain asbestos or lead-based paint or other hazardous substances, which could be released to the environment during demolition if not properly removed, contained, and transported for disposal at approved sites.

	SMCS Project	Theatre
Significance Before Mitigation	Potentially Significant	Potentially Significant
Mitigation Measures	Mitigation Measure 6.4-1	Mitigation Measure 6.4-1
Significance After Mitigation	Less than Significant	Less than Significant

SMCS Project

Construction of the SMCS project would involve the demolition or removal of several buildings. The St. Luke’s Office Medical Building, MTI Building, EAP Building, and House of Furs building have been tested and found to contain asbestos-containing building material (ACBM). Only the House of Furs building has been tested for lead-based paint, which was detected in some older parts of the building. Prior to any planned demolition or renovation that may disturb ACBM or lead-based paint, these materials must first be removed and disposed of by a certified contractor, as noted in the test reports for these buildings.

Because the three other buildings that would be demolished to accommodate the SMCS project (Energy Center, (former) RAS Building, and a private medical office were constructed between the late 1970s and 1980s, it is unlikely the building components contain asbestos or lead-based paint. However, without test results this cannot be confirmed. Such testing has not been performed to date, so there is the potential demolition of these structures could result in the inadvertent release or improper disposal of debris containing these materials.

Spent fluorescent light tubes, thermostats, and other electrical equipment may contain heavy metals such as mercury. Lighting tubes typically contain concentrations of mercury that may exceed regulatory thresholds for hazardous waste and, as such, must be managed in accordance with hazardous waste regulations. PCBs may be present in some older electrical equipment, and may require handling as hazardous waste. As with asbestos and lead, demolition of structures could result in the inadvertent release or improper disposal of debris containing these materials, exposure to which can result in adverse human health effects.

During the occupancy and use of the (former) RAS Building, a 1,300-sf private medical office building, and St. Luke’s Medical Office Building, it is possible hazardous substances such as mercury from broken thermometers may be present in sink traps. Other hazardous substances may also have been similarly disposed, leaving residual material in pipes. Testing for the presence of such materials and dismantling of plumbing fixtures would require careful removal techniques to ensure contractors are not inadvertently exposed to hazardous substances. In addition, contaminated debris could be inadvertently disposed of at a landfill or recycling facility not permitted to accept such waste, which could expose workers to potential safety hazards or result in environmental exposure, if hazardous substances are not properly identified in advance.

This is considered a **potentially significant impact** because it could create a hazard to the public or the environment through a reasonably foreseeable upset or accident condition that could result in a release of hazardous substances. Given the types of medical uses and relatively small number of fixtures in these buildings, it is likely the number of fixtures and amount of material potentially containing hazardous substances would be relatively limited, however.

Theatre

The EAP Building and Trinity Apartments would be demolished to accommodate the proposed Theatre. The EAP Building has been found to contain ACBM, which would require removal by a certified abatement contractor. Due to the age of the building, it may contain lead-based paint. The Trinity Apartments may contain asbestos and/or lead-based paint. Both buildings may contain electrical equipment with PCBs. As described for the SMCS project, demolition and disposal of material containing hazardous substances could present a health or environmental hazard if not properly managed. This is considered a **potentially significant impact**.

Mitigation Measure

Implementation of the following mitigation measure would ensure ACBM, lead-based paint, or other hazardous substances in building components are identified, removed, packaged, and disposed of in accordance with applicable State laws and regulations. This would minimize the risk of an accidental release of hazardous substances that could adversely affect human health or the environment, thus reducing impacts to a *less-than-significant level*.

(SMCS/Theatre)

- 6.4-1 (a) *Prior to demolition of the St. Luke's Medical Office Building, MTI Building, EAP Building, and House of Furs building, the project applicant shall provide written documentation to the City that ACBM abatement has occurred in compliance with applicable State and local laws and regulations.*
- (b) *Prior to demolition of the (former) RAS Building, Energy Center, private medical office building, and Trinity Apartments, the project applicant shall provide written documentation to the City that ACBM testing and abatement, if necessary, has been completed in accordance with applicable State and local laws and regulations.*
- (c) *Prior to demolition of the St. Luke's Medical Office Building, MTI Buildings, EAP Building, (former) RAS Building, Energy Center, St. Luke's parking structure, Old Tavern parking structure, private medical office building, and Trinity Apartments, the project applicant shall provide written documentation to the City that lead-based paint testing and abatement, if necessary, has been completed in accordance with applicable State and local laws and regulations.*
- (d) *Prior to demolition of the (former) RAS Building, St. Luke's Medical Office Building, and private medical office building, the project applicant shall submit a written plan to the Sacramento County Environmental Management Department describing methods to be used to: (1) identify locations that could contain*

hazardous residues (e.g., mercury in sink traps); (2) remove plumbing fixtures known to contain or potentially containing hazardous substances; (3) determine the waste classification for the debris; (4) package contaminated items and wastes; and (5) identify disposal site(s) permitted to accept such wastes. Demolition shall not occur until the plan has been accepted by SCEMD and all hazardous components have been removed to the satisfaction of SCEMD staff.

- (e) *Prior to any demolition activities, the project applicant shall retain a qualified environmental specialist (e.g., a Registered Environmental Assessor or similarly qualified individual) to inspect all existing buildings subject to demolition for the presence of PCBs, mercury, or other hazardous materials. The project applicant shall submit the report to the City, together with an explanation of how the project will mitigate any issues identified in the report. If found at levels that require special handling (i.e., removal and disposal as hazardous waste), the applicant shall manage these materials as required by law and according to federal and state regulations and guidelines, including those of DTSC, SCEMD, Cal/OSHA, and any other agency with jurisdiction over these hazardous materials.*

Impact 6.4-2: Site preparation activities associated with the SMCS project (excavation, grading, trenching) have the potential to encounter previously unidentified contaminated soil or groundwater or buried debris that may contain hazardous substances.		
	SMCS Project	Theatre
Significance Before Mitigation	Potentially Significant	Potentially Significant
Mitigation Measures	Mitigation Measure 6.4-2	Mitigation Measure 6.4-2
Significance After Mitigation	Less than Significant	Less than Significant

SMCS Project

Buildings within the SMCS proposed for below-grade construction activities include: the Community Parking Structure, Future Medical Office Building, SMF Building, the Women and Children’s Center, and connector tunnels. Excavations for these structures would disturb soil and may encounter groundwater. The results of Phase 1 ESAs indicate there are no known soil or groundwater contamination issues at the site, and the locations of known USTs have been determined.

Although the project applicant has no knowledge of such occurrences, the potential exists for historic site uses to have resulted in undocumented releases of hazardous substances to soil or groundwater. For example, items such as old heating fuel USTs predate current permitting and regulatory requirements, so the location(s) of such features may not be known. Leaks from old tanks could have resulted in a release of petroleum products to soil or groundwater. The accidental discovery of unknown hazards during excavation and inadvertent release of hazardous materials could create a significant hazard to the public or the environment if measures are not in place to safely manage such occurrences. This is considered a **potentially significant impact**.

Should contamination be detected in areas to be disturbed, in areas directly adjacent to sites to be developed, or in areas open to public access, remediation of the contaminated areas would be necessary in most cases. Remediation would include, at a minimum, treatment of contaminated soils in a manner that would render them non-hazardous or otherwise protect public health and safety. Proper treatment and/or disposal of soils and groundwater could also be required. As discussed in Impact 6.5-2 in Section 6.5, Hydrology and Water Quality, the City has specific requirements for the disposal of contaminated groundwater.

Site remediation measures, in themselves, could also have adverse impacts. During site remediation, workers and possibly the nearby public could be exposed to chemical compounds in soils, soil gases, or groundwater, primarily as a result of airborne chemical compounds migrating from a site under remediation. Because site controls would be in place during remediation, the likelihood of individuals coming into contact with contaminated soil or debris is minimal. Accidents during transportation of contaminated soils or groundwater could lead to exposure of the public and the environment to the chemical compounds. Worker and public health and safety requirements described above would apply during remediation activities, minimizing the potential that the above exposures would occur.

Potential adverse impacts of remediation would be mitigated, in part, by legally required safety and hazardous waste handling and transportation precautions. For hazardous waste workers, OSHA regulations mandate an initial 40-hour training course and subsequent annual training review. Additionally, site-specific training would be required for some workers. In responsible agency review of mitigation plans, procedures for protection of the public during remediation would be evaluated. These measures, along with application of state and regional cleanup standards, would serve to protect human health and environment during site remediation, thus minimizing remediation impacts.

Remediation of contaminated sites would eliminate the health threats posed by hazardous wastes and prevent workers and the public from encountering such materials in the event of any future excavation at the site. Removal of the toxic materials would also eliminate a potential local source of groundwater contamination; therefore, removal would be beneficial in the long run. Proper handling and disposal of excavated contaminated material would preempt potential health, safety, or environmental effects of the contaminated soil or groundwater.

Theatre

Construction of the Children's Theatre of California could involve site preparation activities such as excavation, grading, and possibly dewatering. During such activities, contaminated soil or groundwater, underground storage tanks, or other hazardous debris could be encountered, as described for the SMCS project. Unless properly managed, construction and remediation could create a health hazard. This is considered to be a **potentially significant impact**.

Mitigation Measure

The following mitigation measure requires site inspections at each location to determine the likelihood of contaminants within the site boundaries, removal or remediation of hazardous materials, and appropriate conditions outlining procedures in the event that previously unknown hazardous debris, soil, or groundwater contamination is discovered during construction. Therefore, implementation of the following mitigation measure would reduce construction-related impacts associated with exposure to hazardous materials to a *less-than-significant level*.

(SMCS/Theater)

6.4-2 *The following measures shall be implemented at all SMCS project sites (including the proposed theater site):*

- (a) *For building locations that have not been subject to Phase I ESAs, before each site is developed under the SMCS project, the project applicant shall ensure that each site is or has been investigated for the possible presence of hazardous materials in soils and buildings. Investigative measures could include, but would not be limited to, a comprehensive review of historic maps and aerial photographs, Sanborn maps, review of available city or county records, and consultation with knowledgeable individuals. If the Phase I ESA recommends a Phase II evaluation, the Phase II evaluation shall be completed prior to site preparation.*
- (b) *In the event that site inspections find evidence of contamination, waste discharges, underground storage tanks, abandoned drums, or other environmental impairment at locations to be developed or in the project site, the SCEMD shall be notified. A site remediation plan shall be prepared that (1) specifies measures to be taken to protect workers and the public from exposure to potential site hazards and (2) certifies that the proposed remediation measures would clean up the contaminants, dispose of the wastes, and protect public health in accordance with federal, state, and local requirements. Commencement of work in the areas of potential hazards shall not proceed until the site remediation plan has been completed to the satisfaction of the SCEMD.*
- (c) *A site health and safety plan, which meets the intent of OSHA hazardous materials worker requirements, shall be prepared and in place prior to commencing work on any contaminated sites. SMCS, through its contractor, shall ensure proper implementation of the health and safety plan.*
- (d) *In the event that previously unidentified USTs or other features or materials that could present a threat to human health or the environment are discovered during excavation and grading, construction in that immediate area shall cease immediately. A qualified professional shall evaluate the location and hazards and make appropriate recommendations. Work shall not proceed in that area until identified hazards are managed to the satisfaction of SCEMD.*

Impact 6.4-3: Construction and operation of the SMCS project would result in the continued routine use, storage, transport, and disposal of hazardous materials.		
	SMCS Project	Theatre
Significance Before Mitigation	Less than Significant	Less than Significant
Mitigation Measures	None required	None required
Significance After Mitigation	N/A	N/A

SMCS Project

Overview

To assess the potential for the SMCS project to involve the use, production, or disposal of materials in a manner that poses substantial hazards to people, or to animal or plant populations, the following analysis considers the pathways through which exposure to hazards could potentially occur, and evaluates the controls that would foreseeably be placed on each of these pathways. Exposure pathways that would be sufficiently controlled to pose no substantial hazards are considered less-than-significant health and safety issues.

Exposure pathways are means by which hazardous substances move through the environment from a source to a point of contact with people. Exposure pathways can exist under many different circumstances. Toxic substances can be released from a facility or source of contamination during normal, everyday operations or unintentionally through leaks, spills, fires, or other accidents. After release, contaminants can move or be transported through the environment by various means.

The hazards posed by chemicals, radioactive materials, and infectious agents vary. Some chemicals can pose physical hazards (e.g., chemical burns) or health hazards (e.g., poisoning), including potential acute or chronic illnesses. The properties and health effects of different chemicals are unique to each chemical and depend on the extent to which an individual is exposed. Exposure to excessive levels of radiation, whether from radiation-producing equipment or radioactive materials, can result in headaches, skin burns, or chronic illness, including cancer. Exposure to biohazardous materials can cause a range of illnesses, depending on the infectious agent encountered. Some infections can result in short-term discomfort (e.g., mild symptoms that can easily be treated or go away by themselves), while others can result in serious acute effects (e.g., dangerous disruptions of life functions). Some chronic diseases may or may not be curable or treatable. Some diseases may be communicable. In all these cases, the risks posed by the hazardous materials depend on the potential for exposure.

The following describes the construction and operational features of the proposed project and how hazardous materials exposure could occur and methods to control such exposures.

Construction

Construction of the SMCS project would involve the use of various products that could contain materials classified as hazardous (e.g., solvents, adhesives and cements, certain paints, cleaning agents and degreasers). Fuels, such as gasoline and diesel, would also be used in heavy equipment and other construction vehicles. The use and storage of such products is subject to applicable hazardous materials regulations, and contract specifications would contain specific provisions regarding the use of these products to ensure compliance with applicable regulations and standards. Because applicable hazardous materials laws and regulations would be implemented as standard procedure for construction of the proposed project through contractor specifications and monitored by the applicant, the impact of construction-related hazardous chemical use and storage would be less than significant.

Medical Facilities Operation

Occupancy and operation of the medical buildings proposed for development by SMCS would require the routine transport, use or disposal of hazardous materials, while the non-medical buildings would rarely contain or require hazardous materials. Similar to existing conditions with Sutter General Hospital and the Buhler Building, the proposed WCC and SMF Building would involve the use of hazardous materials in research, patient care, and routine maintenance and repair activities. Such materials would include a variety of chemicals, radioactive materials, and maintenance products. Biohazardous materials and medical wastes, along with chemical and radioactive waste, would be generated.

The use of hazardous materials would not be a new use at the site when the proposed facilities become occupied. However, because there would be a net increase in patients diagnosed and treated at the site, as compared to existing conditions, there would be an increase in the amount of materials used on-site. The types of materials would not change substantially, and the materials would generally be stored in small, individual containers of about five gallons or less except for the few HMP-reportable products that are stored in large quantities. Therefore, the probability of a major hazardous materials incident would be relatively low. Minor incidents would be more likely, but the consequences of such accidents would probably not be severe due to the typically small quantities of materials handled at any particular time and the equipment and training provided to SMCS facilities staff.

The project-related effects of hazardous materials handling and storage would generally be limited to the immediate areas where the materials would be located, because this is where exposure would be most likely. For this reason, the individuals most at risk would be hospital employees or others in the immediate vicinity of the hazardous materials. While the use and handling of hazardous materials would increase in accordance with the increase in patients, strict rules and regulations minimize the risk of public exposure to hazardous materials. As part of its standard procedures, the WCC and SMF Building would implement Environmental Health and Safety (EHS) programs like those already in use at SGH. EHS programs are designed for compliance with applicable laws, regulations, and accreditation standards, for the safety of patients, staff, and visitors, and to protect the environment. As with the existing facilities, the Environment of Care Manual would continue to direct how hazardous materials (including wastes) are managed at the new facilities developed as part of the SMCS project. The health and safety procedures that protect workers and other individuals in the immediate vicinity of hazardous materials would also protect the adjacent community and environment.

SMCS maintains an emergency response plan to ensure that staff can respond to possible hazardous materials emergencies. In general, spills of less than one-half to one liter (about two to four quarts) are cleaned up by hospital staff. For some materials (e.g., formaldehyde), spills larger than one-half liter are required to be cleaned up by an outside hazardous materials team. The City Fire Department provides "first response" capabilities to identify and secure access to hazardous materials incidents. The Fire Department HazMat team has not been called upon to respond to any hazardous materials spill incidents at existing SGH or Buhler Building facilities within the last five years. Only one incident involving a release of hazardous materials to the environment has occurred at the SGH, which involved ethylene oxide (EtO). EtO is a gas that was used in sterilizing equipment and is classified as a toxic air contaminant (TAC). The incident did not require HazMat team response, but several agencies, including the Sacramento Metropolitan Air Quality Management District, were involved in subsequent enforcement actions.²¹ The use of EtO has been discontinued (see Impact 6.2-6 in Section 6.2, Air Quality),

21 Susan Eisberg, Director of Safety and Environmental Health, Sutter Health Sacramento Sierra Region, personal communication, March 25, 2005.

and current methods involve the use of steam and hydrogen peroxide, as noted in the Environmental Setting in this section. Other jurisdictions are available, if necessary, to support the City through mutual aid agreements. The increase in hazardous materials use would not substantially affect the demand for hazardous materials emergency response services in Sacramento and would not substantially affect the availability or response times of emergency responders because the types of hazardous materials used would not change, only amounts kept at the proposed project. The likelihood of emergency incidents is more a function of the types of materials used as opposed to the quantities of materials used. Because the types of materials used would be similar in the future, SMCS's current emergency response plan would still be effective at responding to anticipated incidents associated with hazardous materials.

Aside from accidents possibly occurring on site, accidents during hazardous materials transport to and from the site could expose individuals and the environment to risks at some distance from the project site. Transportation of hazardous materials to and from the WCC and SMF Building can be expected to increase, in regards to total number of trips, and amount of material transported. Transportation of hazardous materials could increase the risk of exposure to workers and the public through accidental spills due to transportation-related accidents. However, transportation accidents are infrequent. According to the California Department of Transportation, less than 3.12 vehicle accidents occur for every million vehicle miles traveled on major undivided urban highways.²² The frequency is substantially less on other types of urban highways. Moreover, DOT, USPS, and the California Department of Health Services Radiologic Health Branch and Medical Waste Program all specify packaging requirements for hazardous materials and wastes that limit the potential for packages to fail on impact. CHP regulations set forth requirements for testing of shipping containers, marking containers and vehicles, inspecting vehicles, and training drivers. These requirements reduce the potential for hazardous materials releases to occur in the unlikely event of an accident involving transportation of hazardous material to or from the project.

Energy Center

A new 11,000-gallon liquid oxygen tank and 3,000-gallon reserve tank would be located on the west side of the proposed SMF Building (see Figure 2-11 in Chapter 2, Project Description). The tanks would be surrounded by a 22-foot-high concrete wall; a portion of the wall would be metal louvers. The enclosure would be open at the top to provide adequate ventilation. As noted in the Environmental Setting, oxygen is not considered an acutely hazardous or toxic material and is nonflammable. It would be contained in pressurized tanks with leak control devices in a well-ventilated area. Tank design, installation, and operation would be subject to review by the City Fire Department to ensure compliance with applicable Uniform Fire Code requirements. Consequently, there is no evidence the tank would pose a significant health risk to nearby schools or the adjacent playground due to the release of a hazardous substance.

Relocation of the Energy Center and increased capacity would result in an increase in the amount of water treatment chemicals. This would represent an increase over existing conditions, but it would not introduce new or different chemical products compared to those currently in use and for which no special permitting or handling is required. Fuel tanks for the new Energy Center would be located underground, which would minimize the risk of accident or upset that could release hazardous materials to the environment where people could be directly exposed.

22 California Department of Transportation, *1996 Accident Data on California State Highways (Road Miles, Travel, Accidents, Accident Rates)*, 1997.

Summary

Implementation of the SMCS project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, or through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. All non-medical activities discussed above would not require the use of hazardous materials to the extent which would create a significant impact. All medical activities discussed above would be regulated by federal, State, and local laws that are incorporated into SMCS's Environment of Care Manual. The WCC Building and a portion of the SMF Building would be surveyed for hospital-based services every three years by JCAHO and the California Department of Health Services (Licensing & Certification) to ensure compliance with JCAHO standards and California Code of Regulations (CCR), Title 22 (Hospital Licensing and Certification) regulations, which include hazardous materials management provisions. Therefore, construction or operation of the SMCS project would have a **less-than-significant impact**.

Theatre

The Children's Theatre would be used for theatrical purposes that typically do not involve the routine transport, use, or disposal of hazardous materials. Common household-type chemicals may be used and stored within the site but these chemicals would not lead to a significant hazard to people or the environment. Therefore, this is considered a **less-than-significant impact**.

Mitigation Measure

None required.

Impact 6.4-4: Implementation of the SMCS project would involve the use, storage, and transport of hazardous materials, substances, or waste within ¼ mile of an existing or proposed school.		
	SMCS Project	Theatre
Significance Before Mitigation	Less than Significant	Less than Significant
Mitigation Measures	None required	None required
Significance After Mitigation	N/A	N/A

SMCS Project

The SMCS project area is located within one-quarter mile of four schools, as described in the Environmental Setting section. The closest school is approximately 150 feet west of the proposed SMF Building.

Demolition of existing structures has the potential to release asbestos or lead-based paint into the air, which could migrate to nearby schools. As discussed in Impact 6.4-1, specific mitigation measures have been identified to minimize the risk of an accidental release of hazardous substances. The potential for releases of hazardous substances during site preparation is described in Impact 6.4-2. Mitigation Measures identified for these impacts would be sufficient to reduce potential hazards at the school sites, and no additional mitigation is required.

As discussed in Impact 6.4-3, construction and operation of the proposed project would involve the routine use and storage of hazardous materials within the SMCS project. Construction would temporarily and intermittently involve the use of products that may have hazardous properties, but construction site controls would limit the potential for hazardous substances to affect school properties. The use of hazardous materials would not be a new use at the site when the proposed facilities become occupied. However, because there would be a net increase in patients diagnosed and treated at the site, as compared to existing conditions, there would be an increase in the amount of materials used on-site, which would also increase the amount of hazardous waste. The types of hazardous materials would not change, however. As stated in Impact 6.4-3, hazardous materials (including wastes) would be managed at the new facilities in accordance with established protocols.

An 11,000-gallon liquid oxygen tank and 3,000-gallon reserve tank would be located on the west side of the proposed SMF Building (see Figure 2-11) about 150 feet east of the Montessori School and an outdoor play area. The tanks would be surrounded by 22-foot-high concrete wall; a portion of the wall would be metal louvers. For the reasons outlined in Impact 6.4-3, there is no evidence the tanks would pose a significant health risk to nearby schools or the adjacent playground due to the release of a hazardous substance.

The relocated Energy Center would include two new USTs. Fuel would be stored underground, and there would be leak-detection devices. This would not pose a health risk to nearby schools.

Some of the hospital operations would involve processes that could emit toxic air contaminants (TACs), as discussed in Impact 6.2-6 in Section 6.2, Air Quality. TAC emissions already occur from existing facilities, but the types of emissions are not considered acutely hazardous by the SCAQMD, and the concentrations of emissions are not at levels that would pose a significant health risk. Development of the SMF Building, WCC Building, new medical offices, and operation of the relocated and expanded Energy Center could result in an increase in TAC emissions over existing conditions, but not to levels where that would pose a health risk to nearby schools (see Impact 6.2-6 in Section 6.2, Air Quality).

In summary, while hazardous materials, substances, or waste would be handled within the SMCS project within ¼ mile of four schools, including an outdoor play area, impacts would be considered ***less than significant*** for the reasons discussed above.

Theatre

Products used in theaters typically include common items such as paints, glues, and cleaning compounds for set construction. Common household chemicals such as cleaning agents (soap products and degreasers) may be used and stored within the site for maintenance. Neither the types nor quantities of these materials would be substantial. Routine use of these products would not lead to a significant hazard to people or the environment within ¼ mile of a school. Therefore this is a ***less-than-significant impact***.

Mitigation Measure

None required.

Impact 6.4-5: The SMCS project proposed helistop would not result in substantial safety risks due to helicopter operations. However, the design of the proposed helistop serving the Women’s and Children’s Center could be inconsistent with Section 12.92.070 of the Sacramento City Code pertaining to helistop design.

	SMCS Project	Theatre
Significance Before Mitigation	Less than Significant	Less than Significant
Mitigation Measures	Recommended Mitigation Measure 6.4-3	None required
Significance After Mitigation	Less than Significant	N/A

SMCS Project

The SMCS project proposes to construct a helistop on top of the southern section of the WCC Building. The helistop, which would be a new use at the project site, would be used for scheduled transfers of infants, children, and adults. SMCS would not operate life-flight emergency services from the helistop. Helicopters would not be housed, parked, or refueled at this site, but would only drop off patients and return to a remote base. It is anticipated there would be approximately 150-200 take-offs/landings per year, or an average of about 15 to 20 landings/take-offs per month.

A permit for helistop operations is required from the Caltrans Division of Aeronautics, along with land use approvals from the City of Sacramento and the Sacramento Airport Land Use Commission. Caltrans Division of Aeronautics would also be responsible for ensuring FAA requirements are satisfied before approving SMCS’s permit application for the helistop.

The SMCS project would not, in and of itself, generate new helicopter flights in the metropolitan Sacramento area. This project applicant does not propose to develop a new transport service but rather to accommodate existing helicopter operations based at remote locations. Emergency transport would continue to occur within the region, regardless of whether the SMCS project is implemented. Thus, the environmental effect of the SMCS project would be to place helicopter operations (take-offs and landings) in closer proximity to existing developed land uses than if the proposed helistop were not constructed. Helistop operation would also result in approach and departure paths in an area that does not currently have such operations.

The use of the proposed helistop on the roof of the WCC Building by medical transport helicopters is not considered to present a substantial safety risk to the project site or adjacent land uses for several reasons, which are discussed below. The discussion presents some general information about helicopter safety, followed by information specific to the proposed SMCS helistop.

Helicopter Safety and Risk

Some amount of risk is associated with helicopter operations. The degree of risk is measured by the frequency of occurrence (how often), potential consequences (severity of the accident), and spatial distribution (where the accident occurs). In 2001, the accident rate for helicopter emergency medical service (EMS) helicopter operations was estimated to be 5.97 accidents per 100,000 flight hours. This is less than the accident rate helicopter aviation in general (7.64 accidents per 100,000 flight hours). The EMS helicopter rates have remained below the accident rates for both general aviation and all helicopter operations. Fatalities (crew and passengers) have experienced a similar decline. From a high of nearly 10 fatal accidents per 100,000 flight hours in 1980, the rate has decreased to approximately 2 fatal accidents per 100,000 flight hours in 2001.²³

In general, aviation operations are more prone to accidents or incidents during take-offs or landings than during the cruise portion of the flight. However, this is not the case with helicopter emergency medical service operations. Statistics show the highest percentage of helicopter emergency medical service accidents tend to occur during the cruise portion of the flight, generally involving inadvertent flight into poor weather conditions requiring instrument flight (rather than visual) or inflight collisions with objects. Most of these were flights responding to “on-scene” emergencies (e.g., traffic accidents). Accidents during approach (16 percent), take-off (19 percent), and landing (14 percent) occur at lesser frequencies. The vast majority of accidents did not result in post-impact fire, which has often been perceived by the public as a major concern. “Roll-over” accidents and hard landings account for only a small percentage of events (2 percent and 5 percent, respectively).²⁴ Accidents do happen at rooftop hospital heliports/helipads, but they are rare. Where accidents occurred at rooftop facilities, the NTSB identified pilot error as the probable cause in most cases. During the period 1998 through March 2005, there have been few fatal accidents involving hospital rooftop helipads. One occurred in 2002 during take-off/hover, resulting in two fatalities and one serious injury to the crew. The helicopter hit the side of a building that was adjacent to and taller than the rooftop helipad. The helicopter crashed on the ground, but no one on the ground was injured. In another incident, a hospital security officer was struck by the tail rotor when the aircraft was running. In other non-fatal accidents during take-off, pilots were able to land the aircraft safely when problems (usually mechanical) were encountered.²⁵

The statistical data summarized above show that while some risk exists with EMS helicopter operations at a hospital rooftop helipad (or helistop), the risk is not substantial.

Proposed SMCS Helistop Operations

Collisions with objects is one of a number of causes of helicopter accidents. An important Federal Aviation Regulation (FAR) for protecting aircraft during the landing and takeoff phases of flights is FAR Part 77 (14 CFR 77), which establishes height standards for objects near a landing area. The helistop’s approach and departure flight paths are not adversely affected by obstructions. Therefore, the standards of FAR Part 77 are satisfied at the SMCS site.

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- 23 Ira J. Blumen, MD and the UCAN Safety Committee, A Safety Review and Risk Assessment in Air Medical Transport, Supplement to the Air Medical Physician Handbook, November 2002, pages 23, 24, 34-35.
- 24 Ira J. Blumen, MD and the UCAN Safety Committee, A Safety Review and Risk Assessment in Air Medical Transport, Supplement to the Air Medical Physician Handbook, November 2002, pages 26-27.
- 25 Ira J. Blumen, MD and the UCAN Safety Committee, A Safety Review and Risk Assessment in Air Medical Transport, Supplement to the Air Medical Physician Handbook, November 2002, page 8, Attachment 1; and www.nts.gov NTSB Aviation Accident Synopses, 2002-March 2005.

The primary flight path would be arrivals from the northeast, along the Capital City Freeway. Departures would be along Capital City Freeway to the southwest, towards the U.S. Highway 50/State Route 99 interchange (see Figure 6.4-1). This would occur when winds are from the south/southwest, which is the prevailing wind direction in Sacramento. This is also the optimum condition in terms of aircraft performance and safety. When winds are from the north, the flight paths would be reversed (arrivals from the southwest and departures to the northeast). This would be the secondary route. Federal aviation regulations do allow helicopter pilots to divert from established routes when necessary for safety of flight. The primary and secondary arrival/departure paths would not be over existing residential neighborhoods, schools, or churches. (For a discussion of noise impacts associated with the proposed helistop and helicopter operations, please see Impact 6.6-4 in Section 6.6, Noise).

Feasibility planning for the proposed helistop indicates there are no existing buildings or structures within the approach zones that would obstruct airspace, and the height of the proposed WCC would not create an obstruction to helicopters using the helistop. In addition, the 8:1 approach/departure slope with the 4,000-foot approach path required by State and local regulations can be achieved with no obstruction hazards.²⁶ Therefore, there would be no substantial contribution to increased risk of accident because of obstructions.

From a siting and regulatory perspective, the FAA does not prohibit heliports (or helistops) adjacent to freeways or highways,²⁷ so there would be no conflict with that agency's requirements. The City Code (Section 12.92.030) allows helistops to be erected on buildings (with a special use permit), which is consistent with the City's General Plan policy for siting.

Helicopter approaches and departures to the helistop would be visible to passing motorists on the freeway. However, the proposed helistop on the WCC is approximately 167 feet above the ground, which is higher than the elevated freeway and adjacent buildings, and it would be the tallest building at the SMCS project. Because of the height and distance from the freeway, helicopter take-offs and landings would not be a distractive hazard to motorists.

Helicopter landing tests at other local hospitals have demonstrated that while people may notice helicopter operations, there was no observed effect on pedestrian or vehicle traffic patterns or increased rate of vehicle accidents while helicopters were operating.²⁸ Simulated approach and takeoff operations to the proposed SMCS helistop site were conducted on three separate occasions (two daytime and one night) without any noticeable effect on freeway traffic. As noted in the Environmental Setting, helicopter operations are common throughout the downtown area and people have become accustomed to their presence in an urban environment.

Consistency with Design Criteria

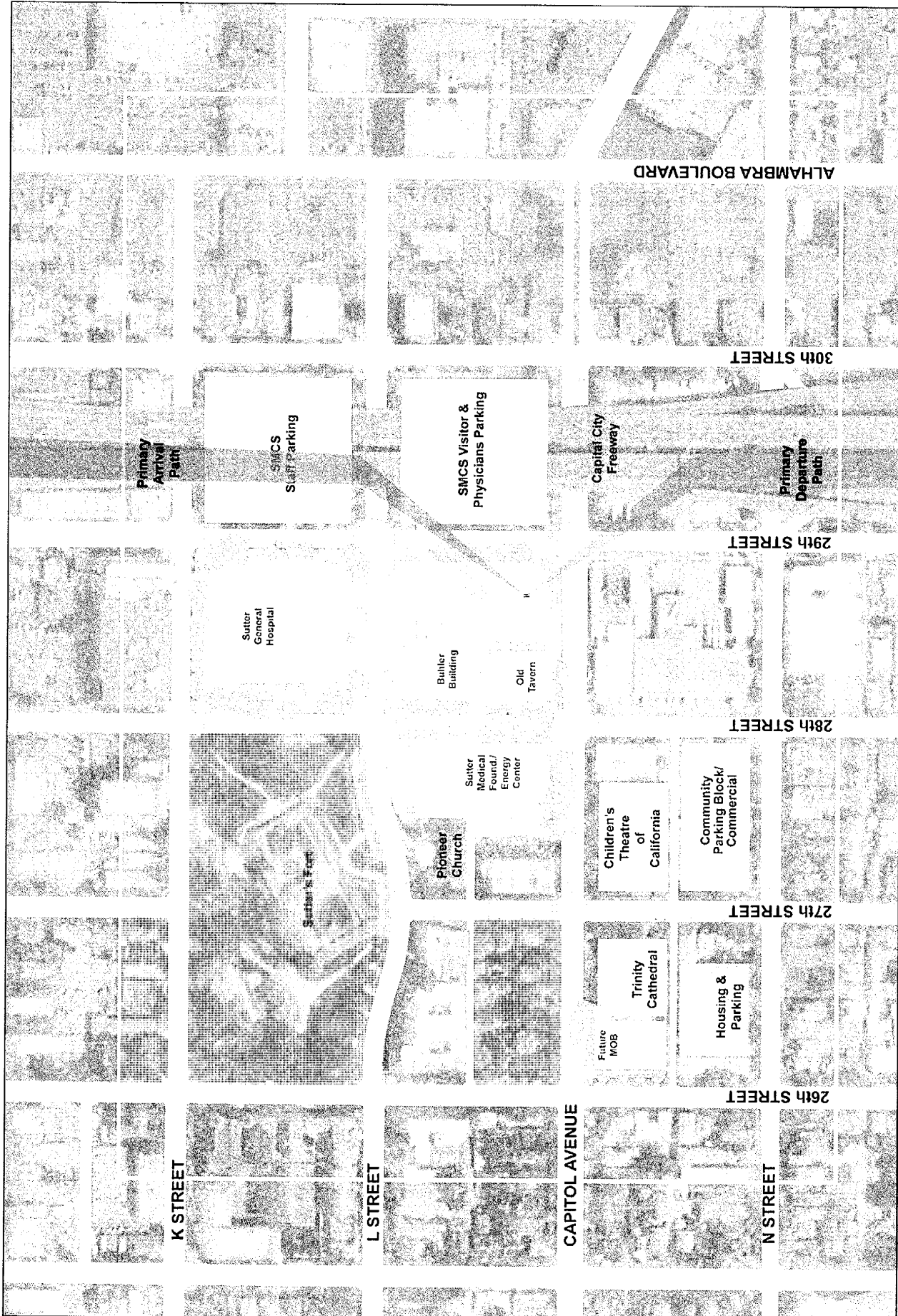
The FAA has established design standards that are specific to the actual landing area at hospital helistops and helipads to protect public safety and property. These standards are current as of September 2004.²⁹ A helistop consists of a touchdown and lift-off (TLOF) area surrounded by a final approach and take-off (FATO) area. A safety area is provided around the

26 Art Negrette, Flight Safety Institute, helistop planner for proposed project, personal communication, March 21, 2005.

27 U.S. Department of Transportation, Federal Aviation Administration, Heliport Design, Advisory Circular 150/5390-2B, September 2004, page 1 (Executive Summary, Section 5.d).

28 Art Negrette, Flight Safety Institute, helistop consultant for SMCS project, personal communication, March 21, 2005.

29 U.S. Department of Transportation, Federal Aviation Administration, Heliport Design, Advisory Circular 150/5390-2B, September 2004.



Not to Scale



FIGURE 6.4-1
Helistop Flight Tracks

Source: KMD Architects 2005



10828-02

FATO. Among other items, the standards specify dimensions for the TLOF and FATO, as well as the access/egress requirements, signage, markings, and lighting, and other safety measures. The Caltrans Division of Aeronautics reviews proposed helistop heliport, or helipad design to ensure compliance with these standards. This review process will occur as part of the permitting process for the proposed helistop, as discussed above.

The City of Sacramento’s Helicopter Ordinance is being updated to conform to federal and Caltrans requirements. The City intends to modify the ordinance to make it consistent with FAA design criteria set forth in Advisory Circular 150/5390-2B. This is expected to occur in 2005. An amendment to the ordinance would require action by the Planning Commission and City Council. When the City’s ordinance is updated, SMCS’s helistop would be consistent with federal, State, and local (City of Sacramento) design criteria. In the event the ordinance is not modified prior to City action on the SMCS project, the SMCS project would be considered inconsistent. However, this is not considered a significant impact because specific design criteria established by the FAA would continue to apply. The amendment to Section 12.92.070 of the City Code pertaining to the size of the “touchdown area” would not result in any significant environmental effects. Therefore, the impact would be considered **less than significant**.

Theatre

The proposed Theatre component of the project would not involve helicopter operations. Impacts would be **less than significant**, and no additional mitigation is required for the Theatre project.

Mitigation Measure

Although not required, implementation of the following mitigation measure would ensure consistency with applicable City regulations.

(SMCS)

6.4-3 *If Section 12.92.070 of the Sacramento City Code has not been amended prior to action by the Planning Commission recommending City Council approval of a Special Use Permit for the SMCS helistop, the project applicant shall request a variance to the City’s Helicopter Ordinance requesting approval for the proposed helistop design, which complies with current FAA design criteria set forth in Advisory Circular 150/5390-2B (September 2004).*

Impact 6.4-6: Implementation of the SMCS project could interfere with emergency response and/or emergency evacuation plans.		
	SMCS Project	Theatre
Significance Before Mitigation	Less than Significant	Less than Significant
Mitigation Measures	None required	None required
Significance After Mitigation	N/A	N/A

SMCS Project

Construction

During construction of individual projects, it may be necessary to restrict travel on certain roadways within the SMCS project area to facilitate construction activities such as demolition, material hauling, construction, staging, and modifications to existing infrastructure. Such restrictions could include lane closures, lane narrowing, and detours, which would be temporary but could continue for extended periods of time. Lane restrictions, closures, and/or detours could cause an increase in traffic volumes on adjacent roadways. In the event of an emergency, emergency response access or response times could be adversely affected. These impacts would occur during the construction period and would not be permanent. The City of Sacramento requires the project applicant prepare and implement a Construction Traffic Management Plan in accordance with Sections 12.20.020 and 12.20.030 of the Sacramento City Code. The plan must be approved by the City Public Works or Utilities Director prior to any work that would obstruct vehicular or pedestrian traffic on any City Street. This is considered a ***less-than-significant impact***, and no additional mitigation is required.

Operation

In conjunction with project development, L Street would be narrowed to accommodate construction of WCC; however, it would not prevent, impede, or impair implementation of an evacuation plan, because it is not a designated evacuation route.

The SMCS project would also create some elevated pedestrian walkways between SMCS facilities. This would decrease pedestrian traffic on local roadways, which could allow for faster and safer emergency vehicle use or evacuation through the project site. This is a ***less-than-significant impact***, and no additional mitigation is required.

Theatre

During construction of the Children's Theatre, it may be necessary to restrict travel on nearby roadways to facilitate construction activities. Such restrictions could include lane closures, lane narrowing, and detours, which may be temporary or continue for extended periods of time. Lane restrictions, closures, and/or detours could cause an increase in traffic volumes on adjacent roadways. Due to the relatively small size of the Theatre project, traffic restrictions would generally be minor and temporary. As described for the SMCS project, a Construction Traffic Management Plan must be prepared and approved by the City prior to work that would obstruct vehicle or pedestrian traffic. No permanent roadway modifications are contemplated for the Theatre. This is a ***less-than-significant impact***, and no additional mitigation is required.

Mitigation Measure

None required

CUMULATIVE IMPACTS

The cumulative context for each of the following impacts varies depending on the nature of the impact. The cumulative context is presented in each discussion.

Impact 6.4-7:	The SMCS project, in combination with other development in the City of Sacramento, would result in the demolition of existing buildings. This demolition and other site preparation activities could result in a release of hazardous materials to the environment thus exposing the public to potential health risks.	
	SMCS Project	Theatre
Significance Before Mitigation	Potentially Significant Short-Term	Potentially Significant Short-Term
Mitigation Measures	Mitigation Measure 6.4-5	Mitigation Measure 6.4-5
Significance After Mitigation	Less than Significant	Less than Significant

SMCS Project and Theatre

For any projects in the City of Sacramento that would develop or redevelop an existing site where hazardous building materials such as asbestos or lead-based paint is present, the potential exists for release of hazardous materials during demolition/renovation of those sites. Previously unidentified soil or groundwater contamination or buried items containing hazardous substances (e.g., USTs) could also be encountered during excavation and other site preparation activities. For individuals not involved in demolition/construction activities, the greatest potential source of exposure to contaminants would be airborne emissions, primarily through construction-generated dust from demolition or grading. Other potential pathways, such as direct contact with contaminated materials would not pose as great a risk to the public because such exposure scenarios would typically be confined to the demolition/construction zones. This assumption is based on implementation of site-specific risk management controls and compliance with applicable laws and regulations pertaining to site cleanup and hazardous materials management at locations in the areas surrounding the project site. Moreover, an individual who is directly outside the demolition/construction zone of one source of hazardous materials would be unlikely to be exposed to maximum levels from another source. Such exposure would typically be site-specific and would involve accidental or inadvertent exposure to hazardous building materials. Associated health and safety risks would generally be limited to those individuals working with the hazardous building materials or to persons in the project site. Furthermore, such impacts would only be temporary and intermittent. The cumulative effect would be a ***potentially significant short-term impact***.

Mitigation Measure

Compliance with Mitigation Measure 6.4-5 would reduce all cumulative impacts to a *less-than-significant level*.

(SMCS/Theater)

6.4-5 Implement Mitigation Measures 6.4-1 and 6.4-2.

Impact 6.4-8: The SMCS project, in combination with other development in the City of Sacramento, could increase the risk of exposure of people to hazards due to increased volume and type of hazardous materials used, transported, stored, and disposed in the City.

	SMCS Project	Theatre
Significance Before Mitigation	Less than Significant	Less than Significant
Mitigation Measures	None required	None required
Significance After Mitigation	N/A	N/A

SMCS Project and Theatre

The construction and operation of current and future projects within the City of Sacramento, including projects within ¼ mile of a school, would continue to involve the use of hazardous materials. Projects that use, store, or dispose of hazardous materials would be required to comply with federal, State and local regulations to ensure the safe handling of these materials. Due to strict regulation, the risk of release or exposure to hazardous materials within Sacramento would be minimized. Associated health and safety risks would generally be limited to those individuals using the materials or to persons in the immediate vicinity of the materials. Although the risk of accident or inadvertent releases cannot be completely avoided, hazardous materials incidents would typically be site-specific, generally one-time occurrences that would not combine with similar effects elsewhere. Implementation of applicable hazardous materials management laws and regulations adopted at the federal, State, and local level, which are monitored by the City of Sacramento and SCEMD, would ensure cumulative impacts related to hazardous materials use remain less than significant.

Hazardous materials use at the SMCS project would increase; however, some of the increase in hazardous materials use would be attributable to the relocation of services from the existing Sutter Memorial Hospital in East Sacramento rather than a new use in Sacramento. Because the proposed project's net contribution to this cumulative impact would be a small increment, the project's contribution would be **less than cumulatively considerable** and, thus, less than significant.

Mitigation Measure

None required.

Impact 6.4-9: Implementation of the SMCS project, in combination with existing and anticipated development in the Sacramento metropolitan area, would increase the number of permitted helistops, heliports, and helipads.		
	SMCS Project	Theatre
Significance Before Mitigation	Less than Significant	No Impact
Mitigation Measures	None required	None required
Significance After Mitigation	N/A	N/A

SMCS Project

There are several permitted helistops, heliports, and helipads in the greater Sacramento area. The Caltrans Division of Aeronautics is also reviewing applications for proposed helipads at two other local hospitals.³⁰ The proposed SMCS helistop would increase the number of helistops in the region. Helicopters transporting patients would occur regardless of whether the SMCS project is implemented. The SMCS project would provide an additional location for patient transfers within the region, but it would not increase the number of helicopter trips.

Each facility must be permitted by Caltrans and secure all required land use approvals. Approach and departure paths are established for each facility, and the use of airspace over Sacramento is governed by federal and state regulations, which applies to helicopter flights. The frequency, location, and severity of helipad accidents (which are extremely rare) at any one location would be site-specific and would be limited to the immediate vicinity. As such, take-off and landing accidents would not combine to create a cumulative effect for the SMCS project. Therefore, the impact is not cumulatively considerable and would result in a ***less-than-significant cumulative impact***.

Theatre

There would be no cumulative impact because there would be no helipad operations associated with the proposed Theatre and ***no impact*** would occur from a cumulative perspective.

Mitigation Measure

None required.

30 Sandy Hesnard, Caltrans Division of Aeronautics, personal communication, March 15, 2005.

Impact 6.4-10: The SMCS project, in combination with development in the City of Sacramento, could interfere with emergency response plans and/or emergency evacuation plans.		
	SMCS Project	Theatre
Significance Before Mitigation	Less than Significant	No Impact
Mitigation Measures	None required	None required
Significance After Mitigation	N/A	N/A

SMCS Project

Construction-related activities and developments within the City of Sacramento that alter, close, or in other ways affect traffic on area roadways could interfere with emergency response access or response times or affect evacuation routes. Construction-related activities of the SMCS project would contribute to this effect. If project restrictions coincide with other closures from adjacent projects, emergency response access or response times could be adversely affected. The City requires all project applicants to prepare and implement a Construction Traffic Management Plan for projects that would obstruct vehicle traffic. This would allow the City to manage affected roadways so that effects would not be cumulatively considerable. The impact is considered a ***less-than-significant cumulative impact***. No additional mitigation is required.

Theatre

As discussed for the SMCS project, cumulative construction traffic impacts would not be significant. No roadway modifications are proposed for the Theatre project that could combine with similar effects elsewhere. There would be ***no impact***.

Mitigation Measure

None required.

6.5 Hydrology and Water Quality

6.5 Hydrology and Water Quality

INTRODUCTION

This section evaluates potential impacts of operation of the SMCS project on local and regional drainage, and water quality. Applicable federal, State, and local regulations governing these topics are included in this section.

Comments received in response to both NOPs (see Appendices B and D) did not raise any specific concerns regarding hydrology and water quality.

The Initial Study (see Appendix E) prepared for the SMCS project and Trinity Cathedral project determined that the SMCS project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge, would not significantly impact water quality, is not located within the 100-year flood hazard zone, and is not subject to inundation by seiche, tsunami, or mudflow; therefore, these issues will not be discussed further in this EIR.

Impacts associated with water supply, wastewater, and storm drainage system capacity are evaluated in Section 6.8, Utility Systems.

Information reviewed to prepare this section included consultation with the project engineer and architect, various technical documents, information from City of Sacramento staff, and regulatory agency information from various websites, which are cited in the footnotes.

ENVIRONMENTAL SETTING

Surface Water Hydrology

The project area is located approximately two miles east of the Sacramento River and a little over one mile south of the American River in an urbanized portion of downtown/midtown 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 about 26,500 square miles and is bounded by the Sierra Nevada to the east, the Coast Ranges 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.¹ The tributaries in the southern portion of the City join to form a single Sacramento

1 City of Sacramento, General Plan Update, p.W-1.

River tributary. The Sacramento River, beginning at the "I" Street Bridge and including all portions downstream, is considered part of the Sacramento-San Joaquin Delta (Delta).²

Drainage and Stormwater Runoff

The project site is flat, and most of the project area contains buildings, parking lots, and other impervious surfaces. Runoff from the project area is directed to drop-inlets, which discharge to the City's Combined Sewer System (CSS), and is ultimately conveyed to wastewater treatment plants for treatment prior to discharge into the Sacramento River. No natural drainage or surface waters occur within the site boundaries.

All piping, drains, basins and pumps connected to the CSS are maintained and operated by the City of Sacramento Utilities Division. The CSS transports approximately 60 million gallons per day (mgd) of wastewater to the Sacramento Regional County Sanitation District's (SRCSD) Sacramento Regional Wastewater Treatment Plant (SRWTP), which treats storm water and sanitary sewage prior to discharge into the Sacramento River. When the capacity of the CSS exceeds 60 mgd, flows are automatically routed to Pioneer Reservoir, a 28-million-gallon storage facility. Once capacity of Pioneer Reservoir has been met, additional volume receives primary treatment with disinfection. The primary treatment cleans up to 250 mgd while discharging into the Sacramento River.

The City also operates its Combined Wastewater Treatment Plant (CWTP), where an additional 130 mgd of combined wastewater receives primary treatment with disinfection prior to discharging to the Sacramento River. The system may also store water in the CWTP basins. Under extreme high flow conditions, discharge of untreated wastewater from the CSS may occur.³ A National Permit Discharge Elimination System (NPDES) Permit regulates waste discharge requirements from the CSS (NPDES No. CA0079111). The CWTP, also operates under a NPDES permit (NPDES No. CA T000625624).⁴

Wet weather flows have been known to exceed system capacity during heavy storm events. When 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. The CSS is considered an impacted system that requires all additional inflow into the system be mitigated.⁵ Please see section 6.8, Utility Systems, for more information on the CSS capacity.

Groundwater

The City of Sacramento is located within the South American Groundwater Subbasin, part of the larger Sacramento Valley Groundwater Basin. Various geologic formations comprise the water-bearing deposits in the basin. Groundwater occurs in unconfined to semi-confined states throughout the subbasins. The degree of confinement typically increases with depth below the ground surface. Groundwater in the upper aquifer formations is typically unconfined. In

2 California Water Code Section 1220.

3 CVRWQCB, Waste Discharge Requirements for City of Sacramento Combined Wastewater Collection and Treatment System, Sacramento County, ORDER NO. 5-01-258, NPDES NO. CA0079111.

4 U.S. EPA, Enforcement and Compliance Online (ECHO), website: http://www.epa.gov/cgi-bin/get1cReport.cgi?tool=echo&IDNumber=110000517432&media_tool=ECHO, Last updated on 03/14/04, Accessed on 03/29/04.

5 Batha, Rick, City of Sacramento, Department of Utilities, Personal Communication 5/25/04.

general, groundwater levels in the vicinity of the City of Sacramento have been reported to be stable, fluctuating less than 10 feet since the 1970s.⁶

Groundwater within the project area has been recorded at fairly shallow depths. Groundwater has been reported at a depth of 20 feet below ground surface, flowing in a southeast direction.⁷

The existing structures on the City block bounded by L Street on the north, 29th Street on the east, Capitol Avenue on the south, and 28th Street on the west (with the exception of the Old Tavern Building) all have foundation dewatering systems to reduce the hydrostatic pressure on the buildings from shallow groundwater. SGH also has a foundation dewatering system. The existing dewatering pumps run infrequently and for short amounts of time.⁸ Groundwater removed via dewatering is discharged to the CSS.

Water Quality

Surface Water

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.⁹ 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.

Ambient water quality characteristics of the Sacramento River are summarized below. 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. Coliform is a bacteria whose lack of presence is a good indicator of the degree of bacteriologic safety of a water supply. Fecal coliform is a bacterium that originates in the intestines of warm-blooded animals. Concentrations of total

6 California Department of Water Resources, *California's Groundwater Bulletin 118, Sacramento Valley Groundwater Basin, South American Subbasin*, February 27, 2004.

7 Cunningham Engineering Corporation, Phase I Environmental Assessment, 2727 Capitol Avenue, Sacramento, CA 95816, July 30, 1999.

8 KMD, Sutter Medical Center, "Sacramento Request to Expand Existing Foundation Dewatering," letter from Bob Peterson to Kimland Yee, City of Sacramento Department of Utilities Engineering Services Division, March 4, 2005.

9 California Regional Water Quality Control Board, Central Valley Region, *The Water Quality Control Plan (Basin Plan)*, Fourth Edition – 1998, revised 2004.

organic carbon exceeded the Disinfection/Disinfection By-Product Rule treatment threshold value more than 50 percent of the time. The trace organic compounds monitored by the CMP 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.

Urban Runoff

Constituents found in urban runoff vary as a result of differences in rainfall intensity and occurrence, geographic features, the land use of a site, as well as vehicle traffic and percent of impervious surface. In the Sacramento area, there is a natural weather pattern of a long dry period from May to October. During this seasonal dry period, pollutants contributed by vehicle exhaust, vehicle and tire wear, crankcase drippings, spills, and atmospheric fallout accumulate within the urban watershed. Precipitation during the early portion of the wet season (November to April) washes these pollutants into the stormwater runoff, which can result in elevated pollutant concentrations in the initial wet weather runoff. This initial runoff with peak pollutant levels is referred to as the "first flush" of a storm event or events.

Concentrations of heavy metals present in dry weather runoff (e.g., runoff during the dry season is generated by landscape irrigation, street washing, etc.) are typically lower than concentrations measured in wet weather runoff (runoff generated during the rainy season primarily by precipitation).

Stormwater discharge monitoring data has been collected from the Sacramento urban area monitoring stations since 1990. From this monitoring, the following six pollutants have been identified as "target pollutants": mercury, diazinon, chlorpyrifos, lead, copper, and fecal coliform.¹⁰ These pollutants were determined based on their toxicity, potential of exceeding water quality criteria, ability to accumulate in humans and animals, or if listed as a pollutant impairing water bodies by the State Water Resources Control Board.

Groundwater Quality

Groundwater quality in the regional sub-basin is generally within the secondary drinking water standards for municipal use, including levels of iron, manganese, arsenic, chromium, and nitrates. The groundwater is described as a calcium magnesium bicarbonate, with minor fractions of sodium magnesium bicarbonate. The water quality in the upper aquifer system is regarded as superior to that of the lower aquifer system. Water from the upper aquifer generally does not require treatment (other than disinfection). The lower aquifer system also has higher concentrations of total dissolved solids (TDS, a measure of salinity) than the upper aquifer, although it typically meets standards as a potable water supply.^{11,12}

There are no known groundwater contamination issues at the site (see Section 6.4, Hazards and Public Safety).

10 City of Sacramento, City of Sacramento Stormwater Quality Improvement Plan, July 1, 2003.
11 California Department of Water Resources, *California's Groundwater Bulletin 118, Sacramento Valley Groundwater Basin, North American Subbasin*, February 27, 2004.
12 California Department of Water Resources, *California's Groundwater Bulletin 118, Sacramento Valley Groundwater Basin, South American Subbasin*, February 27, 2004.

REGULATORY SETTING

The following federal, State, and local regulations associated with hydrology and water quality are applicable to the SMCS project.

Federal

There are no federal regulations that pertain to hydrologic (drainage) conditions at the project site. However, discharges from the project area are subject to federal water quality laws and regulations.

Water quality objectives for all waters of the United States (including the Sacramento River) are established under applicable provisions of section 303 of the federal Clean Water Act (CWA). The CWA prohibits the discharge of pollutants to navigable waters from a point source unless authorized by a National Pollutant Discharge Elimination System (NPDES) permit.

The NPDES permit system was established in the CWA to regulate municipal and industrial discharges to surface waters of the U.S. Each NPDES permit contains limits on allowable concentrations and mass emissions of pollutants contained in discharges. Sections 401 and 402 of the CWA contain general requirements regarding NPDES permits. Section 307 of the CWA describes the factors that EPA must consider in setting effluent limits for priority pollutants.

State

There are no State regulations that pertain to hydrologic (drainage) conditions at the project site. However, discharges from the project area are subject to State water quality laws and regulations.

The SWRCB and CVRWQCB have established water quality standards that are required by section 303 of the CWA and the Porter-Cologne Water Quality Control Act. The Porter-Cologne Act states that basin plans consist of beneficial uses, water quality objectives, and a program of implementation for achieving water quality objectives.¹³ Water quality objectives for the Sacramento River are specified in *The Water Quality Control Plan for the Sacramento River Basin and San Joaquin River Basin* (Basin Plan) prepared by the CVRWQCB in compliance with the federal CWA and the California Water Code (section 13240).¹⁴ The Basin Plan contains water quality numerical and narrative standards and objectives for rivers and their tributaries within its jurisdiction. In cases where the Basin Plan does not contain a standard for a particular pollutant, other criteria, such as EPA water quality criteria developed under section 304(a) of the CWA apply.

13 California Water Code Section 13050[j].

14 The Water Quality Control Plan (Basin Plan) for the California Regional Water Quality Control Board Central Valley Region, Fourth Edition - 1998, California Regional Water Quality Control Board.

Local

City of Sacramento

Combined System Development Fee

The City of Sacramento has developed a sewer ordinance amendment to replace the Mitigation Agreement previously required for developers.¹⁵ 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:¹⁶

- A fee of \$2,633 equivalent single-family dwelling unit (ESD)¹⁷ 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.

Stormwater Quality/Urban Runoff Management

Sacramento County Water Agency, City of Sacramento, City of Folsom, and the City of Galt have a joint NPDES permit (No. CAS085297) that was granted in December 2002. The permittees listed under the joint permit have the authority to develop, administer, implement, and enforce storm water management programs within their own jurisdiction. The permit is intended to implement the Basin Plan.

Urban storm water runoff is defined in the permit as including storm water runoff, dry weather surface runoff, wash water related to street cleaning or maintenance, infiltration, and drainage related to storm events. The permit regulates the discharge of all wet and dry weather urban storm water runoff within the City of Sacramento and requires the City to implement Best Management Practices (BMPs) to reduce pollutants in stormwater. BMPs could include but are not limited to: (1) educational programs on the impacts of potentially harmful chemicals dumped into the storm water drainage systems, and good housekeeping procedures to prevent accidental discharge of harmful contaminants; (2) research on and enforcement of regulations giving local jurisdictions the legal authority to prevent the improper disposal of potentially harmful wastes and eliminate cross-connections, which allow sanitary sewage and/or commercial/industrial wastewater to enter storm sewers or drainage facilities; and (3) public agency control measures, such as implementing intensified street sweeping programs in

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

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

17 1 ESD equals 400 gallons per day.

strategic locations (e.g., major parking lots, shopping malls) and/or at strategic times (e.g., following extended periods of dry weather).

Dewatering

Groundwater discharges to the CSS from construction and/or long-term dewatering of excavated sites are regulated and monitored by the City's Utilities Department pursuant to Department of Utilities Engineering Services Policy No. 0001, adopted as Resolution No. 92-439 by the Sacramento City Council. Groundwater discharges to the City's sewer system are defined as construction dewatering discharges, foundation or basement dewatering discharges, treated or untreated contaminated groundwater cleanup discharges, and uncontaminated groundwater discharges.

The City requires that any short-term discharge be permitted, or an approved Memorandum of Understanding (MOU) for long-term discharges be established, between the discharger and the City. Short-term limited discharges of seven days duration or less must be approved through the City Department of Utilities by acceptance letter, and a permit must be obtained from the SRCSD Industrial Waste Group. Long-term discharges of greater duration than seven days must be approved through the City Department of Utilities and the City Manager through a MOU process. The MOU must specify the type of groundwater discharge, flow rates, discharge system design, a City-approved contaminant assessment of the proposed groundwater discharge indicating tested levels of constituents, and a City-approved effluent monitoring plan to ensure contaminant levels remain in compliance with State standards or SRCSD- and CVRWQCB- approved levels. All groundwater discharges to the sewer must be granted a SRCSD discharge permit. If the discharge is part of a groundwater cleanup or contains excessive contaminants, CVRWQCB approval is also required. The monitoring component of the MOU helps inform the CVRWQCB about new contaminated groundwater discharges that could influence the spread of existing contaminated groundwater plumes that agency monitors.

Wastewater Discharges

Section 13.080.020 of the Sacramento City Code prohibits the discharge of any substances, materials, waters, or waste if the discharge would violate any sewer use ordinance enacted by the SRCSD. Section 13.08.030 of the Sacramento City Code identifies specific waters, wastes, and substances that may not be discharged to the sewer.

Any discharge into the CSS must have a Sewer Use Questionnaire on file with the SRCSD, which would apply to the SMCS project. The SRCSD has adopted a Sewer Use Ordinance that regulates the use of public sewers connected to the SRWTP. While some types of discharges to the sewer require permits from the City because of their potential to affect treatment plant operations and treated effluent quality, the wastewater generated by the existing Sutter General Hospital, including the Buhler Building and Energy Center facilities, does not contain the types of constituents requiring a permit. The characteristics of wastewater generated by the expanded facilities would be similar to existing flows and would not require an Industrial Permit.¹⁸

18 John Lionakis, Capital Engineering Consultants, personal communication, February 22, 2005; Glen DelSarto, Industrial Waste Manager, Sacramento Regional County Sanitation District, personal communication, March 17, 2005.

The wastewater discharged from the SRWTP to Sacramento River is regulated under a NPDES permit issued by the RWQCB. Discharge limitations are specified in the permit to limit water quality impacts in the Sacramento River. Categorical Pretreatment Standards have been established for the pretreatment of certain classes of industrial wastes discharged to publicly owned treatment works, such as the SRWTP. The purpose of these standards is to protect the SRWTP and the environment by regulating potentially harmful discharges to the sewer from industrial and commercial businesses. Discharges from the existing Sutter facilities, including the Energy Center, are not subject to these pretreatment standards, however.

City of Sacramento General Plan

The City of Sacramento General Plan adopted the following goals and policy measures that pertain to the impacts evaluated in this section (urban runoff water quality, construction dewatering, and Energy Center wastewater discharges).

Utility Services -- Drainage

Goal A: Provide adequate drainage facilities and services to accommodate desired growth levels

Policy 1: Ensure that all drainage facilities are adequately sized and constructed to accommodate the projected increase in stormwater runoff from urbanization.

Sacramento Central City Community Plan

The Central City Community Plan does not contain any policies applicable to the provision of sewer or drainage facilities.

IMPACTS AND MITIGATION MEASURES

Methods of Analysis

The qualitative analysis of the potential hydrology and water quality impacts is based on review of the SMCS project site design and intended uses and information developed by the applicant's engineer to establish existing conditions and to identify potential environmental effects, based on the standards of significance presented in this section. The methodology for determining wastewater flows to the CSS are described in Section 6.8, Public Utilities, which calculated a net increase of 0.15 mgd to the CSS.

In determining the level of significance, the analysis assumes that the SMCS project would comply with applicable ordinances and regulations.

Standards of Significance

For the purposes of this EIR, impacts on hydrology and water quality are considered significant if the SMCS project would:

- Violate any water quality standards or waste discharge requirements;
- Provide substantial additional sources of polluted runoff or otherwise substantially degrade water quality;
- Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; or
- Create or contribute runoff water that would exceed the capacity of existing or planned wastewater or stormwater drainage systems.

Impact 6.5-1: Implementation of the SMCS project could result in an increase in the rate and amount of stormwater runoff from the project area, which could cause or exacerbate flood conditions on- or off-site.		
	SMCS Project	Theatre
Significance Before Mitigation	Less than Significant	Less than Significant
Mitigation Measures	None required	None required
Significance After Mitigation	N/A	N/A

SMCS Project

The SMCS project is proposed for development on land that currently contains urban development consisting primarily of impervious surfaces. Development of the SMCS project is expected to increase the amount of impervious surfaces by approximately 16,000 square feet, or approximately 0.37 acre.¹⁹ The City has recently adopted the Combined System Development Fee Ordinance that requires a development fee for projects within the CSS Service boundary.

The project area is drained by the CSS, which is considered an impacted system due to its lack of available capacity during storm events. During dry weather conditions, the CSS has enough available capacity to handle the total flow, which is primarily composed of sewage. During storm events, the combination of sewage and stormwater runoff has the potential to create localized street flooding.²⁰ However, the City is currently implementing system-wide improvements to the CSS and the SMCS project would be required to contribute funds toward City improvements to the CSS or, alternatively, complete on- or offsite improvements to store project wastewater during storm events. Absent system improvements, however, flooding and CSOs would continue.

19 Table of Impervious Surfaces on SMCS, received from Monica Kim Bauer, KMD, 5/25/04.

20 Batha, Rick, City of Sacramento, Department of Utilities, Personal Communication 5/26/04.

Compliance with the City's Combined System Development Fee ordinance would reduce the project impact by providing (1) additional capacity in the City's system to reduce the potential for flooding and CSOs system-wide, or (2) requiring storage of project flows to ensure that the SMCS project would not contribute to flooding and CSOs. This would reduce this impact to a **less-than-significant level**.

Theatre

The site of the proposed Children's Theatre lies within the SMCS project area. The total area of the five parcels that comprise the proposed theatre location is approximately 38,500 square feet. The site currently contains impervious surfaces associated with the Trinity Apartments, EAP Building, an existing surface parking lot, and a vacant lot containing pervious surface, which account for approximately 30,000 square feet of surface coverage. There is one undeveloped lot about 1,700 square feet in size.

Assuming land coverage shown in Figure 2-1 for the proposed Theatre site, it is likely there could be a small increase in impervious surfaces generating stormwater runoff – on the order of approximately 3,000 square feet, but no more than 8,500 square feet. The net increase in impervious surface would not be any greater than 0.25 acre (10,980 square feet). Therefore, increases in stormwater flows from the Theatre site would not be substantial enough to cause or exacerbate capacity exceedences in the CSS that could cause localized flooding. This impact is considered **less than significant**.

Mitigation Measure

None required.

Impact 6.5-2: Stormwater runoff from the SMCS project would contain urban pollutants that could be discharged to the Sacramento River, which could affect surface water quality.		
	SMCS Project	Theatre
Significance Before Mitigation	Less than Significant	Less than Significant
Mitigation Measures	None required	None required
Significance After Mitigation	N/A	N/A

SMCS Project

The SMCS project would be developed on land that currently contains urban development consisting primarily of impervious surfaces (parking lots, building rooftops, hardscaping, and roadways). Stormwater runoff from impervious surfaces on the project site is currently conveyed to the CSS. Stormwater runoff within project area is currently collected by the CSS and transported to the SRWTP or CWTP for treatment before discharging into the Sacramento

River. The CSS and WTPs operate under current NPDES permits regulated by the CVRWQCB.

Runoff from the project site contains varying types and amounts of chemical constituents typical of urban runoff. These pollutants are ultimately conveyed to the Sacramento River. Pollutants likely to occur in stormwater from the site include the target pollutants identified by the City of Sacramento's *Stormwater Quality Improvement Plan* such as pesticides, metals, and fecal coliform, among other urban pollutants. As noted in the Environmental Setting, some water quality degradation of the Sacramento River has occurred as a result of urban development.

Development of the SMCS project would generate only a small net increase in stormwater runoff conveyed to the CSS (see Impact 6.8-7 in Section 6.8, Utility Systems). The types and concentrations of pollutants are not expected to vary significantly from existing conditions. At some locations, there could actually be a decrease in certain pollutants such as oil and grease and metals carried in stormwater runoff. For example, as surface parking lots are converted to buildings, this would remove a source of contaminants usually associated with vehicle use. Consequently, neither the rate nor volume of stormwater runoff discharged from the project site would result in a substantial increase in urban pollutant discharges to the river that would degrade river water quality.

Modifications, if any, to the storm drain inlet locations and sizing to accommodate the SMCS project would include stormwater quality BMPs, consistent with the City's NPDES stormwater permit requirements and features in the existing system. This would ensure urban pollutants generated by the SMCS project would continue to be managed in accordance with State and local regulations.

Because the SMCS project would not result in a substantial net increase in urban pollutants in stormwater runoff and would include stormwater quality BMPs, discharges from the SMCS project would not violate any water quality standards, exceed wastewater discharge requirements, or otherwise degrade water quality, and impacts would be ***less than significant***.

Theatre

The site of the proposed Children's Theatre of California lies within the SMCS project area and currently contains impervious surfaces associated with the Trinity Apartments, EAP Building, and two existing surface parking lots, along with a vacant lot containing pervious surface. As described in Impact 6.5-1, there would not be a substantial net increase in runoff. Because parking areas, which typically contain grease and metals, would be converted to building surfaces, there could be a decrease in these pollutants from the site. Therefore, Sacramento River water quality would not be adversely affected. Impacts would be ***less than significant***.

Mitigation Measure

None required.

<p>Impact 6.5-3: Groundwater from construction and foundation dewatering would be discharged to the City's CSS, which could result in CSS capacity and water quality impacts.</p>		
	SMCS Project	Theatre
Significance Before Mitigation	Less than Significant	Less than Significant
Mitigation Measures	None required	None required
Significance After Mitigation	N/A	N/A

SMCS Project

The Community Parking Structure is proposed to have one level below grade. The Future Medical Office Building (MOB) is proposed to have one level below grade with excavation to approximately 13 feet. The SMF Building is planned to have two parking levels and the Energy Center below grade with excavation to approximately 26 feet.²¹ A tunnel from the SMF Building to the Buhler Building is expected to require excavation to a depth of 18 feet below grade. A tunnel from the SGH to the Buhler Building is expected to require excavation to a depth of 18 feet below grade. Because some excavation activities of the SMCS project could reach levels at or below the depth of groundwater, dewatering activities are anticipated. During construction, it may be necessary to remove groundwater from these excavations because of the shallow water table. During construction dewatering, shallow groundwater may contain sediment that, if discharged to the treatment plant, could affect plant operating conditions.

Permanent foundation dewatering systems are in place for some of the existing structures in the project site. During the life of the project, shallow groundwater could infiltrate subsurface walls and foundations, potentially causing structural damage unless groundwater is removed. Preliminary engineering estimates indicate the WCC would add approximately 33,000 square feet of foundation requiring dewatering, resulting in approximately 100 to 278 gallons per minute (gpm) to be discharged to the CSS. An existing pump that serves the Energy Center would be eliminated, and a new pump would be added to serve the south half of the SGH. A foundation dewatering system for the proposed SMF Building and new Energy Center is not anticipated.

Groundwater discharges to the CSS are not accounted for in the system CSS design, so disposal of large volumes of extracted groundwater could cause localized overflows (street flooding) or Sacramento River outflows. Dewatering discharges could also temporarily or permanently remove sewer capacity from other system users. In the case of the SMCS project, there is a potential for variations in hydrostatic pressures in the subsurface, sufficient to affect foundations. For example, approximately three-quarters of the WCC would be constructed over existing foundations that are dewatered, and approximately one quarter half would be new construction. If foundation dewatering were not provided for the new section, a portion of the foundation would be under positive hydrostatic pressure while the other half would be under negative hydrostatic pressure, which could affect foundation integrity. Diverse hydrostatic

²¹ Bonfantine, David L, personal communication to Cynthia Farias of Sutter Health, April 12, 2004.

pressure could also have adverse effects on foundations in and around the Old Tavern Building (which does not have foundation dewatering).²²

The City of Sacramento requires that any discharges of groundwater from construction foundation or basement dewatering be permitted through the City Utilities Department. The applicant has submitted a written request to the City to expand the underground dewatering systems to accommodate the design of the proposed WCC, which take into account the site-specific concerns summarized above.²³ All groundwater discharges to the sewer must also obtain a discharge permit from the SRCSD Industrial Waste Section. These requirements would be made part of the construction contract specifications and confirmed by City staff through the building permit process. The applicant has been coordinating with City Utilities staff to identify solutions to the hydrostatic pressure issues associated with existing and new construction.

As discussed in Impact 6.4-2 in Section 6.4, Hazards and Public Safety, there are no known groundwater contamination issues at the site, so it is not anticipated that contaminated groundwater would be encountered during dewatering. However, part of the permitting process includes an assessment of groundwater quality. Should contaminants be detected in groundwater proposed for discharge to the CSS that were not previously detected, the City would require the applicant to initiate actions to control contaminant levels during dewatering.

The purpose of these requirements is to ensure project dewatering discharges to the CSS do not temporarily or permanently reduce system capacity to levels at which overflows or outflows could occur and to protect influent and effluent water quality at the treatment plants. Such measures are necessary for the City to comply with adopted NPDES permits. Because there is an established regulatory mechanism in place that is enforced by the City and that would be applicable to the proposed project, the SMCS project would not violate any water quality standards or waste discharge requirements or cause exceedances of CSS capacity. Therefore, impacts would be **less than significant**.

Theatre

If dewatering is required for the Children's Theatre of California construction or long-term operation, that project would be required to comply with the City's dewatering policy, as discussed for the SMCS project. For the reasons described above, impacts would be **less than significant**.

Mitigation Measure

None required.

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- 22 KMD, Sutter Medical Center, "Sacramento Request to Expand Existing Foundation Dewatering," letter from Bob Peterson to Kimland Yee, City of Sacramento Department of Utilities Engineering Services Division, March 4, 2005.
- 23 KMD, Sutter Medical Center, "Sacramento Request to Expand Existing Foundation Dewatering," letter from Bob Peterson to Kimland Yee, City of Sacramento Department of Utilities Engineering Services Division, March 4, 2005.

Impact 6.5-4: Wastewater flows from the SMCS project would contain chemicals, radioactive materials, and chemotherapeutic wastes that would be discharged to the Sacramento River via the CSS and SRWTP, which could affect water quality.

	SMCS Project	Theatre
Significance Before Mitigation	Less than Significant	No Impact
Mitigation Measures	None required	None required
Significance After Mitigation	N/A	N/A

SMCS Project

Some laboratory and patient diagnosis and treatment activities generate wastewater that is discharged to the sewer and that may contain chemicals, radioactive materials, or chemotherapy materials. The Sutter Health *Environment of Care Manual* includes a "Hazardous Chemical Waste Management Program" that describes the procedures for the disposal of hazardous chemicals, radioactive waste, and chemotherapeutic waste within its facilities. The procedures identify steps to minimize the amount of hazardous substances discharged to the sewer through limiting the types and amounts of products used, proper identification and handling of liquid wastes, and disposal methods.²⁴ Wastewater discharged from the existing hospital and medical facilities is considered "commercial" wastewater, and pretreatment or an Industrial Permit is not required.²⁵ Implementation of the SMCS project would result in a net increase of 0.15 mgd of wastewater to the CSS system (see Impact 6.8-6 in Section 6.8, Public Utilities). Because the types of patient care and routine hospital functions would not differ substantially from existing conditions (other than an increase in the number of patients and facility space), the chemical characteristics of wastewater discharged to the sewer would not be expected to differ substantially. Therefore, the SMCS project would not adversely affect the NPDES discharge limitations for the SRWTP or the CWTP such that adverse effects on Sacramento River water quality would occur.

The existing Energy Center uses water to generate chilled water and steam. Various products are used to treat the water to maintain proper water chemistry. These products include algicides, biocides, and anti-scaling chemicals. Wastewater containing low levels of these chemicals is discharged to the CSS. The capacity of the Energy Center would be increased to accommodate additional demand of the SMCS project. This would result in an increase in the amount of water used in the system and a commensurate increase in the amount of chemicals used. This would not be a new discharge, and no change is anticipated in the types of chemicals, as compared to existing conditions, that would substantially affect the quality of water entering the sewer and treated at the treatment plants for which NPDES permits have been granted. The applicant's engineer has indicated that a permit for the increased wastewater discharge from the proposed new Energy Center would not be required,²⁶ indicating that the types and levels of constituents in the wastewater would not be likely to affect the

24 Sutter Health Central Area, *Environment of Care Manual, Hazardous Materials and Waste Management Policies and Procedures, Section C.4, "Hazardous Chemical Waste Management."*

25 Glen DeSarto, Industrial Waste Manager, Sacramento Regional County Sanitation District, personal communication, March 17, 2005.

26 John Lionakis, Capital Engineering Consultants, personal communication, February 22, 2005.

NDPES discharge limitations imposed by the CVRWQCB on either the SRCSD or CWTP plants. Therefore, receiving water quality would not be adversely affected; and impacts would be **less than significant**.

Theatre

The proposed theatre would not discharge any wastewater to the sewer other than domestic wastewater. There would be **no impact**.

Mitigation Measure

None required.

CUMULATIVE IMPACTS

Potential impacts on hydrology and water quality are attributed to development not only within the City limits in the CSS service area, but also in the watershed area that exists outside of the City limits. The context for the evaluation of potential cumulative impacts on hydrology and water quality is described within each cumulative impact analysis.

Impact 6.5-5: The project, in combination with cumulative development in the CSS service area, would generate stormwater runoff that could result in localized flooding.		
	SMCS Project	Theatre
Significance Before Mitigation	Less than Significant	Less than Significant
Mitigation Measures	None required	None required
Significance After Mitigation	N/A	N/A

SMCS Project and Theatre

The City's CSS is considered an impacted system due to its lack of available capacity during storm events. During dry weather conditions, the CSS has enough available capacity to handle the total flow, which is primarily composed of sewage. During storm events, the combination of sewage and stormwater runoff has the potential to create localized street flooding.²⁷ Additional runoff from development within the CSS service area, including the SMCS project, could contribute to localized street flooding related to the exceedance of the system's capacity.

The Department of Utilities has completed several CSS Improvement and Rehabilitation Program projects, including construction of new regional storage projects, and numerous rehabilitation and replacement projects throughout the system. The City continues to undertake

²⁷ Batha, Rick, City of Sacramento, Department of Utilities, Personal Communication 5/26/04.

improvements according to the program, including additional storage facilities, and the improvement and expansion of existing facilities. As previously discussed, the City is implementing a new fee program to ensure that these improvements are sufficiently funded. Future development would generally be limited to infill and redevelopment projects, which would not create new, additional sources of stormwater runoff that could adversely affect system capacity. Compliance with the City’s Combined System Development Fee ordinance would reduce the project’s potential cumulative impact by providing (1) additional capacity in the City’s system to reduce the potential for flooding and CSOs system-wide, or (2) requiring storage of project flows to ensure that the SMCS project would not contribute to flooding and CSOs. Therefore, the project’s contribution would not be cumulatively considered resulting in a **less-than-significant cumulative impact**.

Mitigation Measure

None required.

Impact 6.5-6: Stormwater runoff from the project, in combination with cumulative development in the CSS service area, could discharge urban pollutants to the Sacramento River, which could affect water quality.		
	SMCS Project	Theatre
Significance Before Mitigation	Less than Significant	Less than Significant
Mitigation Measures	None required	None required
Significance After Mitigation	N/A	N/A

SMCS Project and Theatre

Cumulative urban development in the CSS service area would result in the creation of increased impervious surfaces which could increase the types and amounts of pollutants in stormwater runoff. The primary sources of water pollution would include runoff from roadways, and parking lots, runoff from landscaping areas, industrial activities, non-stormwater connections to the drainage system, accidental spills and illegal dumping. Runoff from roadway and parking lots could contain high levels of oil, grease, and heavy metals. Runoff from landscaped areas could contain concentrations of nutrients from fertilizers as well as pesticides.

Urban runoff within of the City and County of Sacramento, City of Folsom, City of Citrus Heights, City of Elk Grove and the City of Galt are regulated under a joint NPDES permit (No. CAS082597), which was required under Phase 1 of the federal program. Phase 1 applied to discharges from large (population 250,000 or above) and medium (population 100,000 to 250,000) municipalities and certain industrial activities.²⁸ Regulations pertaining to smaller jurisdictions, such as other cities in the Sacramento metropolitan area (e.g., Roseville, Rocklin) that also discharge urban runoff to the Sacramento River, required such jurisdictions to obtain permits under a Phase 2 program, which became effective in early 2003. The Phase 2 State

28 California Regional Water Quality Control Board, Waste Discharge Requirements for County of Sacramento and Cities of Citrus Heights, Elk Grove, Folsom, Galt and Sacramento.

Municipal Stormwater Permit required these smaller cities to develop, implement, and enforce a stormwater management program meeting the federal requirements for BMPs and other urban runoff water quality controls. The combined regional effect of the Phase 1 and Phase 2 programs is to reduce the types and amounts of urban pollutants discharged to waterways that drain to the Sacramento River. As discussed in Impact 6.5-2, the SMCS project's contribution to post-construction water quality impacts associated with urban development would be minimal due to the developed nature of the SMCS project area. Impacts would be **less than cumulatively considerable**.

Mitigation Measure

None required.

Impact 6.5-7: The project, in combination with cumulative development in the CSS service area, could discharge groundwater from dewatering to the sewer.		
	SMCS Project	Theatre
Significance Before Mitigation	Less than Significant	Less than Significant
Mitigation Measures	None required	None required
Significance After Mitigation	N/A	N/A

SMCS Project and Theatre

Excavations requiring dewatering and subsurface features of new buildings in the downtown/midtown Sacramento area served by the CSS system are expected to require some level of dewatering because of shallow groundwater conditions. It is possible that dewatering could occur simultaneously at more than one site. The volume of water removed and the rate and frequency it would be discharged to the sewer would be site-specific. If controls such as the City's permit process for dewatering were not in place, the combined effect of simultaneous and/or consecutive discharges could overwhelm the CSS system and/or adversely affect water quality in the system. It could also cause localized shifts in groundwater patterns that could cause areas of degraded groundwater quality to shift.

The dewatering protocol established by the City and enforced at the City level would apply to the proposed project and other development where dewatering is needed in the CSS service area. City staff review of permit applications for dewatering would allow the City to determine the volumes and frequencies of discharges that would be allowed to the CSS from each project to ensure capacity is not exceeded and water quality violations do not occur. This would ensure the project's contribution would be less than cumulatively considerable, and impacts would be **less than significant**.

Mitigation Measure

None required.

<p>Impact 6.5-8: The project, in combination with cumulative development in the CSS service area, would result in increased wastewater flows, which could affect Sacramento River water quality.</p>		
	SMCS Project	Theatre
Significance Before Mitigation	Less than Significant	Less than Significant
Mitigation Measures	None required	None required
Significance After Mitigation	N/A	N/A

SMCS Project and Theatre

Treated wastewater discharges to the Sacramento River are regulated through an NPDES permit issued by the State. Discharges into the treatment plants are subject to Sewer Use Ordinances and, for some industrial and commercial development, additional pretreatment requirements. The purpose of these standards is to ensure that wastewater treated at the plants does not impair the plants' effectiveness, pose hazards to plant workers, or result in discharges to the Sacramento River that could degrade water quality. City and SRCSD staff review existing and proposed discharges to determine whether pretreatment is required or whether the wastewater can be discharged without treatment, even if it contains some level of chemicals or other substances.

Cumulative development in the City and County of Sacramento, in combination with the SMCS project, would result in an increase in the amount of water conveyed to the CSS/CWTP and ultimately the SRWTP for treatment prior to discharge to the Sacramento River. Wastewater conveyed to the plants is expected to increase in volume and would continue to include various constituents that could affect influent and effluent water quality. Such discharges would occur regardless of whether the project is implemented.

The CSS improvements would only accommodate infill or redevelopment activities within the downtown area, and its service area will not be expanded to accommodate new development. As such, the CSS contribution to treated wastewater effluent discharges to the Sacramento River, including the proposed project, is not expected to contribute additional volumes or types of constituents that could adversely affect water quality. Because wastewater characteristics would be similar to existing conditions and flows are limited by CSS capacity, the cumulative impact is considered less than significant. The SMCS project would contribute only a small percent of total CSS discharges (0.15 mgd), which is not considered substantial. Therefore, the project's incremental contribution would not be cumulatively considerable resulting in a ***less-than-significant cumulative impact***.

Mitigation Measure

None required.

6.6 Noise

6.6 Noise

INTRODUCTION

This section evaluates the potential noise impacts associated with the SMCS project. This includes the potential for adverse impacts associated with a substantial temporary and/or permanent increase in ambient noise levels within or around the SMCS project area or exposure of people to excessive noise levels, groundborne vibration, or groundborne noise levels and whether this exposure is in excess of standards established in the local general plan or noise ordinance.

Responses to the October 2003 Notice of Preparation (NOP) and January 2004 NOP (see Appendices B and D), included requests to conduct an analysis of potential noise impacts to Pioneer Church. Concerns were also raised pertaining to noise associated with the proposed helistop and with increased traffic, as such noise could affect nearby residences, including historic structures with original windows in place. These issues are addressed in this section.

The Initial Study (see Appendix E) prepared for the SMCS project and Trinity Cathedral project determined that the project is not located within an airport land use plan or within two miles of a public airport, public use airport, or private airstrip; therefore, these issues will not be discussed further in this EIR. Data used to prepare the analysis contained in this section was obtained by measuring and modeling existing and future noise levels at the project site(s) and in the surrounding area.

Sources reviewed for this section include the City of Sacramento General Plan, the City of Sacramento Municipal Code, the Federal Interagency Committee on Airport Noise's – *Sleep Disturbance Dose-Response Relationship*, US EPA's *Noise Ranges of Typical Construction Equipment*, and the Federal Railroad Administration's *Vibration Source Level for Construction Equipment*.

ENVIRONMENTAL SETTING

Acoustical Terminology

Sound is technically 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 physical intensity of the pressure vibrations that make up any sound. The pitch of the sound is related to the frequency of the pressure vibration. Since the human ear is not equally sensitive to a given sound level at all frequencies, a special frequency-dependent rating scale has been devised to relate noise to human sensitivity. The A-weighted decibel scale (dBA) provides this compensation by discriminating against frequencies in a manner approximating the sensitivity of the human ear.

Noise is often defined simply as unwanted sound, and thus is a subjective reaction to characteristics of a physical phenomenon. Researchers have generally agreed that A-weighted sound pressure levels (sound levels) are very well correlated with community reaction to noise. Variations in sound levels over time are represented by statistical descriptors, and by time-weighted composite noise metrics such as the Day-Night Average Level (L_{dn}), or the Community Noise Equivalent Level (CNEL). Throughout this analysis, A-weighted sound pressure levels will be used to describe community noise unless otherwise indicated.

A typical noise environment consists of a base of steady “background” noise that is the sum of many distant and indistinguishable noise sources. Superimposed on this background noise is the sound from individual local sources. These can vary from an occasional aircraft or train passing by to virtually continuous noise from, for example, traffic on a major highway. Table 6.6-1 provides examples of maximum sound levels associated with common noise sources.

Table 6.6-1

Typical A-Weighted Maximum Sound Levels of Common Noise Sources

Decibels	Description
130	Threshold of pain
120	Jet aircraft take-off at 100 feet
110	Riveting machine at operators position
100	Shot-gun at 200 feet
90	Bulldozer at 50 feet
80	Diesel locomotive at 300 feet
70	Commercial jet aircraft interior during flight
60	Normal conversation speech at 5-10 feet
50	Open office background level
40	Background level within a residence
30	soft whisper at 2 feet
20	Interior of recording studio

Source: California Department of Transportation, 1988.

Several rating scales have been developed to analyze the adverse effects of community noise on people. Since environmental noise fluctuates over time, these scales consider that the effect of noise upon people is largely dependent upon the total acoustical energy content of the noise, as well as the time of day when the noise occurs. Scales 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.

- L_{min} , the minimum instantaneous noise level experienced during a given period of time.
- L_{max} , the maximum instantaneous noise level experienced during a given period of time.

Noise environments and consequences of human activities are usually well represented by median noise levels during the day and night, or over a 24-hour period. Environmental noise levels are generally considered low when the L_{dn} is below 60 dBA, moderate in the 60 to 70 dBA range, and high above 70 dBA. Examples of low daytime 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 disrupt sleep. Examples of moderate-level noise environments are urban residential or semi-commercial areas (typically 55 to 60 dBA) and commercial locations (typically 60 dBA). People may consider louder environments adverse, but most will accept the higher levels associated with more noisy urban residential or residential-commercial areas (60 to 75 dBA) or dense urban or industrial areas (65 to 80 dBA).

When evaluating changes in 24-hour community noise levels, a difference of 3 dBA is a barely perceptible increase to most people. A 5 dBA increase is readily noticeable, while a difference of 10 dBA would be perceived as a doubling of loudness.

Noise levels from a particular source decline as distance to the receptor increases. Other factors, such as the weather and reflecting or shielding, also help intensify or reduce the noise level 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; generally, a single row of buildings between the receptor and the noise source reduces the noise level by about 5 dBA, while a solid wall or berm reduces noise levels by 5 to 10 dBA. The manner in which older homes in California were constructed generally provides a reduction of exterior-to-interior noise levels of about 20 to 25 dBA with closed windows. The exterior-to-interior reduction of newer residential units is generally 30 dBA or more.

Project Location and Existing Land Uses in the Project Vicinity

The SMCS project area is located in the Midtown area of the City of Sacramento within the Central City District and the Winn Park-Capitol Avenue Neighborhood (see Figure 2-1 in Chapter 2, Project Description).

The project area consists of a number of individual building sites, as described in Chapter 2, Project Description and shown in Figure 2-1 in Chapter 2. Adjacent uses include the historic Sutter's Fort State Historic Park, the historic Old Tavern building, a mix of commercial and professional office buildings and a Regional Transit Bus Service Center.

The project area also has nearby uses that would be considered "sensitive noise receptors". Sensitive receptors are those uses that may be more affected by high noise levels. These uses

usually are those where people sleep, or those where activities occur that require quiet environments. Nearby sensitive noise receptors include two and three story Victorian residences, apartment complexes, including a senior housing complex, two churches (Trinity Cathedral and Pioneer Church), and the existing Sutter General Hospital and Buhler Building, as well as medical offices (see Figure 2-1 in Chapter 2).

Existing Noise Environment in the Project Vicinity

The noise environment within the project area is defined primarily by roadway traffic on Capital City Freeway and local streets. In addition, background noise levels due to school uses, ambulance and police sirens, and general neighborhood activities also contribute to the overall noise environment.

Measured Ambient Noise Levels in the Project Vicinity

To quantify existing background noise levels within and around the project area, Bollard & Brennan, Inc. conducted continuous hourly noise measurements at two locations for a 24-hour period on Tuesday March 30, 2004. A short-term ambient noise survey was also conducted at six locations on February 19, and March 30-31, 2004. Figure 6.6-1 shows the noise measurement sites and Table 6.6-2 lists the noise measurement sites and provides a summary of the noise measurement results.

Table 6.6-2

Existing Ambient Noise Monitoring Results February 19 and March 30-31, 2004

Site #	Location	Average Measured Hourly Noise Levels, dBA						
		24-hour L _{dn}	Daytime (7:00 am - 10:00 pm)			Nighttime (10:00 pm - 7 am)		
			L _{eq}	L ₅₀	L _{max}	L _{eq}	L ₅₀	L _{max}
Continuous 24-hour Noise Measurement Sites								
10	Trinity Church 27 th Street and Capitol Ave.	65.3	63.1	61	77.6	57.5	55	70.8
12	Sutter Medical Center 29 th Street and L Street	73.6	69.4	69	80.2	66.6	65	76.2
Short-term Noise Measurement Sites								
3	29 th and J Street	–	70.7	–	78.1	Feb. 19, 2004 (9:30 p.m.)		
7	2814 I Street	–	63.6	–	73.6	Feb. 19, 2004 (4 pm to 9 pm)		
8	2700 D Street	–	56.8	–	72.5	Feb. 19, 2004 (4 pm to 9 pm)		
9	Alhambra Ave. & J Street	–	65.0	–	75.0	Feb. 19, 2004 (2:50 p.m.)		
10	27 th & Capitol Avenue (Trinity Church)	–	62.0	–	68.0	Feb. 19, 2004 (3:00 p.m.)		
			Feb. 19, 2004 (10:00 p.m.)			61.0	–	72.0
13	30 th & Alhambra	–	60.9	61	60.4	Feb. 31, 2004 (2:43 p.m.)		

Source - Bollard & Brennan, Inc., 2004.

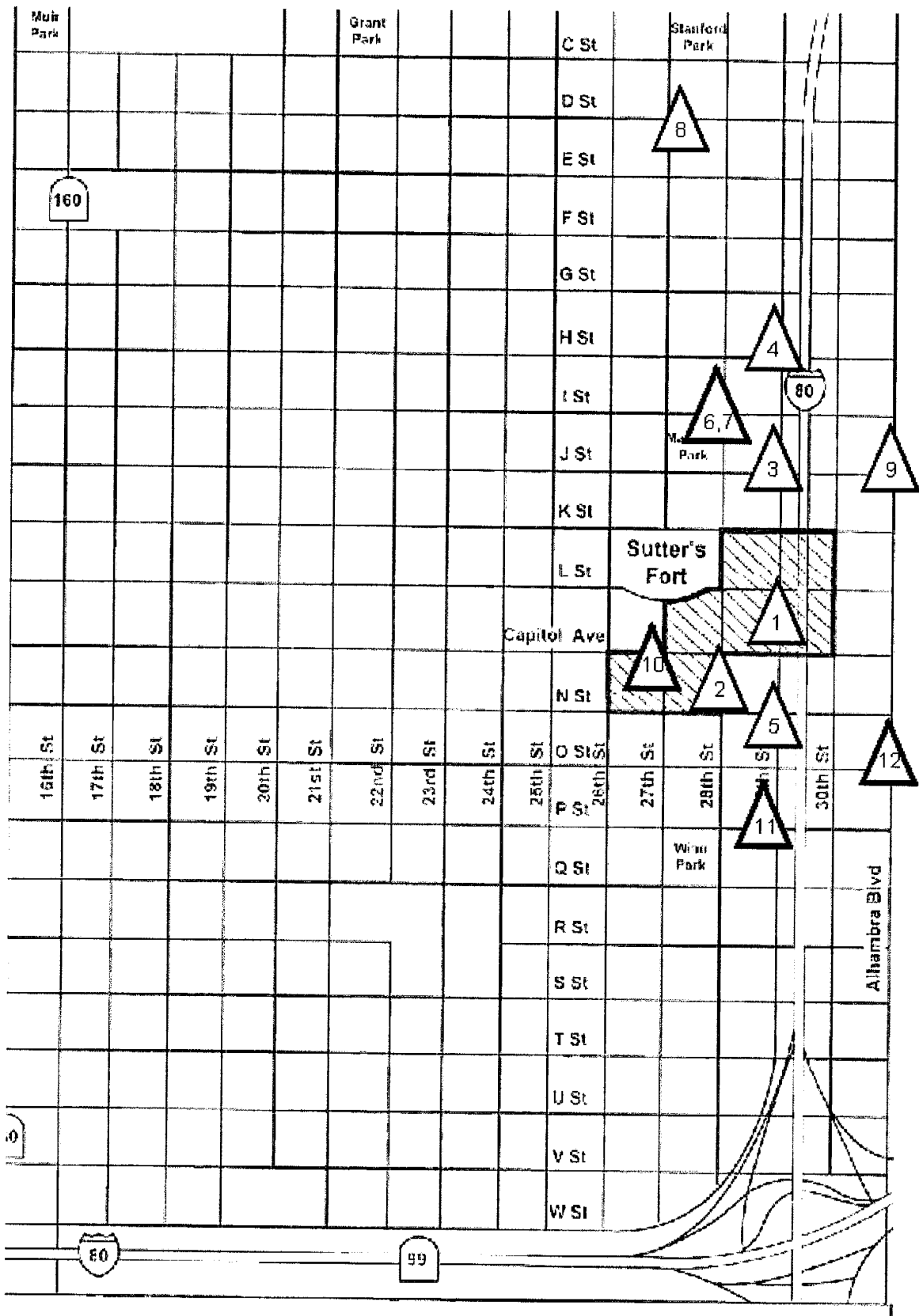


FIGURE 6.6-1
Ambient Noise Measurement Sites

Not to Scale

10828-02

Source: Bollard and Brennan Noise, Inc. 2004

Sutter Medical Center, Sacramento

EIP
ASSOCIATES

Larson Davis Laboratories (LDL) Model 820 precision integrating sound level meter was used for the ambient noise level measurement survey. The meter was calibrated before and after use with an LDL Model CA200 acoustical calibrator to ensure the accuracy of the measurements. The equipment used meets all pertinent specifications of the American National Standards Institute for Type 1 sound level meters (ANSI S1.4).

The noise level meter was programmed to record the average, median and maximum noise level at each proposed building site within the project area during the survey. The maximum value, denoted L_{max} , represents the highest noise level measured. The average value, denoted L_{eq} , represents the energy average of all of the noise received by the sound level meter microphone during the monitoring period. The median noise level which is denoted L_{50} is the noise level exceeded half of the time during the measurement.

Existing Traffic Noise Environment

To describe existing noise levels associated with traffic, the Federal Highway Administration Highway Traffic Noise Prediction Model (FHWA RD-77-108) was used. This model is based on the Calveno reference noise factors for automobiles, medium trucks and heavy trucks, with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, and the acoustical characteristics of the site. The FHWA model was developed to predict hourly L_{eq} values for free-flowing traffic conditions.

Traffic volumes for existing conditions were obtained from the traffic consultant, DKS Associates, in the form of intersection turning movements. Truck usage on area roadways were estimated from field observations, file data and published Caltrans truck classification counts.

Table 6.6-3 shows the predicted existing traffic noise levels in terms of the Day/Night Average Level descriptor (L_{dn}) at a standard distance of 100 feet from the centerlines of the existing project area roadways for existing conditions, as well as distances to existing traffic noise contours. The extent by which existing land uses in the project vicinity are affected by existing traffic noise depends on their respective proximity to the roadways and their individual sensitivity to noise. A complete listing of the FHWA Model input data for existing conditions is contained in Appendix I.

REGULATORY SETTING

Federal

Federal Aviation Administration

The Federal Aviation Administration (FAA) has adopted a noise compatibility criterion of 65 dB L_{dn} for residential uses, which includes penalties for evening noises.

Table 6.6-3

Existing Traffic Noise Levels and Distances to Contours

Roadway Segment	Segment	L _{dn} @ 100 Feet	Distance to Contours (feet)		
			70 dB L _{dn}	65 dB L _{dn}	60 dB L _{dn}
J Street	27 th /28 th	60.5	-	-	113
J Street	28 th /29 th	60.8	-	-	120
26 th Street	K/L	51.1	-	-	-
26 th Street	L/Capitol	51.0	-	-	-
26 th Street	Capitol/N	50.4	-	-	-
K Street	27 th /28 th	58.4	-	-	70
K Street	28 th /29 th	59.0	-	-	79
L Street	25 th /26 th	57.4	-	-	54
L Street	26 th /27 th	57.3	-	-	53
28 th Street	J/K	55.1	-	-	32
28 th Street	N/O	53.8	-	-	-
Capitol	25 th /26 th	57.8	-	-	61
Capitol	26 th /28 th	58.1	-	-	65
N Street	27 th /28 th	57.7	-	-	58

Note: Distance is from the centerline of the roadway segment to the receptor location.
 "-" = contour is located within the roadway right-of-way.

Source: EIP Associates, 2005.

State

State of California Public Utilities Code

The State legislative authority to adopt noise standards governing the operation of aircraft and aircraft engines for airports is provided in Section 21669, Article 3, Chapter 4, Part 1, Division 9 of the Public Utilities Code (PUC) (Aeronautics Law). Caltrans Division of Aeronautics is the agency responsible for compliance with this PUC section.

The PUC differentiates emergency¹ service helicopters from other aircraft by providing exemptions from local ordinances. Section 21662.4 (a), Article 3, Chapter 4, Part 1, Division 9 of the PUC states the following concerning exemptions from the noise ordinances:

Emergency aircraft flights for medical purposes by law enforcement, fire fighting, military, or other persons who provide emergency flights for medical purposes are exempt from local ordinances adopted by a city, county, or city and county, whether general law chartered, that restricts flight departures and arrivals to particular hours of the day or night, that restrict the departure or arrival of aircraft based upon the aircraft's noise level, or that restrict the operation of certain types of aircraft.

1 The SMCS proposed helistop is for non-emergency, scheduled transfers of seriously ill infants, children and adults. This exemption would not apply to the project.

Caltrans Division of Aeronautics

The Caltrans Division of Aeronautics has adopted CNEL as the noise descriptor to be used in describing the noise impact boundary of California airports. The Division of Aeronautics has identified a CNEL value of 65 dB as the noise impact criterion for noise-sensitive land uses, such as single family or multi-family dwellings. The CNEL is typically about 1 dB more than the Ldn because it applies an additional penalty for noise sources between the hours of 7:00 p.m. and 10:00 p.m. The Ldn descriptor only applies a penalty to noise levels between the hours of 10:00 p.m. and 7:00 a.m.

California Airport Noise Regulations

The California Code of Regulations (Section 5006) includes a discussion of California Airport Noise Regulations that addresses the potential sleep disturbance from aircraft operations. This information is relevant because the SMCS project includes a helistop. The following are excerpts from that study:

The extent to which environmental noise disturbs human sleep patterns varies greatly from individual to individual as well as from one time to another for any particular individual. Whether an individual is aroused by a noise depends upon the individual's sleep state and sleep habits, the loudness or suddenness of the noise, the information value of the noise (a child crying, for example), and other factors.

Early studies of the effects of noise on sleep disturbance produced varying results. A major factor in these differences, though, is whether the study evaluated people sleeping in a laboratory or in their own homes. Generally laboratory studies have shown considerably more sleep disturbance than is evident in field studies. More recent studies, all conducted in the field, have produced relatively consistent results. These studies have included:

- *A 1990 British Study;*
- *A 1992 U.S. Air Force study on residents near Castle Air Force Base and Los Angeles International Airport; and*
- *A 1995 study comparing the effects of the closure of Stapleton International Airport with the opening of Denver International Airport.*

In 1997, the Federal Interagency Committee on Aviation Noise (FICAN) sought to put the subject to rest with publication of a recommended new dose-response curve predicting awakening. This curve was calculated using data from the above three studies, among others. The 1997 FICAN curve represents the upper limit of the observed field data and should be interpreted as predicting the maximum percent of the exposed population expected to be behaviorally awakened.

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 acceptable noise levels for existing and proposed land uses. The City of Sacramento is currently in the process of updating the current 1988 General Plan.

The City of Sacramento General Plan does not have a stand-alone Noise element. Instead, goals, policies, and information related to noise are included in the Health and Safety Element of the General Plan. This Element establishes maximum acceptable interior and exterior noise level criteria for new single-family development, multi-family development, schools, and libraries. Of these, the SMCS project would include only multi-family uses. The General Plan specifies a maximum interior noise level of 45 dB Ldn, and a maximum noise level of 60 dB Ldn in common outdoor use areas associated with multi-family development (see Figure 6.6-2a and 6.6-2b).

The General Plan also 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.

Policy 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 3.² 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.

Policy 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.

Policy 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.

² This Figure is included in this section as Figure 6.6-2a.

LAND USE CATEGORY	COMMUNITY NOISE EXPOSURE L _{dn} OR CNEL db					
	55	60	65	70	75	80
Residential	////////////////////					
			////////////////////)))))))))	+++++	
Transient Lodging – Motels, Hotels	////////////////////					
			////////////////////)))))))))	+++++	
Schools, Libraries, Churches, Hospitals, Nursing Homes	////////////////////					
			////////////////////)))))))))	+++++	
Auditoriums, Concert Halls, amphitheatres	////////////////////					
				+++++		
Sports Arena, Outdoor Spectator Sports	////////////////////					
					+++++	
Playgrounds, Neighborhood Parks	////////////////////					
)))))))))	+++++	
Golf Courses, Riding Stables, Water Recreation, Cemeteries	////////////////////					
)))))))))	+++++	
Office Buildings, business Commercial and Professional	////////////////////					
			////////////////////)))))))))	
Industrial Manufacturing, Utilities Agriculture	////////////////////					
				////////////////////)))))))))	

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 should be discouraged. If new construction or development 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.	

FIGURE 6.6-2a
Land Use Compatibility for Community Noise Environments

Applicable Area

Noise Source	Land Use	Interior	Exterior	Statement Requirements	Noise Element Requirements
Traffic or fixed source (Industrial, plants, etc.)	Single Family	X	X	None	$L_{dn} < 45 \text{ dB}^2$
	Single Family		X	None	$L_{dn} \leq 60 \text{ dB}$ in backyards
	Multi-Family ¹	X		$L_{dn} < 45 \text{ dB}$	$L_{dn} < 45 \text{ dB}$
	Multi-Family		X	None	$L_{dn} \leq 60 \text{ dB}$ in common outdoor use areas
	Schools	X		None	Noisiest hourly $L_{ea} \leq 40 \text{ dB}$ during school day
	Schools		X	None	$L_{dn} \leq 60 \text{ dB}$
	Libraries	X		None	Noisiest hour $L_{eq} \leq 45 \text{ dB}$
	Libraries		X	None	None
Aircraft	Single-Family	X		None	$L_{dn} \leq 45 \text{ dB}$ and maximum instantaneous levels of $\leq 50 \text{ dBA}$ in bedrooms and $\leq 55 \text{ dBA}$ in other habitable rooms ²
	Single-Family		X	CNEL $\leq 65 \text{ dB}$ (State Aeronautics Noise Standards) requirement does not apply to Mather and McClellan's AFB's	CNEL $\leq 60 \text{ dB}$ for Metro Airport CNEL $\leq 65 \text{ dB}$ for all others
	Multi-Family	X		$L_{dn} \leq 45 \text{ dB}$	$L_{dn} \leq 45 \text{ dB}$ and maximum instantaneous levels of $\leq 50 \text{ dBA}$ in bedrooms and $\leq 55 \text{ dBA}$ in other habitable rooms ²
	Multi-Family		X	CNEL $\leq 65 \text{ dB}$ (State Aeronautics Noise Standards) requirement does not apply to Mather and McClellan's AFB's	CNEL $\leq 60 \text{ dB}$ for Metro Airport CNEL $\leq 65 \text{ dB}$ for all others
	Schools	X		None	Noisiest hourly $L_{eq} \leq 40 \text{ dB}$ during school day
	Schools		X	CNEL $\leq 65 \text{ dB}$ (State Aeronautics Noise Standards) requirement does not apply to Mather and McClellan's AFB's	CNEL $\leq 60 \text{ dB}$ for Metro Airport CNEL $\leq 65 \text{ dB}$ for all others
	Libraries	X		None	Noisiest hour $L_{eq} \leq 45 \text{ dB}$
	Libraries		X	None	None
Rail Traffic	Single-Family	X		None	$L_{dn} \leq 45 \text{ dB}$ and maximum instantaneous levels of $\leq 50 \text{ dBA}$ in bedrooms and $\leq 55 \text{ dBA}$ in other habitable rooms ²
	Single-Family		X	None	$L_{dn} \leq 60 \text{ dB}$
	Multi-Family	X		$L_{dn} \leq 45 \text{ dB}$ unless there are less than 4 trains per day between 7:00 a.m. and 10:00 p.m. and there are no trains between 10:00 p.m. and 7:00 a.m.	$L_{dn} \leq 45 \text{ dB}$ and maximum instantaneous levels of $\leq 50 \text{ dBA}$ in bedrooms and $\leq 55 \text{ dBA}$ in other habitable rooms ²
	Multi-Family		X	None	$L_{dn} \leq 60 \text{ dB}$
	Schools	X		None	Noisiest hourly $L_{eq} \leq 40 \text{ dB}$ during school day
	Schools		X	None	Maximum instantaneous levels $\leq 85 \text{ dBA}$
	Libraries	X		None	Noisiest hour $L_{eq} \leq 45 \text{ dB}$
	Libraries		X	None	None

1 Multi-family includes hotel, motel, apartment houses, and dwellings other than detached single-family dwellings as defined by title 24, Part 2, California Administrative Code.

2 The requirement for interior noise exposure is triggered when the exterior L_{dn} exceeds 60 dB.

3 Projects for which U.S. Department of HUD financing is requested are subject to HUD noise requirements. The noise element requirements listed in this table are at least as stringent as the HUD requirements.

FIGURE 6.6-2b

Maximum Acceptable Interior and Exterior Noise Levels for New Development without Mitigation

“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.

Policy 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.

Policy 2: 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.

Policy 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.

Policy 2: Encourage the incorporation of the latest noise control technologies in all projects.

City of Sacramento Noise Ordinance Requirements

For noise sources, other than transportation-related sources, the City of Sacramento Noise Ordinance is used for determining land use compatibility. Section 6.68.060 of the Sacramento City Code (Noise Control) states that it is unlawful for any person at any location within the City to create any noise which causes the noise levels on the affected residential property to exceed the noise standards shown in Table 6.6-4.

The City of Sacramento Noise Ordinance also provides exemptions for construction activities. The following is contained within Section 8.68.080 of Chapter 8.68 Noise Control of the Health and Safety Element:

E. Noise sources due to the erection (including excavation), demolition, alteration or repair of any building or structure between the hours of seven a.m. and six p.m. on Monday, Tuesday, Wednesday, Thursday, Friday, and Saturday, and between nine a.m. and six p.m. on Sunday; provided, however, that the operation of an internal combustion engine shall not be exempt pursuant to this subsection if such engine is not equipped with suitable exhaust and intake silencers which are in good working order. The director of building inspections, may permit work to be done during the hours not exempt by this subsection in the case of urgent necessity and in the interest of public health and welfare for a period not to exceed three days. Application for this exemption may be made in conjunction with the application for the work permit or during progress of the work.

Table 6.6-4

**Sacramento City Noise Ordinance Standards
Applicable at Exterior Spaces of Residential Uses**

Cumulative Duration of Intrusive Sound	Noise Metric	Daytime, dB	Nighttime, dB
Cumulative period of 30 minutes per hour	L ₅₀	55	50
Cumulative period of 15 minutes per hour	L ₂₅	60	55
Cumulative period of 5 minutes per hour	L ₀₈	65	60
Cumulative period of 1 minute per hour	L ₀₂	70	65
Level not to be exceeded for any time during hour	L _{max}	75	70

Notes: Daytime is defined as 7 a.m. to 10 p.m. and Nighttime is defined as 10 p.m. to 7 a.m.

Each of the noise limits specified above shall be reduced by 5 dBA for impulsive or simple tone noises or for noises consisting of speech or music. If the existing ambient noise levels exceed that permitted in the first four noise-limit categories, the allowable limit shall be increased in 5 dB increments to encompass the ambient.

Source: City of Sacramento Noise Ordinance.

IMPACTS AND MITIGATION MEASURES

Methods of Analysis

The SMCS project is analyzed on both a project-specific level and program level. The project-specific analysis focuses on noise associated with project construction and operation of the following SMCS project components: Women's and Children's Center (WCC), SMF Building, Community Parking Structure, Residential, and Future MOB. The program level analysis addresses the Children's Theatre of California (B Street Theatre). The location of the new theatre is on the south side of Capitol Avenue on the corner of Capitol Avenue and 27th Street. The noise sources to be evaluated on a project level at existing noise-sensitive land uses in the project vicinity are increases in traffic noise, helicopter operations, and construction noise levels. Noise impacts upon the project area are limited to traffic noise and noise associated with the proposed helistop. It is anticipated that the primary noise sources for the Theatre analysis would be associated with construction of the facility and operational traffic.

Traffic Noise Impact Assessment Methodology

To assess noise impacts due to project-related traffic increases on the existing local roadway network, traffic noise levels are predicted at a representative distance for both the Existing Plus Project and Existing No Project conditions.

The FHWA traffic noise prediction model was used to predict Existing Plus Project traffic noise levels at a representative distance of 35 feet from the roadway centerline. The FHWA Model was also used to predict the Future (2025) With Project and Future (2025) Without Project Scenarios. The City of Sacramento may also implement a program to convert some existing one-way streets in the vicinity of the project to two-way streets. The FHWA Model was also used to calculate traffic noise levels for this two-way scenario both with and without the project.

Helicopter Noise Impact Assessment Methodology

The SMCS project includes a non-emergency helistop which would be located at the southern section of the roof of the WCC. The helistop would be used for periodic scheduled transfers of seriously ill infants, children, and adults to the hospital from varying counties in northern California, and from western Nevada. For the purposes of this analysis, helicopter trips are conservatively estimated at approximately 200 round-trips per year.

There is no primary provider of helicopter service for the hospital. The types of helicopters which may use the facility include BK117, BO105, A109, and Bell 206 Long Ranger helicopters.

There two basic approach and departure flight paths. The approach and departure flight paths generally follow Capital City Freeway from the north to the south or the south to the north. The approach from the north is on a heading of approximately 180° , at an altitude of 1,000 feet mean sea level (MSL), and descending at a rate of 500 feet per minute. The departure would continue on the heading of 180° to the south. The approach from the south is on a heading of approximately 360° , at an altitude of 1,000 feet MSL, and descending at a rate of 500 feet per minute. The departure would continue on the heading of 360 degrees to the north.

To describe noise levels associated with the proposed helicopter operations, a series of noise measurements were performed during pre-arranged helicopter operations. The noise level measurements were conducted on February 19, 2004. The noise level measurements were conducted at 11 noise measurement sites, as shown on Figure 6.6-1. The sites were selected to provide meaningful technical data to develop a noise level data base for noise prediction, to calibrate the noise modeling of the proposed helicopter operations, to represent noise levels at the nearest residences, and to determine the effects of shielding of helicopter noise by intervening buildings. To represent a worst case noise exposure, the noise level measurements were conducted for a Bell 206 Long Ranger helicopter.

Noise measurements were conducted for a series of arrivals and departures for both flight tracks. The pertinent noise level data which was collected for each operation included the sound exposure levels (SEL) and the maximum noise level (L_{max}). Table 6.6-5 provides a description of each noise measurement site and the results of the noise level measurements for each site. The results indicate the mean measured sound level for each event.

As a means of developing noise contours associated with the proposed helicopter operations, Bollard & Brennan, Inc. used the Federal Aviation Administration (FAA) Integrated Noise Model (INM) Version 6.1. The INM has the ability to develop noise contours for both fixed wing aircraft (airplanes) and helicopter operations. The INM has an extensive data base for various helicopters, including the Bell 206 Long Ranger. The INM also allows user input for all aspects of aircraft noise levels and operational characteristics. However, the INM does not account for shielding from buildings or other structures such as elevated roadways.

Inputs to the model include the helicopter type, operational characteristics such as flight path, air speed, rate of descent and climb, thrust settings and head wind. One of the INM outputs is a grid analysis. The grid analysis allows the user to compare predicted noise levels, such as SEL values to measured noise levels. Therefore, prior to producing noise contours, it was important to compare the INM output to the field measurement data which was collected on February 19 2004. The results of the analysis indicated that the INM under predicted noise levels at noise measurement locations.

Table 6.6-5
Summary of Staged Helicopter Noise Measurement Results
February 19, 2004

Location	Type of Operation	Mean Sound Level, dB	
		SEL	L _{max}
Site 1 – 29 th Street and L Street	Arrival	99.1 dB	94.8 dB
	Departure	96.8 dB	88.2 dB
Site 2 – 28 th Street and Capitol Avenue	Arrival	94.2 dB	85.1 dB
	Departure		
Site 3 – 29 th Street and J Street	Arrival	96.7 dB	83.3 dB
	Departure	90.0 dB	80.5 dB
Site 4 – 29 th Street and H Street	Arrival	95.1 dB	85.3 dB
	Departure	87.2 dB	77.4 dB
Site 5 – 29 th Street and N Street	Arrival	96.0 dB	84.6 dB
	Departure	93.9 dB	83.3 dB
Site 6 – 2814 I Street (Interior Master B.R.)	Arrival	66.0 dB	56.5 dB
	Departure	58.5 dB	50.5 dB
Site 7 – 2814 I Street (Roof top of Master B.R.)	Arrival	92.6 dB	81.5 dB
	Departure	88.0 dB	79.5 dB
Site 8 – 2700 D Street	Arrival	84.5 dB	72.0 dB
	Departure	79.0 dB	69.0 dB
Site 9 – Alhambra Avenue and J Street	Arrival	83.8 dB	71.8 dB
	Departure	80.0 dB	68.0 dB
Site 10 – 27 th Street and Capitol Avenue	Arrival	80.7 dB	70.0 dB
	Departure	84.4 dB	70.7 dB
Site 11 – 29 th Street and P Street	Arrival	95.4 dB	85.2 dB
	Departure	89.6 dB	78.3 dB

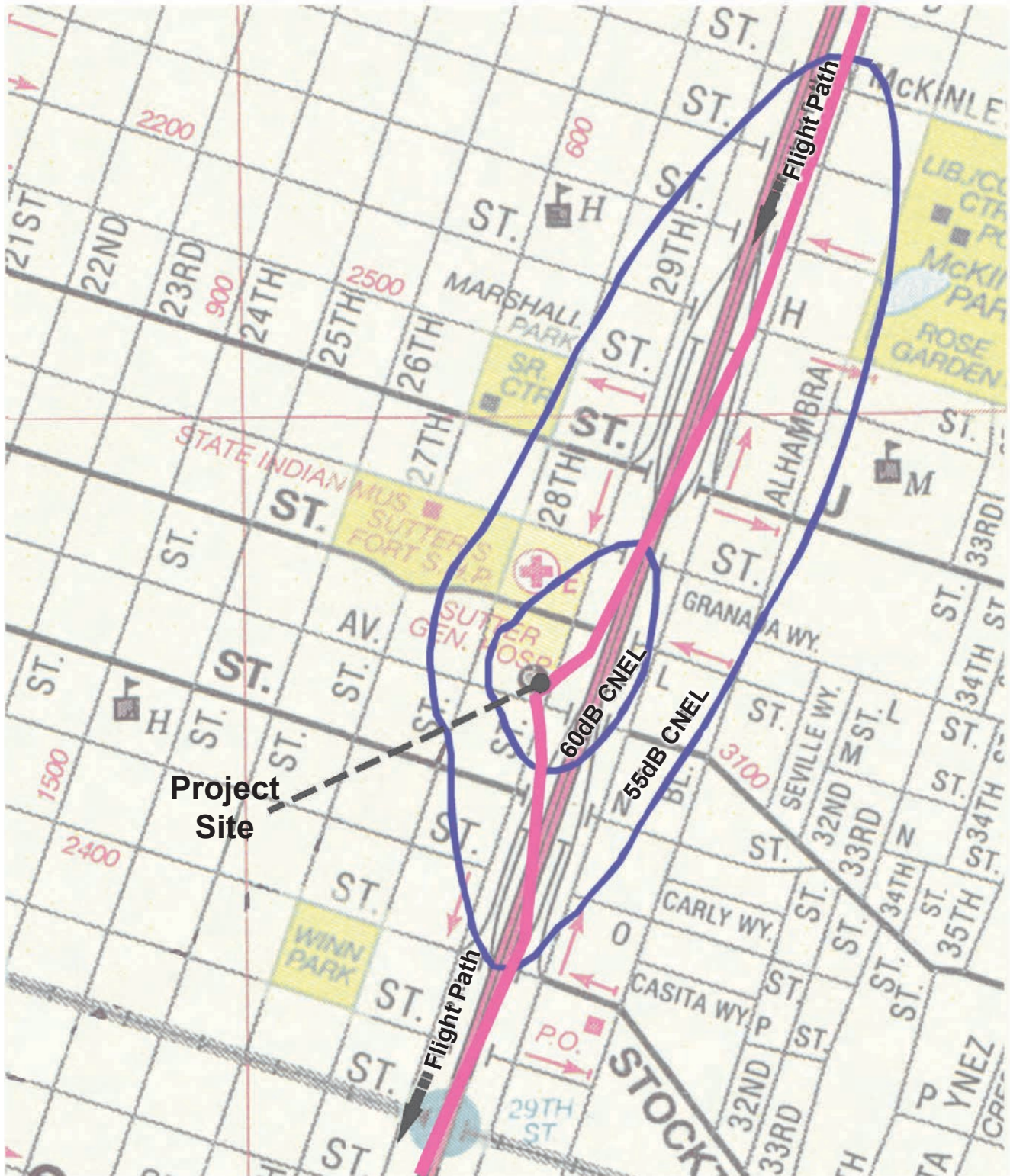
Source: Bollard & Brennan, Inc., 2004.

Adjustments were made to the INM noise curves as a result of the under-predicted noise levels at the noise measurement locations. The results of the adjustments to the noise curves resulted in a very close correlation between the measured noise levels and the predicted noise levels. The predicted noise levels are slightly higher than those which were measured at locations more than five blocks from the proposed helistop. Table 6.6-6 shows the comparison of the INM model predicted SEL values and the measured SEL values at each of the noise monitoring locations. Bollard & Brennan, Inc. utilized the INM to develop noise level contours for helicopter operations. The contours which were developed included CNEL contours and SEL contours.

CNEL Contours

Two sets of CNEL contours were developed for the helistop.

The first set of CNEL contours was based upon an approach from the north and departure to the south. The second set of CNEL contours was based upon an approach from the south and departure to the north. The contours assumed a worst case with two arrivals and two departures occurring during the nighttime hours. Figures 6.6-3 and 6.6-4 show the locations of the 60 dB CNEL and 55 dB CNEL contours for both approach and departure scenarios. The 65 dB CNEL contours were not plotted due to the fact that it was confined to the project site.



Project Site

Flight Path

Flight Path

60dB CNEL

55dB CNEL



FIGURE 6.6-3
Approach from North/South Departure Helicopter CNEL Contours

Not to Scale

10828-02

Source: Bollard and Brennan Noise, Inc., 2004

Sutter Medical Center, Sacramento



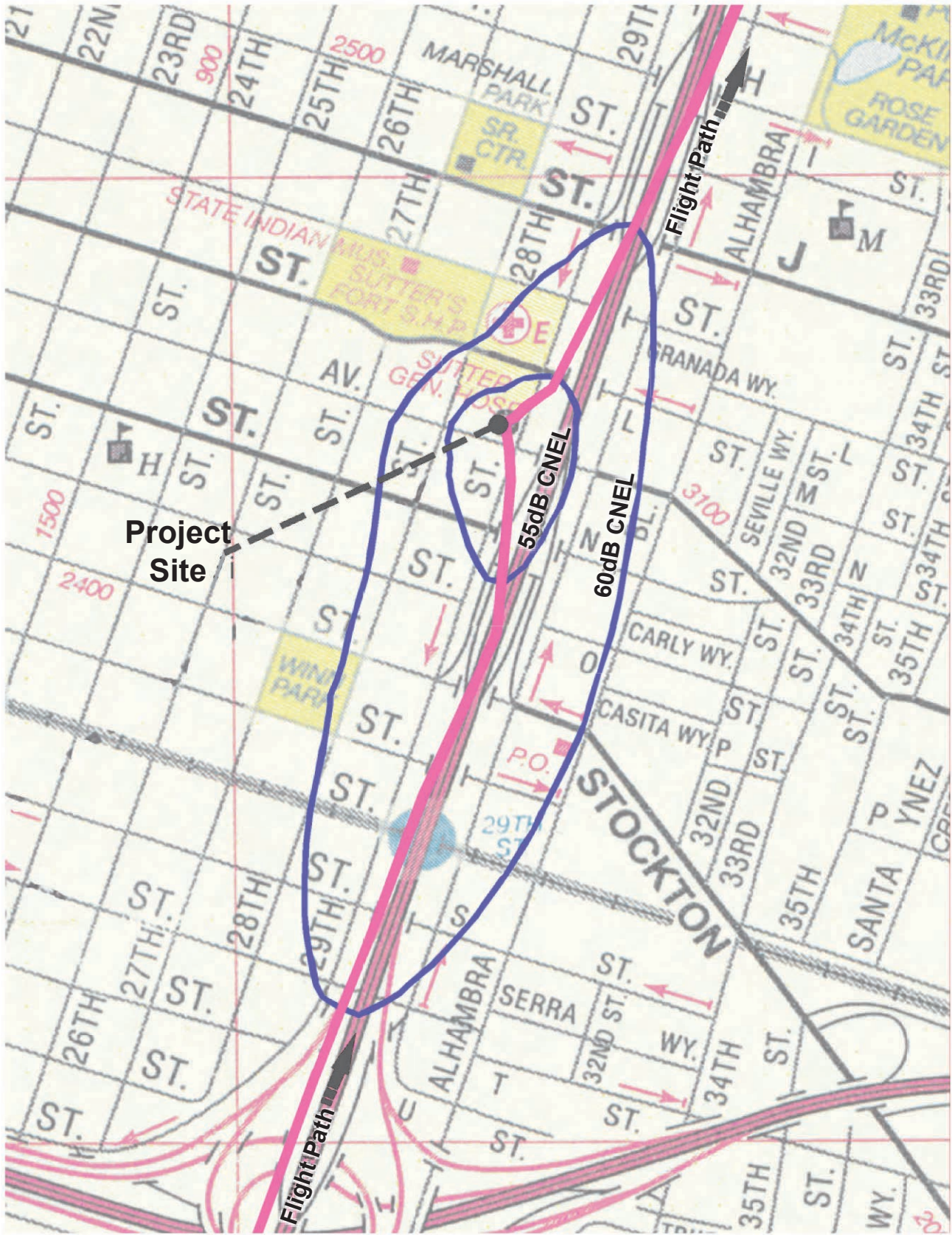


FIGURE 6.6-4
Approach from South/North Departure Helicopter CNEL Contours

Not to Scale



10828-02

Source: Bollard and Brennan Noise, Inc., 2004

Sutter Medical Center, Sacramento



Table 6.6-6**Comparison of INM Modeled Noise Levels and Measured Noise Levels**

Location	Type Operation	Mean Sound Level, dB	
		Measured SEL	INM Model SEL
Site 1 – 29 th Street and L Street	Arrival	99.1 dB	100.6 dB
Site 2 – 28 th Street and Capitol Avenue	Arrival	94.2 dB	95.7 dB
Site 3 – 29 th Street and J Street	Arrival	96.7 dB	95.5 dB
Site 4 – 29 th Street and H Street	Arrival	95.1 dB	94.0 dB
Site 5 – 29 th Street and N Street	Arrival	96.0 dB	96.8 dB
Site 6 – 2814 I Street (Interior Master B.R.)	Arrival	66.0 dB	NA
Site 7 – 2814 I Street (Roof top of Master B.R.)	Arrival	92.6 dB	93.4 dB
Site 8 – 2700 D Street	Arrival	84.5 dB	87.3 dB
Site 9 – Alhambra Avenue and J Street	Arrival	83.8 dB	88.3 dB
Site 10 – 27 th Street and Capitol Avenue	Arrival	80.7 dB	86.1 dB
Site 11 – 29 th Street and P Street	Arrival	95.4 dB	94.2 dB

Source: Bollard & Brennan, Inc., 2004.

SEL Contours

Two sets of SEL contours were also developed to illustrate the potential for sleep disturbance. The first set of SEL contours was based upon an approach from the north and departure to the south. The second set of SEL contours was based upon an approach from the south and departure to the north. The contours represent single noise events for an arrival and a departure. Figures 6.6-5 and 6.6-6 show the locations of the 85 dB, 90 dB and 95 dB SEL contours for both approach and departure scenarios.

Construction Noise Impact Assessment Methodology

During the construction phases of the SMCS project, noise from construction activities would increase the noise environment in the immediate area. Activities involved in construction would generate noise levels ranging from 85 to 90 dB at a distance of 50 feet, as indicated by Table 6.6-7. Construction activities would be temporary in nature, typically occurring during normal working hours.

Noise would also be generated during the construction phase by increased truck traffic on area roadways. A significant project-generated noise source would be truck traffic associated with the transport of heavy materials and equipment to and from construction sites. This noise increase would be of short duration, and would likely occur primarily during daytime hours. Based upon the project description, there would not be any pile driving associated with project construction activities.

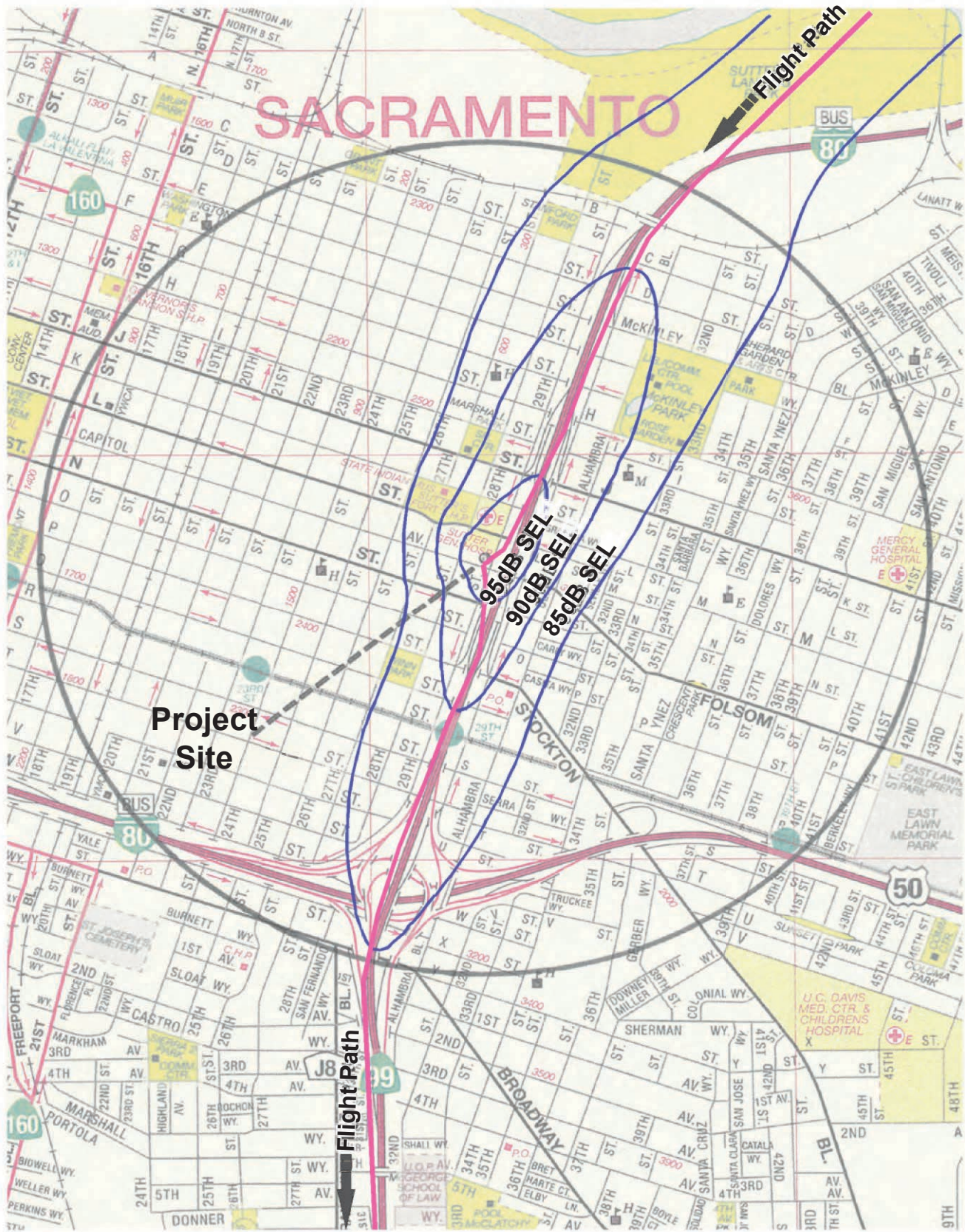
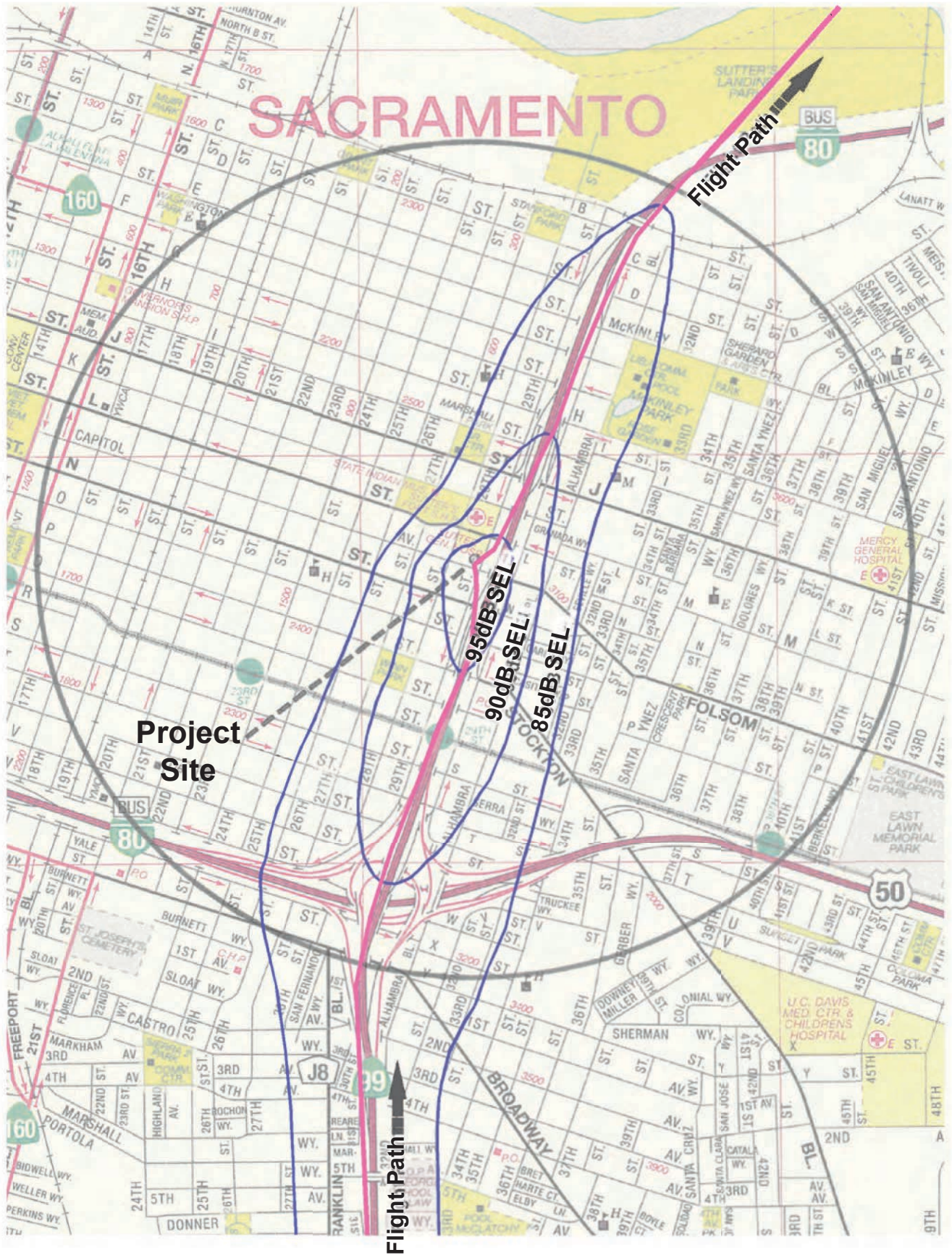


FIGURE 6.6-5
Approach from North/Depart to South Helicopter SEL Contours

Not to Scale



Project Site

95dB SEL

90dB SEL

85dB SEL

Flight Path

Flight Path



FIGURE 6.6-6
Approach from South/Depart to North Helicopter SEL Contours

Not to Scale

10828-02

Source: Bollard and Brennan Noise, Inc. 2004

Sutter Medical Center, Sacramento



Table 6.6-7

Noise Ranges of Typical Construction Equipment

Construction Equipment	Noise Levels in dBA L_{eq} at 50 feet ¹
Front Loader	73-86
Trucks	82-95
Cranes (moveable)	75-88
Cranes (derrick)	86-89
Vibrator	68-82
Saws	72-82
Pneumatic Impact Equipment	83-88
Jackhammers	81-98
Pumps	68-72
Generators	71-83
Compressors	75-87
Concrete Mixers	75-88
Concrete Pumps	81-85
Back Hoe	73-95
Pile Driving (peaks)	95-107
Tractor	77-98
Scraper/Grader	80-93
Paver	85-88

Note:

1. Machinery equipped with noise control devices or other noise-reducing design features does not generate the same level of noise emissions as that shown in this table.

Source: U.S. EPA, 1971.

Construction Vibration Impact Methodology

Vibration caused by construction activities can be interpreted as energy transmitted in waves through the soil mass. These energy waves generally dissipate with distance from the vibration source, due to spreading of the energy and frictional losses. The energy transmitted through the ground as vibration, if great enough, can result in structural damage. Certain levels of vibration can also cause annoyance to people nearby and can potentially disrupt sleep. Groundborne vibration is measured in vibration decibels (VdB). Table 6.6-8 shows typical vibration source levels for construction equipment.

Table 6.6-8

Vibration Source 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
Small Bulldozer	58	52	50	48	46

Source: Federal Railroad Administration, 1998; and EIP Associates, 2005.

Standards of Significance

Generally, a project may have a significant effect on the environment if it will substantially increase the ambient noise levels for adjoining areas or expose people to severe noise levels. In practice, more specific professional standards have been developed, as discussed previously in the Regulatory Setting section. These standards state that a noise impact may be considered significant if it would generate noise that would conflict with local planning criteria or ordinances, or substantially increase noise levels at noise-sensitive land uses.

A helistop is proposed on the roof of the WCC. Because the Children’s Theatre of California project component does not include a helistop no impact would occur. Therefore, in the impact analysis the theatre component does not include an analysis that addresses helicopter noise.

In terms of sleep disturbance, there are no criteria which have been established which assess the rate of sleep disturbance which is considered acceptable or unacceptable. For the purposes of this analysis, the potential for sleep disturbance will be discussed for informational purposes.

For the purposes of this EIR, impacts associated with the increase in noise are considered significant if the SMCS project would:

- Expose noise-sensitive land uses in the project vicinity to traffic noise levels in excess of the City of Sacramento General Plan Noise Element standards or result in a perceptible ambient noise level increase of 5 dB (see Table 6.6-4);
- Expose existing residences to noise levels in excess of the standards contained within the City of Sacramento Noise Ordinance standards;
- Result in residential interior noise levels of 45 L_{dn} or greater caused by noise level increases due to the project;
- Expose residences to groundborne vibration decibels (VdB) in excess of 81 VdB.
- Expose occupied existing and project residential and commercial areas to vibration that would compromise the structural integrity of these buildings; or
- Expose residences to helicopter noise greater than the Caltrans Division of Aeronautics Standard of 65 dB CNEL.

Impact 6.6-1: Construction activities would intermittently generate noise levels above existing ambient levels in the project vicinity.		
	SMCS Project	Theatre
Significance Before Mitigation	Short-term Significant	Short-term Significant
Mitigation Measures	Mitigation Measure 6.6-1	Mitigation Measure 6.6-1
Significance After Mitigation	Short-term Significant and Unavoidable	Short-term Significant and Unavoidable

SMCS Project

During construction of the proposed SMCS project, noise levels would be produced by the operation of heavy-duty equipment and various other construction activities. This construction noise would affect surrounding uses, but would be temporary, lasting only until the project construction is completed. As discussed in the Environmental Setting, there are sensitive uses in the vicinity of the project area (primarily residences, schools, and existing hospital uses), some of which are just across the street from areas where development activity, including demolition activities, would occur. During construction, the nearby residences would be occupied and the nearby hospital would continue to accommodate patients.

The Sacramento Municipal Code, Title 8 – Health and Safety, Chapter 8.68 – Noise Control, states that “it is unlawful for any person to make or continue or cause to be made or continued 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”. This chapter also sets “not-to-be-exceeded” exterior noise standards for residential property.

Even though Chapter 8.68 sets general noise limits, the chapter also exempts certain activities from the provisions of the rest of the chapter. One of these activities is erection (including excavation), demolition, alteration or repair of any building or structure, as long as the activity takes place between certain hours. These specified hours ensure that construction occurs only during daytime hours; thereby minimizing the chance that noise would be generated during the more “sensitive” hours when people may be trying to sleep (see Noise Ordinance text on page 6.6-9).

Because construction would occur during hours when buildings surrounding the different project site(s) are occupied, construction noise could impact these uses. As shown in Table 6.6-7, jack-hammers could produce peak levels of up to 98 dBA L_{eq} at 50 feet. Jack-hammers or other impact equipment would be expected to be used during demolition of the existing buildings. Since noise from a point source usually attenuates at approximately 6 dBA per doubling of distance, this would result in noise levels of about 101 dBA L_{eq} at 100 feet, and 95 dBA L_{eq} at 200 feet when this activity was ongoing.

Even though the City of Sacramento Municipal Code exempts construction activities from the noise standards specified elsewhere in the Municipal Code, this would do nothing to reduce the levels of construction noise experienced by occupants of nearby buildings, including Sutter General Hospital, the Buhler Building, other medical offices, and residents during the day. Construction activities such as the use of jackhammers and tractors would produce high levels of noise. Consequently construction noise, at least during the initial phases of demolition and grading, would create a **short-term significant impact** to surrounding uses.

Theatre

Similar to the SMCS project, the proposed Children’s Theatre of California would generate noise during construction. Senior housing exists across the street from the theatre site as well as other residential and office uses. Daytime construction noise would be a special issue at this senior housing, because residents are more likely to be at home during the day. Demolition and grading activities could generate particularly high levels of noise that could affect residents. This would be considered a temporary **short-term significant impact**.

Mitigation Measures

The following measures would apply to both the SMCS project and the proposed Theatre. The measures would reduce noise from construction activities, but would not reduce noise to a level that would make it less than significant. Consequently, this would remain a *short-term significant and unavoidable impact*.

6.6-1 (SMCS/Theatre)

- (a) *All construction equipment shall be equipped with factory matching mufflers and in good working order.*
- (b) *All staging areas and water tanks shall be located as far away from residential, hospital, medical office, and other noise-sensitive uses as possible.*

Impact 6.6-2: Construction activities could result in groundborne vibration.		
	SMCS Project	Theatre
Significance Before Mitigation	Less than Significant	Less than Significant
Mitigation Measures	None required	None required
Significance After Mitigation	N/A	N/A

SMCS Project

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 6.6-8 shows typical vibration levels for construction equipment.

Construction-related vibration has two potential impacts. First, vibration at high enough levels can disturb people trying to sleep. Thresholds for this vibration have been developed by the Federal Railway Administration, which has determined that any vibration over 80 VdB can be a significant impact at places where people sleep. Second, groundborne vibration can potentially damage the foundations and exteriors of existing, older structures. Groundborne vibration that can cause this kind of damage is typically limited to impact equipment, especially pile-drivers.

The closest buildings where people would sleep would be over 50 feet away from all project site boundaries. As shown in Table 6.6-8, this distance would ensure that VdB levels would not exceed the 80 VdB threshold at which sleep disturbance could occur. Consequently, even if impact equipment such as jackhammers were used during demolition or construction of the project, sleep would not be affected. Also, the Sacramento Municipal Code requires that construction activity take place only outside of recognized sleep hours, so sleep patterns of nearby residences would not likely be affected.

Structural damage to existing buildings due to construction vibration would only be an issue during pile-driving, since pile-drivers are the only pieces of impact equipment that produce groundborne vibration levels great enough to result in this kind of damage. Pile-driving would not occur as part of the SMCS project. Instead, the project applicant would use ground-drilling equipment in order to sink piles.

Construction-related vibration would not reach the 80 VdB threshold of significance and would not cause annoyance to occupants of these buildings. Also, no pile-driving would occur during construction, so no structural damage could occur to existing buildings. Consequently construction vibration would result in an impact that would be **less than significant**.

Theatre

Construction of the proposed Children’s Theatre could create groundborne vibration. Residential and other sensitive receptors are not located within 50 feet of the site of the proposed Theatre. Consequently, according to Table 6.6-8, construction activities could not exceed the 80 VdB threshold and disturb sleep. Also, as discussed above, construction would be limited to daytime hours when sleep would not normally be disturbed. Construction of the Theatre would not require pile-driving, and so the structural integrity of nearby buildings would not be compromised. Consequently, vibration from construction of the theatre would be considered a **less-than-significant impact**.

Mitigation Measures

None required.

Impact 6.6-3: The SMCS project could result in an increase in existing traffic noise levels at existing land uses in the project vicinity on the existing local roadway network.		
	SMCS Project	Theatre
Significance Before Mitigation	Less than Significant	Less than Significant
Mitigation Measures	None required	None required
Significance After Mitigation	N/A	N/A

SMCS Project

The SMCS project would increase ambient noise levels by increasing traffic on local roads. Typically, a 3 dBA increase in ambient noise levels is barely perceptible, and a 5 dBA increase is readily noticeable. Consequently, if any sensitive noise receptors would be exposed to an ambient increase of 5 dBA or more, this increase would be considered significant. Sensitive receptors are described in the Environmental Setting section.

Table 6.6-9, shows both existing and Existing Plus Project noise levels for various roadways in the vicinity of the project area. As shown, some roadways nearby already generate traffic that creates noise levels over 60 dBA Ldn at receptors along these roads. In no case, however,

would traffic noise levels currently below 60 dBA be increased to the extent that receptors along the roads would experience noise levels over 60 dBA Ldn as a result of the project. In general, traffic noise levels along roads in the vicinity of the project would not increase by more than 1.6 dBA, as shown in Table 6.6-9. This would not be a noticeable noise increase. Consequently, this would be considered a *less-than-significant impact*.

Table 6.6-9

Existing Traffic Noise Levels With and Without SMCS Project

Roadway	Road Segment	Noise Levels (L _{dn}) 35 Feet from Centerline		
		Existing No Project (dB)	Existing Plus Project (dB)	Change (dB)
J Street	27 th /28 th	66.8	66.8	0
J Street	28 th /29 th	67.0	67.1	+0.1
26 th Street	K/L	55.4	57.0	+1.6
26 th Street	L/Capitol Avenue	55.4	55.5	+0.1
26 th Street	Capitol Avenue/N	54.7	55.4	+0.7
K Street	27 th /28 th	64.5	64.7	+0.2
K Street	28 th /29 th	65.0	65.4	+0.4
L Street	25 th /26 th	63.6	64.0	+0.4
L Street	26 th /27 th	63.5	63.9	+0.4
28 th Street	J/K	59.5	59.5	0
28 th Street	N/O	58.2	58.2	0
29 th Street	L/Capitol Avenue	66.3	66.5	+0.2
Capitol Avenue	25 th /26 th	63.9	63.9	0
Capitol Avenue	26 th /28 th	64.1	64.0	-0.1
Capitol Avenue	28 th /29 th	64.8	66.2	+1.4
N Street	27 th /28 th	63.9	63.9	0

Source: EIP Associates, 2005.

Theatre

The Theatre component would also generate traffic volumes, which would increase noise levels on local roadways adjacent to sensitive receptors. However, the Theatre would only generate traffic before and after performances, when theatre-goers are either going to or departing from a performance. This project-related traffic would occur intermittently, and due to the size of the proposed Theatre, the traffic is not anticipated to exceed noise levels over 60 dBA. Consequently, while the project could increase traffic noise at certain times, it would not generate an increase in traffic throughout the day that would result in a noticeable increase in noise. Therefore, the 24-hour noise values would not be significantly affected, and this would be considered a *less-than-significant impact*.

Mitigation Measures

None required.

Impact 6.6-4: Helicopter activities could exceed the City's exterior noise threshold.		
	SMCS Project	Theatre
Significance Before Mitigation	Less than Significant	N/A
Mitigation Measures	None required	N/A
Significance After Mitigation	N/A	N/A

SMCS Project

The SMCS project would include a helistop that would be used for non-emergency, scheduled transfers of patients to and from the hospital by helicopter. The helistop would be used intermittently on an as-needed basis. It is expected that no more than 200 landings would occur during the year. Helicopters would approach and depart from the roof of the WCC using two basic flight paths. These paths generally follow the Capital City Freeway from the north to the south or the south to the north. The approach from the north is on a heading of approximately 180 degrees, at an altitude of 1,000 feet mean sea level (MSL), and descending at a rate of 500 feet per minute. The departure would continue on the heading of 180 degrees to the south. The approach from the south is on a heading of approximately 360 degrees, at an altitude of 1,000 feet MSL, and descending at a rate of 500 feet per minute. The departure would continue on the heading of 360 degrees to the north.

Because helicopter flight paths would follow the Capital City Freeway, noise contours developed to evaluate helicopter noise generally follow the freeway as well. The 60 dB CNEL helicopter noise contour extends approximately three blocks north/south from about K Street to the north to about O Street to the south. East/west, the contour extends for about one and a half blocks to the west of the freeway.

The proposed helicopter operations would generate noise in residential areas that would be perceptible to residents. While this helicopter noise would be apparent to residents for short periods of time, the City of Sacramento General Plan standards for interior and exterior noise levels are measured over a 24-hour period. This 24-hour noise metric differs from other metrics such as L_{eq} , that measure noise levels over another, usually much shorter period of time. In contrast to L_{eq} , 24-hour standards evaluate noise levels when averaged over a much longer period, where very high or low noise levels average out and give a more accurate picture of ambient noise for an area. The short duration of helicopter noise during arrivals and departures would not be long enough to affect 24-hour noise levels. The impact to individuals from exposure to short-term helicopter noise is analyzed in Impact 6.6-7. As shown in Figures 6.6-3 and 6.6-4, the INM predicted CNEL contours indicate that no residential use would be exposed to noise levels in excess of the City of Sacramento exterior noise level criterion of 60 dB CNEL. Therefore, this is considered a **less-than-significant impact**.

Mitigation Measures

None required.

Impact 6.6-5: Helicopter activities could exceed Caltrans exterior noise thresholds.		
	SMCS Project	Theatre
Significance Before Mitigation	Less than Significant	N/A
Mitigation Measures	None required	N/A
Significance After Mitigation	N/A	N/A

SMCS Project

As noted in Impact 6.6-6, the project includes a helistop. Use of the helistop would occur intermittently and on an as-needed basis. The proposed helicopter operations could exceed the FAA or Caltrans Division of Aeronautics exterior noise level criterion of 65 dB Ldn/CNEL in residential areas. These noise levels would only occur during take-offs and landings, and would be of short duration. Consequently, they would not significantly affect 24-hour noise level standards. As shown in Figures 6.6-3 and 6.6-4, the INM predicted CNEL contours indicate that no residential uses would be exposed to noise levels in excess of 60 dB CNEL. Therefore, no residential uses would be exposed to noise levels in excess of 65 dB CNEL. This is considered a *less-than-significant impact*.

Mitigation Measures

None required.

Impact 6.6-6: Helicopter activities could exceed the city's interior noise thresholds.		
	SMCS Project	Theatre
Significance Before Mitigation	Less than Significant	N/A
Mitigation Measures	None required	N/A
Significance After Mitigation	N/A	N/A

SMCS Project

The proposed helicopter operations could exceed the City's interior noise level criterion of 45 dB L_{dn}/CNEL. A typical exterior to interior noise level reduction of 25 dB can be expected with windows in the closed position. Based on the noise measurement data collected for noise monitoring sites 6 and 7 (shown in Table 6.6-5), the minimum exterior to interior noise level reduction was 25 dB with the windows closed. Since no residential uses would be exposed to exterior helicopter noise levels in excess of 60 dB Ldn/CNEL, the interior noise levels are expected to comply with the City's interior noise level criterion of 45 dB Ldn/CNEL. Therefore, this is considered a *less-than-significant impact*.

Mitigation Measures

None required.

Impact 6.6-7: Helicopter activities could contribute to a sleep disturbance in adjacent neighborhoods.		
	SMCS Project	Theatre
Significance Before Mitigation	Potentially Significant	N/A
Mitigation Measures	Mitigation Measure 6.6-2	N/A
Significance After Mitigation	Significant and Unavoidable	N/A

SMCS Project

The proposed helicopter operations could result in sleep disturbance at existing residential areas adjacent to and near the proposed WCC. To describe noise levels due to the proposed helicopter operations, a series of noise measurements were performed during pre-arranged helicopter operations. The noise level measurements were conducted on February 19, 2004. The noise level measurements were conducted at 11 noise measurement sites. The sites were selected to provide meaningful technical data to develop a noise level data base for noise prediction, to calibrate the noise modeling of the proposed helicopter operations, to represent noise levels at the nearest residences, and to determine the effects of shielding of helicopter noise by intervening buildings. The measurement sites are shown by Figure 6.6-1. To represent worst case noise exposure, the noise level measurements were conducted for a Bell 206 Long Ranger helicopter.

Noise measurements were conducted for a series of arrivals and departures for both flight tracks. The pertinent noise level data which was collected for each operation included the sound exposure levels (SEL) and the maximum noise level (L_{max}). Table 6.6-10 provides a description of each noise measurement site and the results of the noise level measurements for each site. The results indicate the mean measured sound level for each event.

There are currently no established criteria establishing at what point sleep disturbance would occur, or what is considered acceptable. Using the acceptable noise level standards for various uses found in the City's General Plan is not appropriate because these standards use a 24-hour metric monitoring approach and helicopter noise would only affect people for short periods of time. Nevertheless, people living nearby could potentially be severely affected during the short duration of their exposure to the helicopter noise, especially if they were exposed during nighttime hours when they may be trying to sleep. Consequently, it is more appropriate to use the standards found in the City's Municipal Code. These standards, as shown in Table 6.6-4, set "not to be exceeded" exterior noise levels of 70 dBA during the nighttime hours of ten p.m. to seven a.m. The Municipal Code does not set interior noise levels for residences when noise is being generated by a source that is not another residence.

Table 6.6-10 shows monitored maximum noise levels at various locations in the vicinity of the heli-stop.³ As shown, maximum noise levels generated by the helicopter could easily exceed the 70 dBA maximum allowed by the Municipal Code at some areas containing residential uses, including apartments near L Street and 28th Street. Consequently, this would be considered a **significant impact**.

Table 6.6-10
Summary of Staged Helicopter Noise Measurement Results
February 19, 2004

Site	Type Operation	Mean Sound Level, dB	
		SEL	L _{max}
Site 1 – 29 th Street and L Street	Arrival	99.1 dB	94.8 dB
	Departure	96.8 dB	88.2 dB
Site 2 – 28 th Street and Capitol Avenue	Arrival	94.2 dB	85.1 dB
	Departure		
Site 3 – 29 th Street and J Street	Arrival	96.7 dB	83.3 dB
	Departure	90.0 dB	80.5 dB
Site 4 – 29 th Street and H Street	Arrival	95.1 dB	85.3 dB
	Departure	87.2 dB	77.4 dB
Site 5 – 29 th Street and N Street	Arrival	96.0 dB	84.6 dB
	Departure	93.9 dB	83.3 dB
Site 6 – 2814 I Street (Interior Master B.R.)	Arrival	66.0 dB	56.5 dB
	Departure	58.5 dB	50.5 dB
Site 7 – 2814 I Street (Roof top of Master B.R.)	Arrival	92.6 dB	81.5 dB
	Departure	88.0 dB	79.5 dB
Site 8 – 2700 D Street	Arrival	84.5 dB	72.0 dB
	Departure	79.0 dB	69.0 dB
Site 9 – Alhambra Avenue and J Street	Arrival	83.8 dB	71.8 dB
	Departure	80.0 dB	68.0 dB
Site 10 – 27 th Street and Capitol Avenue	Arrival	80.7 dB	70.0 dB
	Departure	84.4 dB	70.7 dB
Site 11 – 29 th Street and P Street	Arrival	95.4 dB	85.2 dB
	Departure	89.6 dB	78.3 dB

Source: Bollard & Brennan, Inc. 2004.

Mitigation Measures

The following mitigation measure could serve to limit maximum levels of helicopter noise by ensuring that helicopters use the flight paths following Capital City Freeway whenever possible. This would not necessarily reduce maximum noise levels as shown in Table 6.6-10. Consequently, this measure would not limit noise to the extent that it would significantly lessen the potential impact. The impact would remain *significant and unavoidable*.

³ As discussed in the Methods of Analysis, noise measurements were taken during a helicopter simulation in February 2004.

(SMCS)

6.6-2 All helicopter operations shall use the flight paths described in this EIR, unless safety precautions require a diversion from the flight paths.

Impact 6.6-8: The SMCS project could result in an increase in future traffic noise levels at existing land uses in the project vicinity on the existing local roadway network.		
	SMCS Project	Theatre
Significance Before Mitigation	Less than Significant	Less than Significant
Mitigation Measures	None required	None required
Significance After Mitigation	N/A	N/A

SMCS Project

In addition to increasing traffic noise in the near term, the SMCS project could also increase noise in future years. The future year analyzed in this case is 2025. Table 6.6-11 shows modeled traffic noise levels for future with project and future without project scenarios. As shown, all east/west lettered streets would have traffic noise levels greater than 60 dBA Ldn at 50 feet. For roadway segments with traffic noise levels below 60 dBA Ldn in the future, the project would increase noise levels along only the 28th Street roadway segment between J and K Streets above 60 dBA Ldn. However, there are no sensitive receptors along this roadway segment. Also, as shown in Table 6.6-11, no roadway would experience traffic noise level increases of more than 1.1 dBA Ldn in 2025 as a result of the project, when compared to the Without Project Scenario. This 1.1 dBA Ldn increase would not be a perceptible increase.

The City may also implement a traffic calming program where certain one-way streets in the vicinity of the project area would be converted to two-way streets. The traffic noise modeling for this future scenario is shown in Table 6.6-12. As shown, traffic noise levels would increase by no more than 2.1 dBA Ldn at any roadway. This would not be a perceptible increase in noise. Therefore, because future traffic noise with the project in 2025 would not differ significantly from future traffic noise without the project, the impact would be considered **less than significant**.

Theatre

The Children’s Theatre of California project would also generate traffic volumes that would increase noise levels on local roadways adjacent to sensitive receptors. However, the Theatre would only generate traffic before and after performances, when theatre-goers are either going to or departing from a performance. This project-related traffic would occur intermittently. Consequently, while the project could increase traffic noise at certain times, it would not increase traffic noise throughout the day. Therefore, the 24-hour noise values would not be significantly affected, and this would be considered a **less-than-significant impact**.

Table 6.6-11

**Future (Year 2025) Traffic Noise Levels
With and Without SMCS Project**

Roadway	Segment	Noise Levels (L_{dn}) 35 Feet from Centerline		
		Future No Project (dB)	Future Plus Project (dB)	Change (dB)
J Street	27 th /28 th	67.9	68.0	+0.1
J Street	28 th /29 th	68.3	68.3	0
26 th Street	K/L	55.3	56.4	+1.1
26 th Street	L/Capitol Avenue	55.5	55.6	+0.1
26 th Street	Capitol Avenue/N	54.7	55.2	+0.5
K Street	27 th /28 th	65.3	65.5	+0.2
K Street	28 th /29 th	65.8	66.0	+0.2
L Street	25 th /26 th	64.9	64.7	-0.2
L Street	26 th /27 th	65.2	64.6	-0.6
28 th Street	J/K	59.3	60.3	+1
28 th Street	N/O	58.8	59.0	+0.2
29 th Street	L/Capitol	66.9	67.1	+0.2
Capitol Avenue	25 th /26 th	65.8	65.5	-0.3
Capitol Avenue	26 th /28 th	66.0	66.2	+0.2
Capitol Avenue	28 th /29 th	65.5	66.3	+0.8
N Street	27 th /28 th	64.4	64.3	-0.1

Source: EIP Associates, 2005.

Table 6.6-12

**Future (Year 2025) Traffic Noise Levels, Two-Way Scenario
With and Without SMCS Project**

Roadway	Segment	Noise Levels (L_{dn}) 35 Feet from Centerline		
		Future No Project (dB)	Future Plus Project (dB)	Change (dB)
J Street	27 th /28 th	67.8	67.9	+0.1
J Street	28 th /29 th	68.0	68.1	+0.1
26 th Street	K/L	54.8	55.1	+0.3
26 th Street	L/Capitol Avenue	54.9	54.9	0
26 th Street	Capitol Avenue/N	54.5	55.1	+0.6
K Street	27 th /28 th	65.6	65.4	-0.2
K Street	28 th /29 th	66.1	66.2	+0.1
L Street	25 th /26 th	63.9	63.8	-0.1
L Street	26 th /27 th	63.0	63.7	+0.7
28 th Street	J/K	59.3	59.7	+0.4
28 th Street	N/O	58.9	59.1	+0.2
29 th Street	L/Capitol Avenue	66.4	68.5	+2.1
Capitol Avenue	25 th /26 th	65.9	65.9	0
Capitol Avenue	26 th /28 th	66.0	66.3	+0.3
Capitol Avenue	28 th /29 th	64.8	65.8	+1
N Street	27 th /28 th	64.7	64.8	+0.1

Source: EIP Associates, 2005.

Mitigation Measures

None required.

Impact 6.6-9: Future traffic noise levels may exceed acceptable noise level criteria at the exterior of the Women's and Children's Center.		
	SMCS Project	Theatre
Significance Before Mitigation	Significant	Less than Significant
Mitigation Measures	Mitigation Measure 6.6-3	None required
Significance After Mitigation	Less than Significant	N/A

SMCS Project

The City of Sacramento General Plan does not include interior noise standards for hospital uses. The General Plan does, however, specify a maximum "normally acceptable" exterior noise standard of 60 db Ldn. For residential uses, the General Plan specifies a "normally acceptable" exterior noise standard of no more than 60 db Ldn, and a "normally acceptable" interior noise standard of no more than 45 db Ldn.

As shown in Tables 6.6-9, 6.6-11, and 6.6-12, roadway noise levels at some streets adjacent to the WCC would produce traffic noise levels in excess of the 60 db Ldn standard at 35 feet. This indicates that exterior traffic noise levels at the hospital would exceed the City's maximum "normally acceptable" noise exposure for hospital uses.

Also, as shown in the tables, proposed residences and offices on N Street between 26th and 27th Streets could experience exterior noise levels in excess of the City's 60 db Ldn "normally acceptable" noise exposure for residences. This, however, is not an issue with the residences, as they are not proposed to have front or back yards. Exterior noise levels are designed to protect individuals from excessive or uncomfortable noise levels at outdoor areas where they may spend significant amounts of time recreating or relaxing. The absence of these types of outdoor areas at the proposed residential units means that the emphasis should be placed on interior noise level standards. Construction of newer buildings usually has the capacity to reduce exterior to interior noise levels by about 30 db. Even in future years, exterior noise levels at the residences would not reach much higher than 64 db. The exterior to interior noise reduction provided by construction would result in interior noise levels below the 45 db "normally acceptable" interior noise standard for residential uses.

Because there is only an exterior noise standard for hospital uses, and because this standard would be exceeded at the proposed WCC, this would be considered a **significant impact**.

Theatre

The City of Sacramento General Plan does include exterior noise exposure levels for auditoriums, which would include uses such as the proposed theatre. The General Plan does

not contain interior noise standards for these uses. The “normally acceptable” exterior noise exposure level is 70 db. As shown in the traffic noise tables, the proposed theatre would not be exposed to noise levels approaching 70 db. Therefore, this would be a ***less-than-significant impact***.

Mitigation Measures

The Sacramento General Plan does not prohibit new land uses where the uses would be exposed to noise levels in excess of the applicable community noise exposure level. Instead, the General Plan stipulates that development can be undertaken only after certain analyses are performed to insure proper noise insulation features. Consequently, the following mitigation measure, which would apply only to the SMCS project, would reduce the impact to the project from traffic noise to a *less-than-significant level*.

(SMCS)

6.6-3 *Construction of the proposed WCC shall occur only after a detailed analysis of the noise reduction requirements is made and required noise insulation features are included in the project design.*

CUMULATIVE IMPACTS

The cumulative noise context for the SMCS project is the noise from traffic and other operational activity generated by sources in the general vicinity of the SMCS project area.

Impact 6.6-10: The SMCS project, along with other future development, would increase noise levels.		
	SMCS Project	Theatre
Significance Before Mitigation	Less than Significant	Less than Significant
Mitigation Measures	None required	None required
Significance After Mitigation	N/A	N/A

SMCS Project and Theatre

The cumulative impact of the SMCS project would include the Project plus Other Future Development in the vicinity. It is not likely that new stationary sources of noise would develop in the area. Any stationary noise sources would be required by the City to mitigate any noise impacts prior to receiving a permit. Consequently, the major noise impact of future cumulative development would be traffic noise. Tables 6.6-13 and 6.6-14 show cumulative traffic noise levels both With and Without the SMCS project, for future year and future year “two-way” scenarios. These cumulative scenarios include the future development taken into account in Tables 6.6-11 and 6.6-12, plus traffic from the proposed Trinity Cathedral expansion.

As shown in Tables 6.6-13 and 6.6-14, total cumulative development in 2025 would differ very little from the “Future-plus-Project” scenarios shown in Tables 6.6-11 and 6.6-12. As discussed in Impact 6.6-2, the SMCS project would add, at the most, 1.1 dBA Ldn to roadway noise levels, which would not be a significant increase. The Theatre would only generate traffic before and after performances, when theatre-goers are either going to or departing from a performance. This intermittent project traffic would add to cumulative future noise levels, but would not do so throughout the day. The Theatre’s addition to 24-hour noise values would be very small. Since total cumulative noise levels resulting from the SMCS project and the Theatre would not differ significantly from Future-plus-Project noise levels, the contribution to cumulative roadway noise would not be a perceptible increase. This would be considered a *less-than-significant impact*.

Mitigation Measures

None required.

Table 6.6-13

Future (Year 2025) Traffic Noise Levels, Cumulative Scenario

Roadway	Segment	Noise Levels (L_{dn}) 35 Feet from Centerline
		Cumulative (dB)
J Street	27 th /28 th	68.0
J Street	28 th /29 th	68.3
26 th Street	K/L	56.4
26 th Street	L/Capitol Avenue	55.4
26 th Street	Capitol Avenue/N	55.3
K Street	27 th /28 th	65.5
K Street	28 th /29 th	66.1
L Street	25 th /26 th	64.8
L Street	26 th /27 th	64.6
28 th Street	J/K	60.4
28 th Street	N/O	58.9
29 th Street	L/Capitol Avenue	67.2
Capitol Avenue	25 th /26 th	65.8
Capitol Avenue	26 th /28 th	66.2
Capitol Avenue	28 th /29 th	66.4
N Street	27 th /28 th	64.1

Source: EIP Associates, 2005.

Table 6.6-14

**Future (Year 2025) Traffic Noise Levels,
Cumulative Two-Way Scenario**

Roadway	Segment	Noise Levels (L_{dn}) 35 Feet from Centerline
		Cumulative (dB)
J Street	27 th /28 th	67.8
J Street	28 th /29 th	68.1
26 th Street	K/L	55.2
26 th Street	L/Capitol Avenue	55.0
26 th Street	Capitol Avenue/N	55.1
K Street	27 th /28 th	65.4
K Street	28 th /29 th	66.1
L Street	25 th /26 th	63.8
L Street	26 th /27 th	63.7
28 th Street	J/K	60.0
28 th Street	N/O	59.1
29 th Street	L/Capitol Avenue	68.3
Capitol Avenue	25 th /26 th	65.9
Capitol Avenue	26 th /28 th	66.2
Capitol Avenue	28 th /29 th	66.1
N Street	27 th /28 th	64.9

Source: EIP Associates, 2005.

6.7 Transportation and Circulation

6.7 Transportation and Circulation

INTRODUCTION

The Transportation and Circulation section analyzes existing and cumulative transportation and circulation impacts associated with development of the SMCS project on a project-specific level. Impacts associated with the Children's Theatre are analyzed on a program level. The traffic model outputs are included in a separately bound technical appendix to this EIR (Volume III). The analysis includes consideration of automobile traffic on existing roadway capacity, transit, bicycle, pedestrian, and parking impacts. Quantitative analyses of a.m. and p.m. peak hour conditions have been conducted for the following scenarios:

- Existing without Project
- Existing with SMCS Project
- Cumulative without SMCS Project
- Cumulative with SMCS Project
- Cumulative with SMCS Program and Trinity Project
- Cumulative without SMCS Project with City's Two Way Conversion Project
- Cumulative with SMCS Project with City's Two Way Conversion Project
- Cumulative with SMCS Program and Trinity Project with City's Two Way Conversion Project

Table 6.7-1 describes the traffic analysis scenarios.

Preparation of the Transportation and Circulation section included review of various sources of information. These sources include, but are not limited to, the 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) and Sacramento Central City Two-Way Conversion studies.

Comments received in response to the Notice of Preparation (NOP) were received between October 2003 and February 2004. Comments on the NOP addressed several subject areas including study content, study area, parking impacts, construction impacts, and garage access locations.

Study content comments requested consideration or analysis of impacts to traffic flow related to Sutter General Hospital's L Street access, the City's Smart Plan, the Central City Two-Way Conversion Study, merge/diverge maneuvers for freeway and ramp junctions, Regional

Table 6.7-1**Description of Traffic Analysis Scenarios**

Scenario	Description of Scenario
Existing Conditions	
Existing Without SMCS Project	Existing conditions in the study area without any additional development
Existing With SMCS Project	Traffic conditions in the study area including development of the SMCS project
Cumulative Conditions	
Cumulative Without Project	Year 2025 conditions in the study area without any changes to the project site
Cumulative With SMCS Project	Year 2025 conditions in the study area including development of the SMCS Project
Cumulative With SMCS Program ¹ and Trinity Project	Year 2025 conditions in the study area including development of the SMCS Program and Trinity Project
Cumulative Without Project With Two-Way Conversion	Year 2025 conditions in the study area without any changes to the project site. Assumes implementation of City's two-way conversion project in the study area
Cumulative With SMCS Project With Two-Way Conversion	Year 2025 conditions in the study area including development of the SMCS project. Assumes implementation of two-way conversion project in the study area
Cumulative With SMCS Program and Trinity Project With Two-Way Conversion	Year 2025 conditions in the study area including development of the SMCS Program and Trinity Project. Assumes implementation of two-way conversion project in the study area

Notes:

1. The SMCS program includes the SMCS project components plus the Children's Theatre of California project.

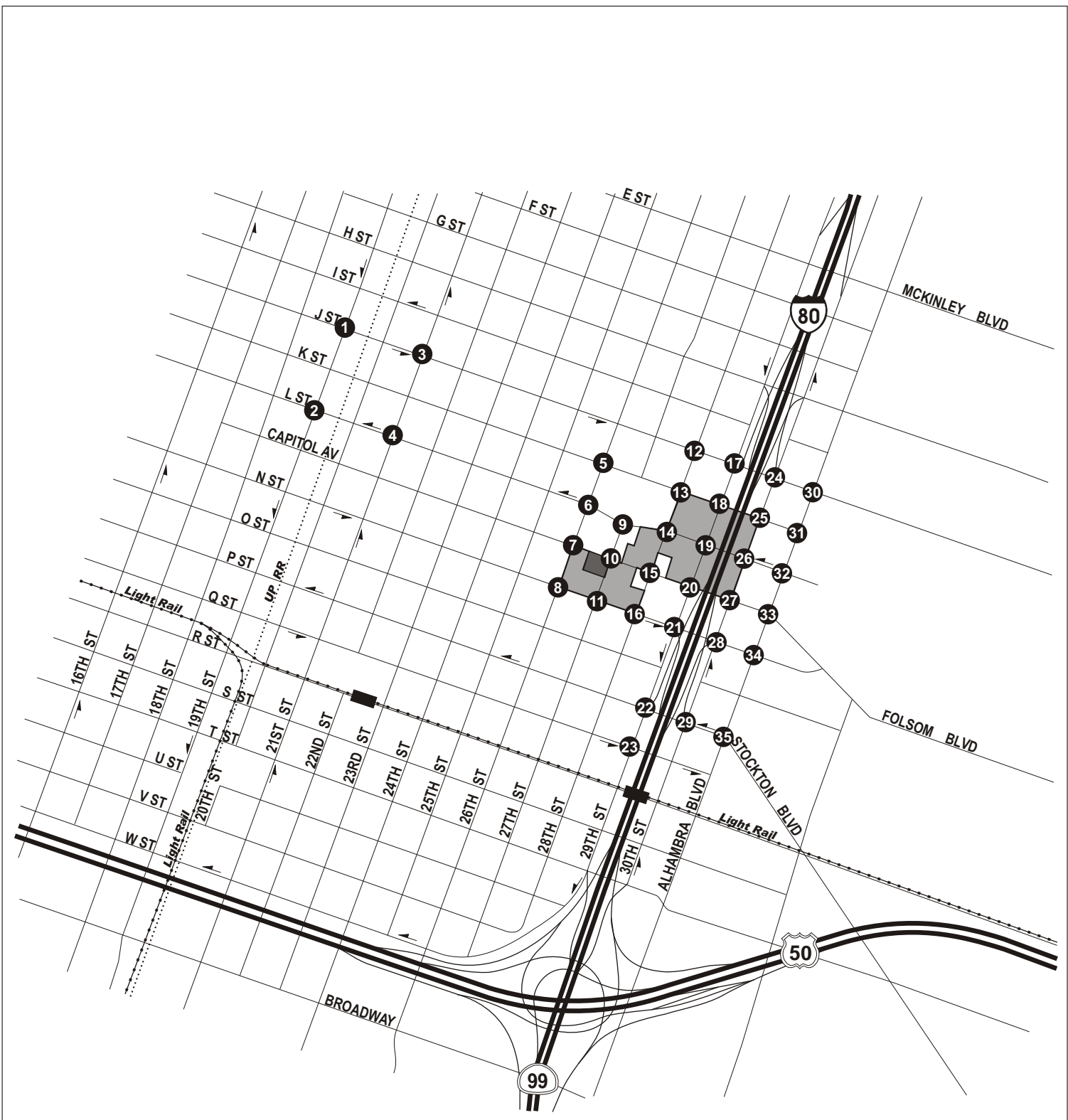
Source: DKS Associates, 2005.

exclusive bus lane, conflicts with bus maintenance facilities and bus operations, State Park operations, funding for traffic calming in nearby neighborhood, project impacts on buses, parking and construction impacts on neighborhoods and recommended boundaries for the study area.


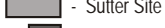

Parking comments requested consideration or analysis of parking impacts on neighborhoods within the study area, parking impacts associated with Pioneer church, impact of increased demand for metered parking, location of entrances and exits to the new Community Parking, Structure construction-related parking impacts, interim parking impacts between the time the Old Tavern Garage is demolished and the new Community Parking Structure is completed. These issues are all addressed in this section.

SMCS Project

As illustrated in Figure 6.7-1, the SMCS project area is located north of N Street, south of L Street, east of 26th Street, and west of 30th Street in the midtown area of the City of Sacramento. Figure 6.7-2 illustrates the proposed site plan.

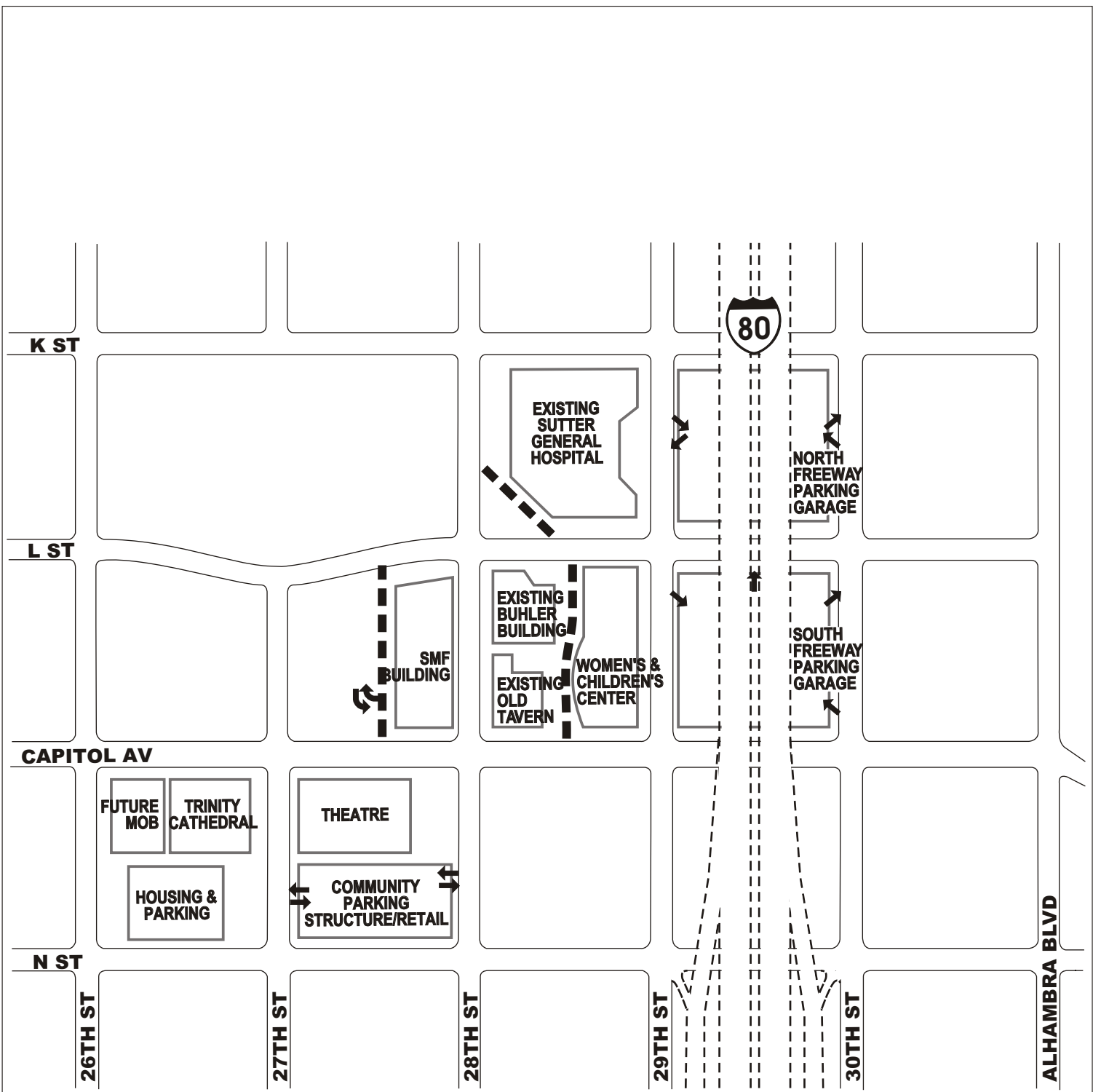


LEGEND



-  - Study Intersection & Number
-  - Sutter Site
-  - Trinity Site


 NO SCALE
DKS Associates
 TRANSPORTATION SOLUTIONS

**Figure 6.7-1
PROJECT LOCATION**



LEGEND

-  - Parking Entrance/Exit
-  - Valet/Drop-off/Pick-up Roadways


 NO SCALE
DKS Associates
 TRANSPORTATION SOLUTIONS

**Figure 6.7-2
SITE MAP**

Major transportation elements of the SMCS project include:

- Continued use of the two parking garages located under the Capital City Freeway, with some modifications.
- A new parking structure (Community Parking Structure) located on the north side of N Street between 27th and 28th Streets.
- An elevated spanning structure over L Street connecting the new Women's and Children's Center (WCC) with the existing Sutter General Hospital (SGH).
- A private roadway located west of the WCC, extending from Capitol Avenue to L Street (valet drop off/pick up location), as well as a private roadway located west of the proposed SMF Building connecting Capitol Avenue to L Street (valet drop off/pick up location).
- Modification to L Street between 28th and 29th Streets to allow the WCC to encroach into the south side of the L Street right-of-way a maximum of approximately 28 feet.

For purposes of the transportation analysis, Table 6.7-2 summarizes the changes in the building elements (by location, type of land use and size) associated with the SMCS project.

ENVIRONMENTAL SETTING

The roadway, transit, bicycle, and pedestrian components of the transportation system are described below. Figure 6.7-1 illustrates the roadway system within the study area.

Regional Roadways

Regional automobile access to the project area, the Sacramento Central City and midtown 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), and State Route 99 (SR 99).

US 50 is an east-west freeway that is located along the south side of the Central City, about nine 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 immediately adjacent to the project 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.

Table 6.7-2

Project Description Summary

Component	Land Use	Existing Size	Future Size	Change in Size
SMCS Project				
Sutter General Hospital	Hospital	351,000 sf	422,300 sf	71,300 sf ¹
Women's and Children's Center	Hospital	-	398,362 sf	398,362 sf
Sutter Medical Foundation (SMF) Building and Energy Center	Medical Office Building	-	97,223 sf	97,223 sf
	Hospital	-	34,514 sf	34,514 sf ²
	Energy Center, Parking, Tunnels, Bridges	-	71,645 sf	71,645 sf
Future Medical Office Building	Medical Office Building	-	35,000 sf	35,000 sf
Existing Medical Office Buildings ³	Medical Office Building	9,652 sf	-	(9,652 sf)
Trinity Apartments	Apartments	5 d.u.	-	(5 d.u.)
Residential Development	Apartments	-	32 d.u.	32 d.u.
Retail Development	Retail	-	9,000 sf	9,000 sf
SMCS Program				
Theatre	Theatre	-	565 seats	565 seats
Trinity Cathedral Project				
Trinity Cathedral	Church	23,466 sf	67,750 sf	44,284 sf

Notes:

1. 71,300 square feet of previously entitled space. Not part of SMCS project, but included in the project for purposes of traffic analysis.
2. 13 ambulatory surgery suites.
3. Includes MTI Office Buildings A, B, and C and one additional building on the SMF site.

Source: SMCS Project Description, Chapter 2.

Local Roadways

Downtown Sacramento is served by a grid street system. Numbered streets exist in a north-south orientation; lettered streets exist in an east-west orientation.

19th and 21st Streets are north-south streets located seven and five blocks west of the project area, respectively. These streets act as a one-way couplet between Broadway and I Street, with 19th Street accommodating southbound traffic and 21st Street accommodating northbound traffic. In these segments, each street has three through travel lanes. To the north, 19th and 21st Streets terminate near C Street in the Midtown Area. To the south, the roadways extend beyond US 50 into the Land Park area of the City.

26th Street is a two-way north-south local street that serves the project area. The roadway has one through travel lane in each direction. To the north, the roadway terminates near C Street in the Midtown area. To the south, the roadway extends south of US 50.

27th Street is a two-way north-south local street that serves the project area. The roadway has one through travel lane in each direction. Near the site, 27th Street is interrupted by Sutter's Fort between L and K Streets. North of Sutter's Fort, 27th Street terminates near C Street in the Midtown area. To the south, 27th Street terminates at W Street adjacent to US 50.

28th Street is a two-way north-south local street that serves the project area. The roadway has one through travel lane in each direction. To the north, the roadway terminates near B Street in the Midtown area. To the south, the roadway terminates at V Street.

29th and 30th Streets are north-south streets located adjacent to the project area. The elevated Capital City Freeway is located between these streets. In the project vicinity, these streets form a one-way couplet, with 29th Street accommodating southbound traffic and 30th Street accommodating northbound traffic. These streets have three through lanes in most of the project vicinity. 29th Street extends from B Street to the north to W Street to the south. 30th Street extends from U Street to the south to north of C Street to the north.

Alhambra Boulevard is a north-south street located one-block east of 30th Street. This two-way street has one or two travel lanes in each direction. To the north, Alhambra Boulevard terminates near B Street. To the south, the roadway extends to Broadway.

J Street is an east-west street located about two blocks north of the project area. To the west, J Street begins at the I-5 interchange at 3rd Street. To the east, J Street extends into East Sacramento. J Street is one-way eastbound between 3rd Street and Alhambra Boulevard, generally with three through lanes.

K Street is an east-west street located about one block north of the project area. K Street is a two-way street with one through lane in each direction. To the west, K Street begins at 14th Street adjacent to the Sacramento Convention Center. To the east, it extends to Alhambra Boulevard.

L Street is an east-west street adjacent to the project area. L Street begins at Alhambra Boulevard to the east, and extends to 3rd Street to the west. The roadway is one-way westbound with two through lanes.

Capitol Avenue is an east-west two-way street adjacent to the project area. To the west, it extends to 15th Street at Capitol Park. To the east, it extends to Alhambra Boulevard. East of Alhambra Boulevard, it becomes Folsom Boulevard and extends through East Sacramento. In the project vicinity, Capitol Avenue has one through lane in each direction.

N Street is an east-west street adjacent to the project area. It extends from 2nd Street to the west to Folsom Boulevard to the east. It is one-way eastbound from 2nd Street to 28th Street. From 28th Street to Folsom Boulevard, it is a two-way street.

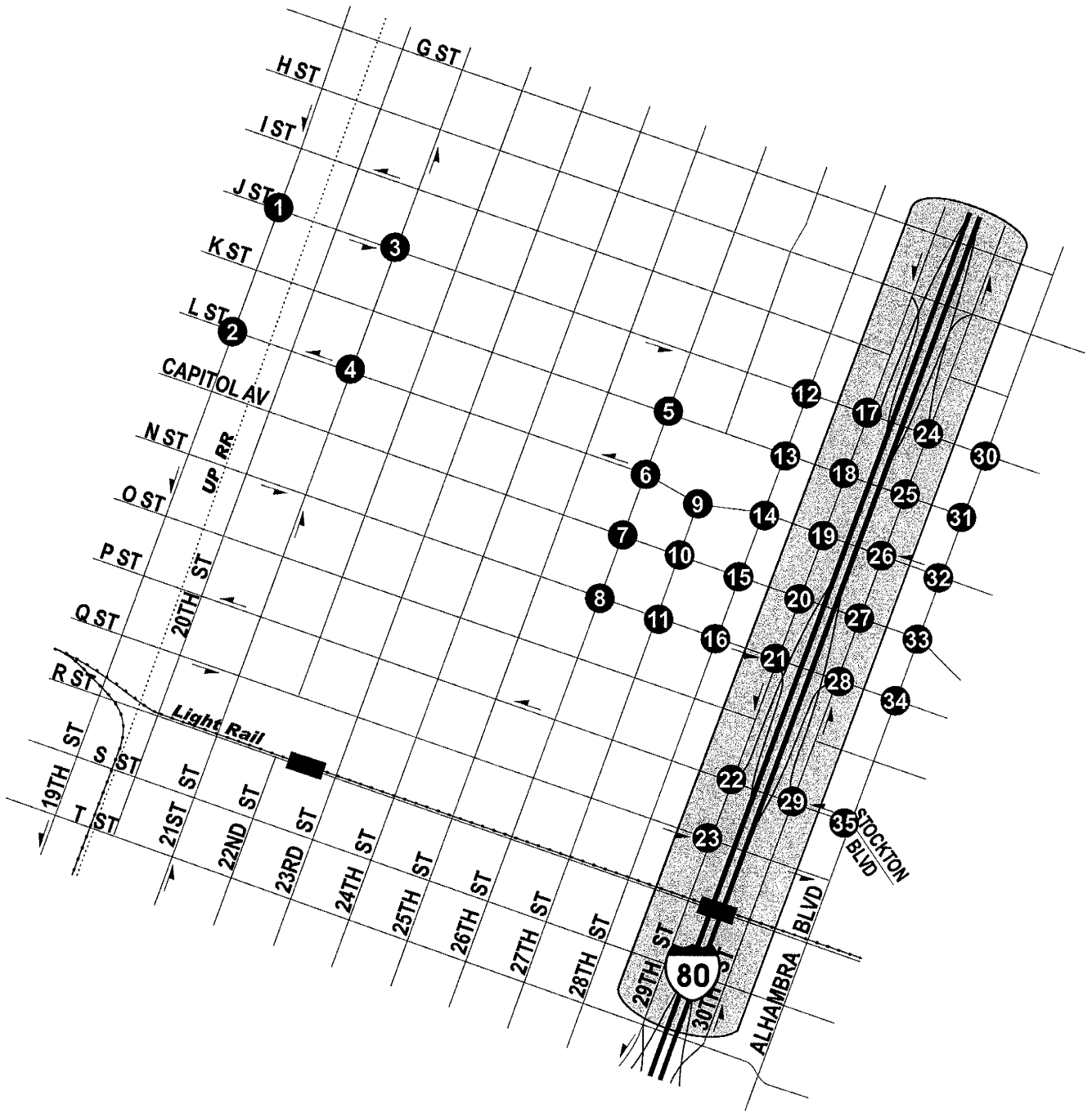
P and Q Streets are east-west streets located two and three blocks west of the project site, respectively. These streets act as a one-way couplet between 2nd Street and Alhambra Boulevard, with P Street accommodating westbound traffic and Q Street accommodating eastbound traffic. East of Alhambra Boulevard, P Street continues as Stockton Boulevard.

Existing Roadway Operating Conditions

Study Area

For traffic analysis purposes, a set of intersections and freeway system segments were 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 6.7-3, the study area includes the following thirty-five intersections:

1. 19th and J Streets
2. 19th and L Streets
3. 21st and J Streets
4. 21st and L Streets
5. 26th and K Streets
6. 26th and L Streets
7. 26th Street and Capitol Avenue
8. 26th and N Streets
9. 27th and L Streets
10. 27th Street and Capitol Avenue
11. 27th and N Streets
12. 28th and J Streets
13. 28th and K Streets
14. 28th and L Streets
15. 28th Street and Capitol Avenue
16. 28th and N Streets
17. 29th and J Streets
18. 29th and K Streets
19. 29th and L Streets
20. 29th Street and Capitol Avenue
21. 29th and N Streets
22. 29th and P Streets
23. 29th and Q Streets



LEGEND

① - Study Intersection & Number

▨ - Area of Freeway Analysis



NO SCALE

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**Figure 6.7-3
STUDY AREA**

24. 30th and J Streets
25. 30th and K Streets
26. 30th and L Streets
27. 30th Street and Capitol Avenue
28. 30th and N Streets
29. 30th and P Streets
30. Alhambra Boulevard and J Street
31. Alhambra Boulevard and K Street
32. Alhambra Boulevard and L Street
33. Alhambra Boulevard and Capitol Avenue
34. Alhambra Boulevard and N Street
35. Alhambra Boulevard and P Street

The following mainline sections on the Capital City freeway system are included in the study area:

1. Northbound – South of N Street Exit
2. Northbound – N Street Exit to P Street Entrance
3. Northbound – P Street Entrance to H Street Exit
4. Northbound – H Street Exit to J Street Entrance
5. Northbound – North of J Street Entrance
6. Southbound – North of J Street Exit
7. Southbound – J Street Exit to H Street Entrance
8. Southbound – H Street Entrance to P Street Exit
9. Southbound – P Street Exit to N Street Entrance
10. Southbound – South of N Street Entrance

The following ramp junctions on the Capital City freeway system are included in the study area:

1. Northbound N Street Exit
2. Northbound P Street Entrance
3. Northbound H Street Exit
4. Northbound J Street Entrance

5. Southbound J Street Exit
6. Southbound H Street Entrance
7. Southbound P Street Exit
8. Southbound N Street Entrance

The following weaving areas on the Capital City freeway system are included in the study area:

1. Northbound U.S. 50 Entrance to N Street Exit
2. Northbound P Street Entrance to H Street Exit
3. Southbound H Street Entrance to P Street Exit
4. Southbound N Street Entrance to U.S. 50 Exit

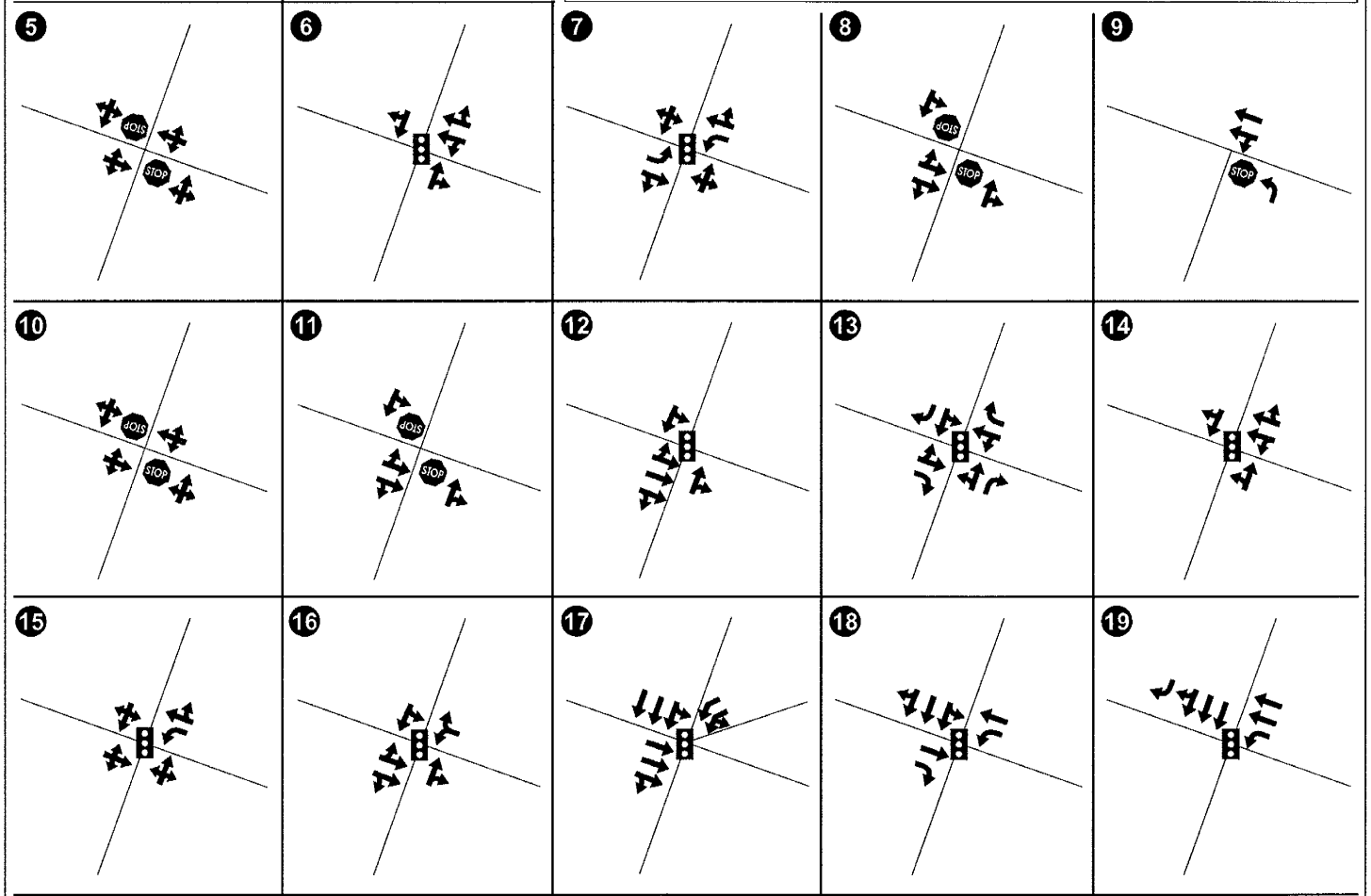
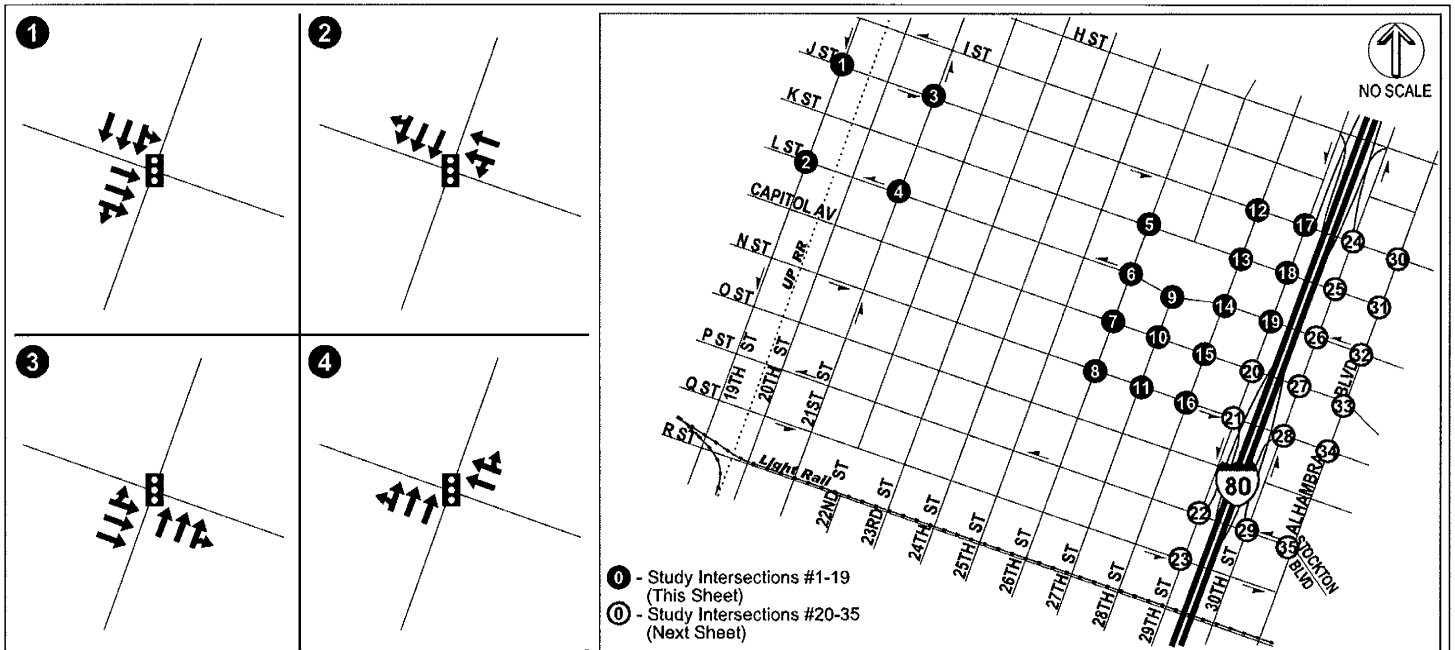
Traffic counts were collected at each of the study area intersections and freeway ramps during the a.m. and p.m. peak commuter periods in September 2003. Year 2003 freeway mainline count data was obtained from Caltrans.

Figure 6.7-4 illustrates existing intersection geometry (approach lanes and traffic control). Figure 6.7-5 illustrates existing a.m. and p.m. peak hour traffic counts.

Methodology

Field reconnaissance was conducted to determine the traffic control characteristics of each of the study area intersections and freeway system segments. 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 uses a LOS "E" standard for the Sacramento urban freeway system.



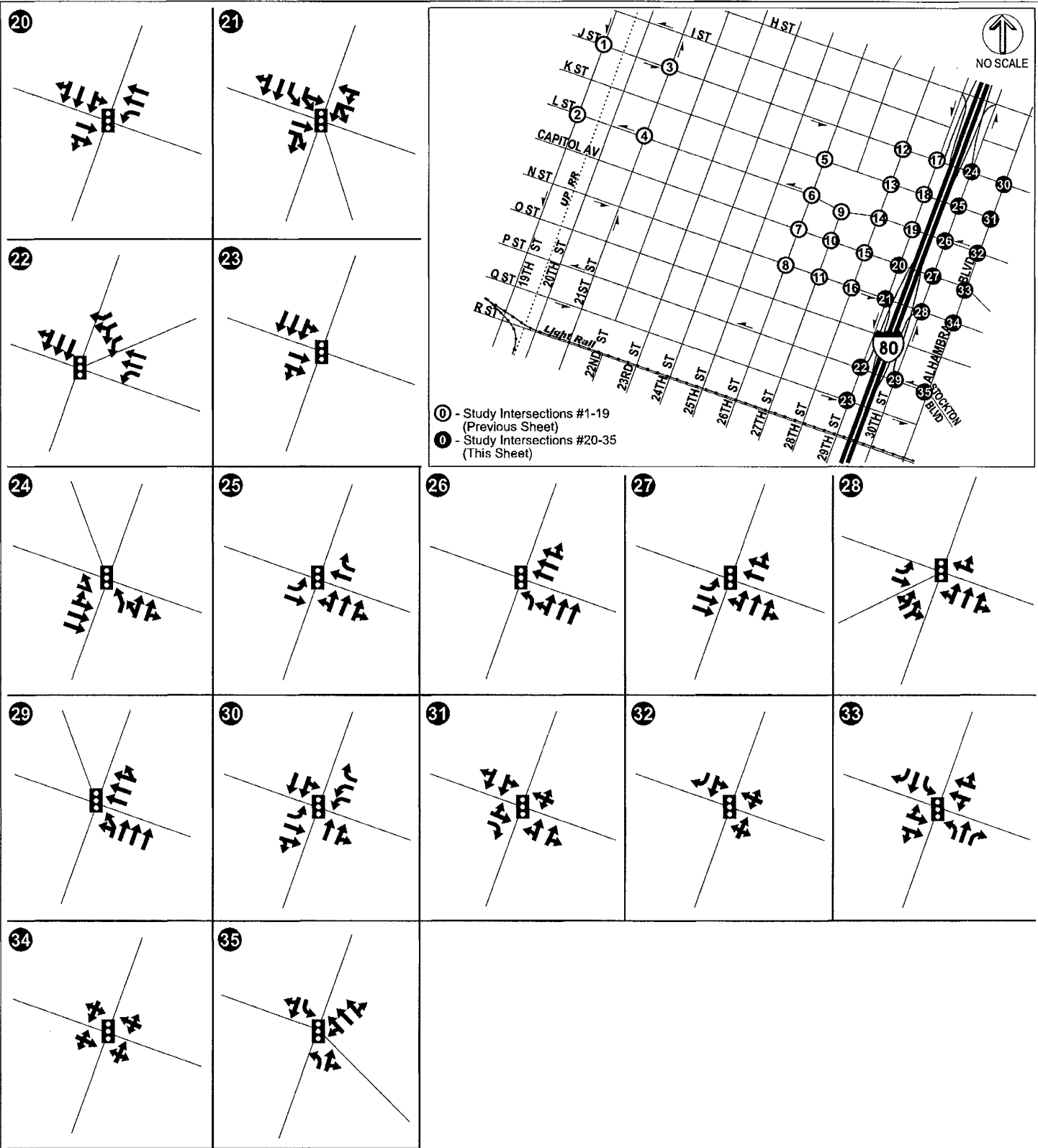
Study Intersections Continued Next Page

LEGEND

- - Study Intersection & Number
- ↑ - Lane Configuration
- ☒ - Signal Control
- STOP - Stop Control


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Figure 6.7-4 (1 of 2)
EXISTING
INTERSECTION GEOMETRY



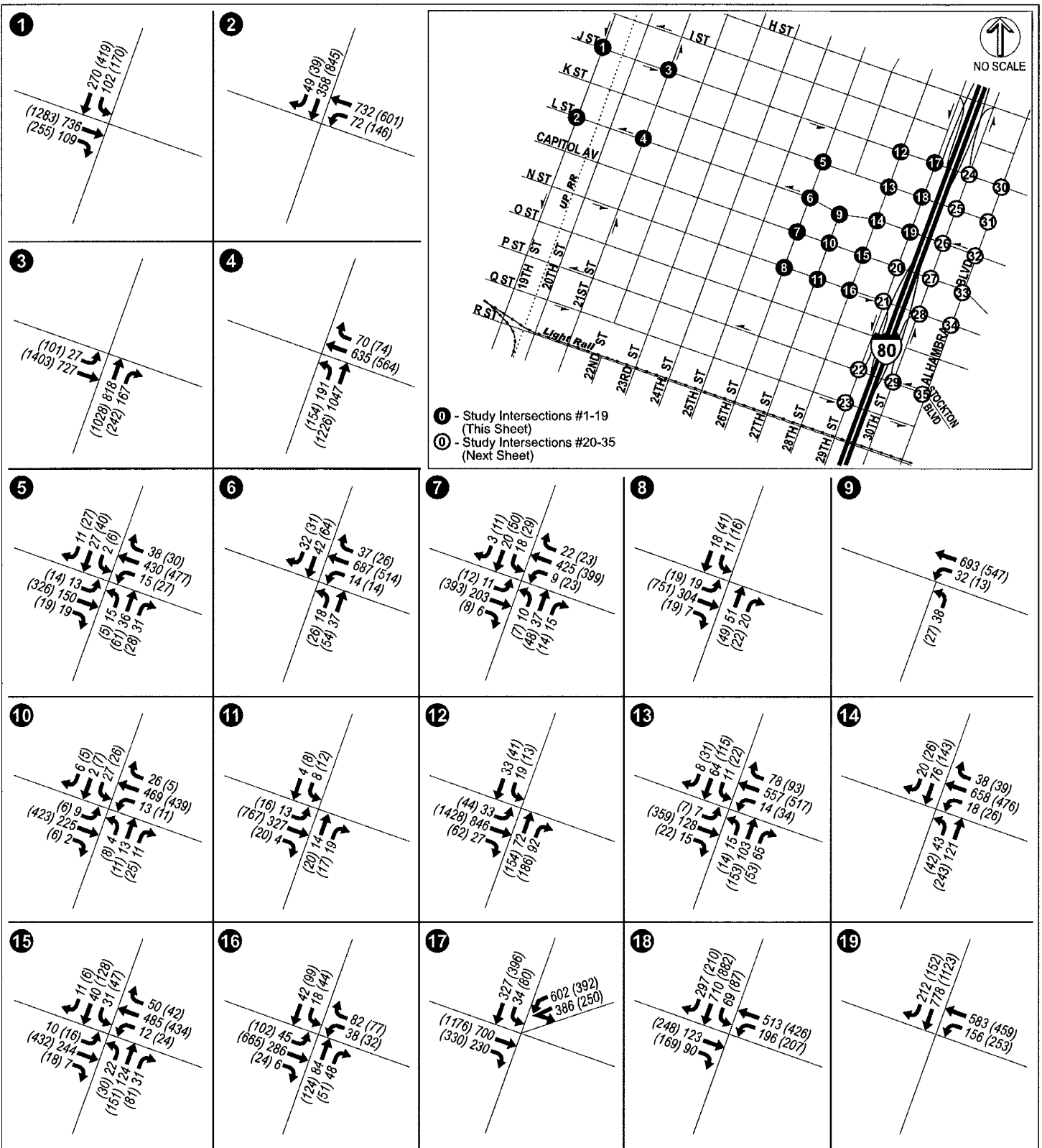
Study Intersections Continued from Previous Page

LEGEND

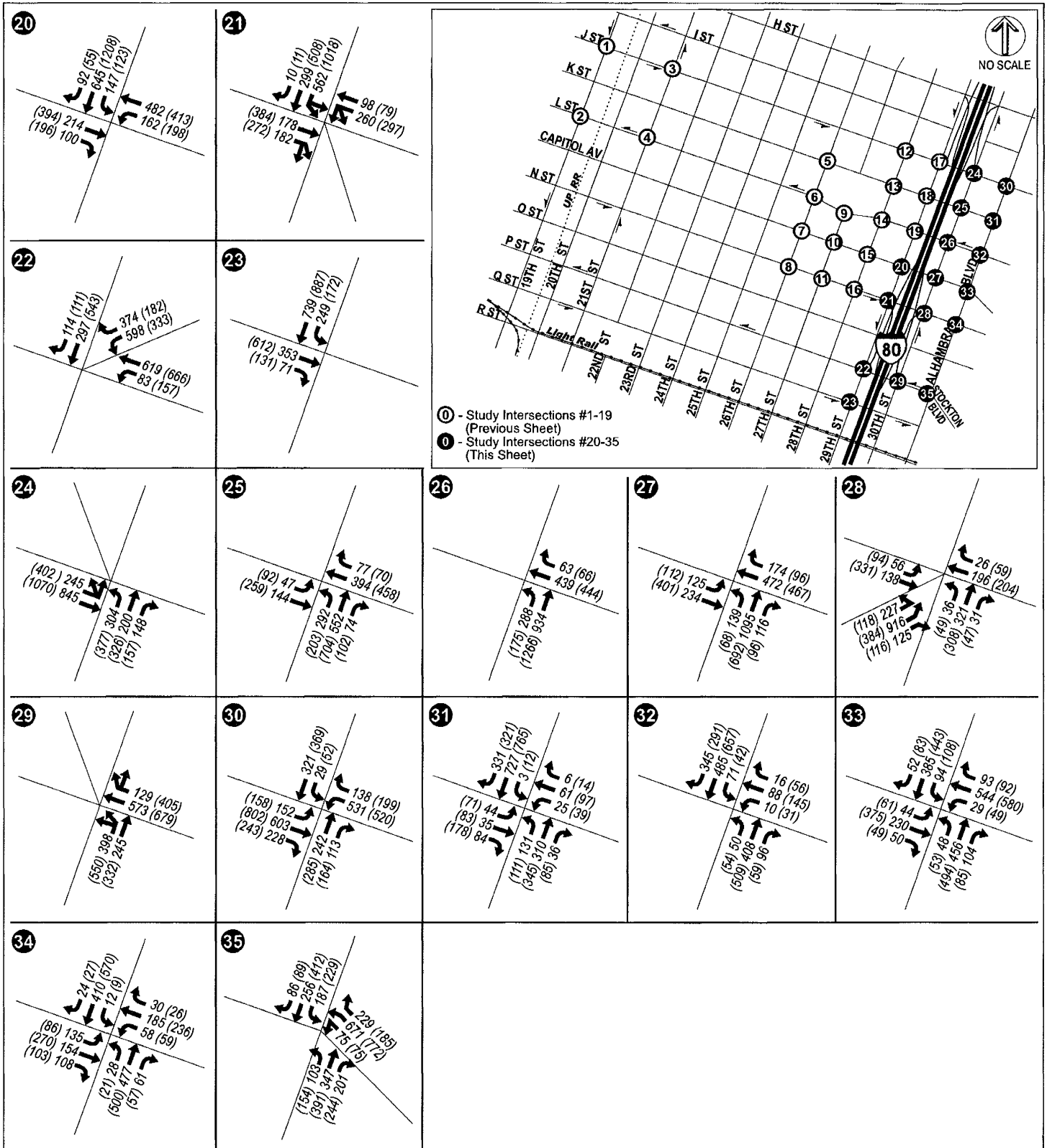
- Study Intersection & Number
- Lane Configuration
- Signal Control
- Stop Control

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Figure 6.7-4 (2 of 2)
EXISTING INTERSECTION GEOMETRY



Study Intersections
Continued Next Page



Study Intersections Continued from Previous Page

LEGEND

- - Study Intersection & Number
- ← AM (PM) - Peak Hour Traffic Volume



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Figure 6.7-5 (2 of 2)
EXISTING VOLUMES

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 6.7-3 and 6.7-4 present the level of service criteria for signalized and unsignalized intersections, respectively.

Table 6.7-3

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 6.7-4

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 using 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 6.7-5 through 6.7-7 present the level of service criteria for freeway mainline, ramp junction, and weaving segments, respectively.

Table 6.7-5

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 6.7-6

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 6.7-7**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.

Analysis Results**Intersections**

Table 6.7-8 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 used to determine conformity with the City's goal. Individual movements may operate at worse levels of service. All of the intersections currently meet the City's LOS "C" goal.

Freeway System

Tables 6.7-9 through 6.7-11 summarize the existing a.m. and p.m. peak hour operating conditions on the freeway system that serves the project area. The freeway system generally operates within Caltrans' LOS "E" goal with the exception of northbound travel in the p.m. peak commuter period. Downstream congestion at the railroad overcrossing north of the study area (where the freeway narrows to three northbound lanes) results in recurrent queuing into the study area. Therefore, p.m. peak hour traffic operations are deemed LOS "F" in the northbound direction.

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. There is an existing midblock pedestrian bridge located on K Street between 28th Street and 29th Street. This pedestrian bridge connects Sutter General Hospital and medical offices and parking located in the building to the north. There is also an existing midblock pedestrian bridge located on L Street between 28th and 29th Streets. This pedestrian bridge connects Sutter General Hospital and the Buhler Building to the south.

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

Table 6.7-8
Existing Intersection Operating Conditions

Intersection	A.M. Peak Hour		P.M. Peak Hour	
	LOS	Delay (seconds)	LOS	Delay (seconds)
1. 19 th and J Streets	A	9.9	B	11.0
2. 19 th and L Streets	A	6.3	A	6.9
3. 21 st and J Streets	A	3.0	A	5.5
4. 21 st and L Streets	A	8.8	B	10.1
5. 26 th and K Streets	A	2.5	A	3.5
6. 26 th and L Streets	B	10.9	A	9.8
7. 26 th Street and Capitol Avenue	B	9.9	B	10.8
8. 26 th and N Streets	A	8.2	B	12.3
9. 27 th and L Streets	A	0.9	A	0.7
10. 27 th Street and Capitol Avenue	A	1.4	A	1.7
11. 27 th and N Streets	A	1.5	A	1.1
12. 28 th and J Streets	B	12.8	B	15.9
13. 28 th and K Streets	B	10.5	B	10.1
14. 28 th and L Streets	A	7.6	A	9.9
15. 28 th Street and Capitol Avenue	B	7.9	B	10.9
16. 28 th and N Streets	B	18.7	B	15.3
17. 29 th and J Streets	B	19.9	B	17.0
18. 29 th and K Streets	B	10.7	B	11.4
19. 29 th and L Streets	A	6.8	B	10.2
20. 29 th Street and Capitol Avenue	A	5.4	A	7.9
21. 29 th and N Streets	B	20.0	C	21.9
22. 29 th and P Streets	B	17.3	B	14.4
23. 29 th and Q Streets	A	6.0	A	9.2
24. 30 th and J Streets	A	7.8	A	5.8
25. 30 th and K Streets	A	7.6	B	10.2
26. 30 th and L Streets	A	6.9	A	9.1
27. 30 th Street and Capitol Avenue	B	10.9	B	12.3
28. 30 th and N Streets	B	19.7	B	16.8
29. 30 th and P Streets	A	8.6	A	9.2
30. Alhambra Boulevard and J Street	B	19.0	C	21.1
31. Alhambra Boulevard and K Street	A	8.1	A	8.6
32. Alhambra Boulevard and L Street	B	16.4	B	10.3
33. Alhambra Boulevard and Capitol Avenue	C	25.2	C	28.7
34. Alhambra Boulevard and N Street	B	13.3	B	17.1
35. Alhambra Boulevard and P Street	C	24.5	C	28.0

Source: DKS Associates, 2005.

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.

Table 6.7-9

**Existing Peak Hour Capital City Freeway Mainline
Operating Conditions**

Direction	Location	Through Lanes	Auxiliary Lanes	Volume	Volume/Capacity Ratio	LOS
A.M. Peak Hour						
Northbound	South of N Street Exit	4	1	7,520	0.72	C
	N Street Exit to P Street Entrance	4	0	6,250	0.71	C
	P Street Entrance to H Street Exit	4	1	6,700	0.64	C
	H Street Exit to J Street Entrance	4	0	6,100	0.69	C
	North of J Street Entrance	3	0	6,550	0.99	E
Southbound	North of J Street Exit	3	0	6,350	0.96	E
	J Street Exit to H Street Entrance	3	0	5,360	0.81	D
	H Street Entrance to P Street Exit	3	1	5,860	0.71	C
	P Street Exit to N Street Entrance	3	0	4,890	0.74	D
	South of N Street Entrance	3	1	5,740	0.70	C
P.M. Peak Hour						
Northbound	South of N Street Exit	4	1	5,570	0.54	F ¹
	N Street Exit to P Street Entrance	4	0	5,170	0.59	F ¹
	P Street Entrance to H Street Exit	4	1	5,550	0.53	F ¹
	H Street Exit to J Street Entrance	4	0	4,950	0.56	F ¹
	North of J Street Entrance	3	0	5,700	0.86	F ¹
Southbound	North of J Street Exit	3	0	5,800	0.88	D
	J Street Exit to H Street Entrance	3	0	5,160	0.78	D
	H Street Entrance to P Street Exit	3	1	5,960	0.73	C
	P Street Exit to N Street Entrance	3	0	5,440	0.82	D
	South of N Street Entrance	3	1	6,820	0.83	D

Notes:

1. LOS "F" conditions due to queuing from downstream bottleneck.

Source: DKS Associates, 2005.

Table 6.7-10

**Existing Peak Hour Capital City Freeway Ramp Junction
Operating Conditions**

Direction	Location	Junction Type	Ramp Volume	LOS
A.M. Peak Hour				
Northbound	N Street Exit	Lane Drop	1,270	D
	P Street Entrance	Lane Addition	450	C
	H Street Exit	Lane Drop	600	C
	J Street Entrance	Single lane on ramp	491	B
Southbound	J Street Exit	Single lane off ramp	1,080	E
	H Street Entrance	Lane Addition	500	C
	P Street Exit	Lane Drop	970	C
	N Street Entrance	Lane Addition	850	C
P.M. Peak Hour				
Northbound	N Street Exit	Lane Drop	400	F ¹
	P Street Entrance	Lane Addition	380	F ¹
	H Street Exit	Lane Drop	600	F ¹
	J Street Entrance	Single lane on ramp	818	F ¹
Southbound	J Street Exit	Single lane off ramp	698	E
	H Street Entrance	Lane Addition	800	C
	P Street Exit	Lane Drop	520	C
	N Street Entrance	Lane Addition	1,380	D

Notes:

1. LOS "F" conditions due to queuing from downstream bottleneck.

Source: DKS Associates, 2005.

Table 6.7-11

Existing Peak Hour Capital City Freeway Weaving Segment Operating Conditions

Direction	Location	Weaving Segment Speed (mph)	Weaving Segment Density (pcplph)	LOS
A.M. Peak Hour				
Northbound	U.S. 50 Entrance to N Street Exit	41.8	39.3	E
	P Street Entrance to H Street Exit	55.7	26.3	C
Southbound	H Street Entrance to P Street Exit	48.8	32.7	D
	N Street Entrance to U.S. 50 Exit	43.2	29.0	D
P.M. Peak Hour				
Northbound	U.S. 50 Entrance to N Street Exit	47.9	25.4	F ¹
	P Street Entrance to H Street Exit	57.6	21.0	F ¹
Southbound	H Street Entrance to P Street Exit	50.0	32.5	D
	N Street Entrance to U.S. 50 Exit	38.1	39.0	E

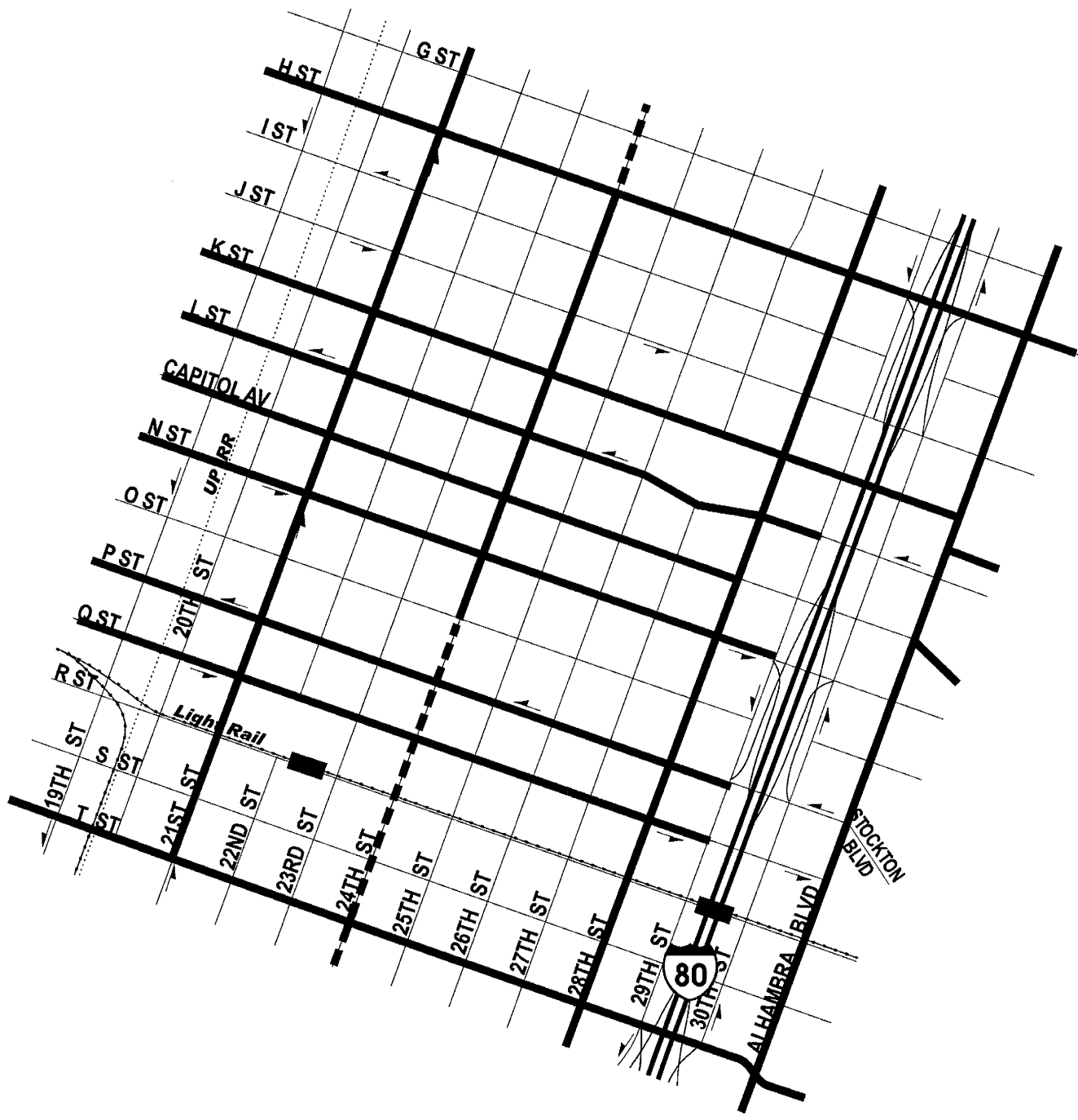
Notes:

1. LOS "F" conditions due to queuing from downstream bottleneck.

Source: DKS Associates, 2005.

Figure 6.7-6 illustrates existing and planned bikeways in the study area. Existing on-street bikeways include:

- 20th Street – E Street to T Street
- 24th Street – H Street to O Street
- 28th Street – B Street to V Street
- Alhambra Boulevard – C Street to Broadway
- K Street – 15th Street to Alhambra Boulevard
- Capitol Avenue – 15th Street to 28th Street
- G Street - 16th Street to Alhambra Boulevard
- E Street - 7th Street to east of Alhambra Boulevard
- H Street - 16th Street to east of Alhambra Boulevard
- I Street - 21st Street to 29th Street
- 18th Street - D Street to south of Broadway



LEGEND

- Existing On-Street Bikeway
- Proposed On-Street Bikeway



NO SCALE

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**Figure 6.7-6
BIKEWAYS**

- T Street - 3rd Street to east of Alhambra Boulevard
- V Street - 8th Street to 28th Street
- 8th Street - T Street to V Street
- 17th Street - T Street to V Street
- D Street - 17th Street to 20th Street
- L Street – 15th Street to 29th Street
- N Street – 15th Street to 29th Street
- P Street – 15th Street to 29th Street
- Q Street – 15th Street to 29th Street

Transit System

The Sacramento Regional Transit District (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 6.7-7 illustrates transit services in the study area.

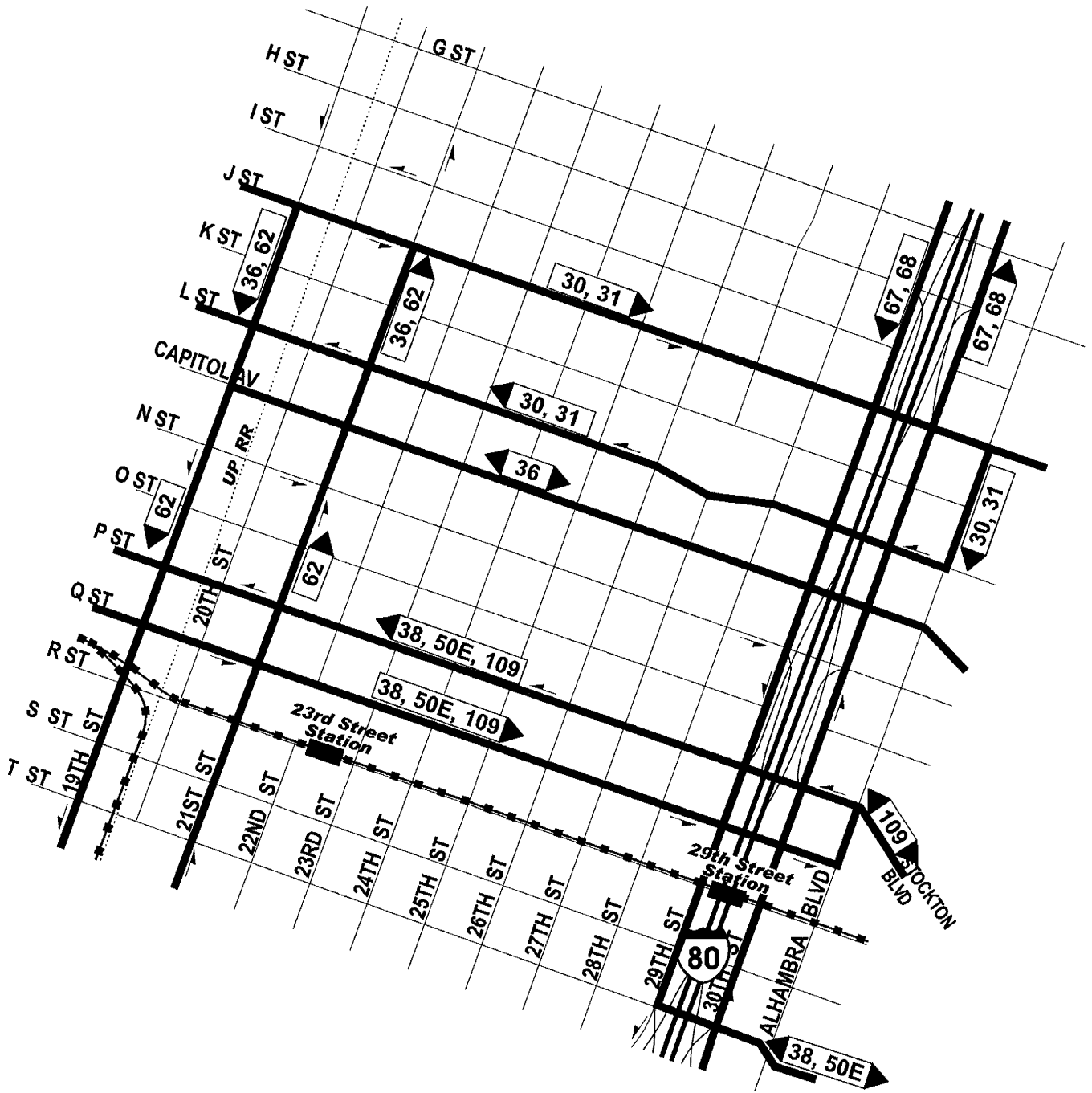
The nearest light rail station is the 29th Street Station, located along R Street between 29th and 30th Streets, about four blocks south of the project area. A shuttle service is operated by SMCS between Sutter General Hospital and the station.

The following RT bus routes serve the project area:

- Routes 30 (J Street [DASH]) and 31 (J Street – River Park) operate along J Street and L Street. These routes extend between Downtown and California State University Sacramento.
- Route 36 (Folsom) operates along Capitol Avenue. The route extends between Downtown and the University / 65th Street Light Rail Station.
- Routes 67 (Franklin) and 68 (44th Street) operate along 29th and 30th Streets. These routes extend to Arden Fair Mall to the north and Florin Mall to the south.

The Amador Regional Transit System provides commuter services between Amador County and Sacramento. An inbound (to Sacramento) stop is located at 29th and L Streets, and an outbound (from Sacramento) stop is located at 28th and J Streets.

Roseville Transit operates commuter services between the City of Roseville and Sacramento. These routes stop at 28th and J Streets in the a.m. commuter period and at 28th and L Streets in the p.m. commuter period.



LEGEND

- Route Number & Direction
- Bus Routes
- Light Rail



NO SCALE

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**Figure 6.7-7
REGIONAL TRANSIT ROUTES**

Parking

Off-Street

Table 6.7-12 summarizes existing and proposed off-street parking associated with the SMCS project. The project area currently provides 1,847 off-street spaces, not including the structurally deficient St. Luke's parking structure. On a typical day, 1,427 of these spaces were observed to be occupied (77 percent). The SMCS project would increase the overall parking supply to 2,737 spaces, an increase of 890 off-street spaces.

Table 6.7-12
Existing and Proposed Parking Supply

Location	Existing Parking Supply (spaces)	Existing Midday Occupied Spaces ²	Existing Midday Percent Occupied	Existing Midday Vacant Spaces	Proposed Parking Supply (spaces)	Change in Parking Supply (spaces)
Under Freeway – North Lot	681	527	77%	154	716	35
Under Freeway – South Lot	686	592	86%	94	756	70
SGH	55	39	71%	16	0	-55
Old Tavern Garage	137	59	43%	78	0	-137
Buhler Bldg surface spaces over ROC	28	25	89%	3	0	-28
Paragary's (community block) surface lot	142	79	56%	63	0	-142
St. Luke's parking garage ¹	0	40	-	-40	0	0
Green Lot	32	15	47%	17	0	-32
EAP Building	15	6	40%	9	0	-15
MTI Building	5	5	100%	0	0	-5
Private medical office	21	14	67%	7	0	-21
Pioneer Lot	32	23	72%	9	0	-32
Trinity Apartments	13	3	23%	10	0	-13
Proposed						
SMF Building	0	0	0	0	90	90
Future MOB	0	0	0	0	35	35
Community Parking Structure	0	0	0	0	1,100	1,100
Residential	0	0	0	0	40	40
Total	1,847	1,427	77%	420	2,737	890

Notes:

- The garage has a capacity of 249 spaces, but is partially closed due to structural conditions. Because of the condition of the facility, the parking supply is considered to be zero for parking analysis purposes.
- Based on recent parking lot utilization counts that were conducted in March and April 2005.

Source: Project Description, Chapter 2; DKS Associates, 2005.

On-Street

Within approximately one-block of the project area, there are approximately 728 on-street parking spaces.¹ On a typical midday period, 402 of these spaces (55 percent) were occupied. The project is expected to reduce the number of on-street spaces slightly, although a specific number of affected spaces is not available at this time.

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).

Federal

There are no federal regulations applicable to the transportation and circulation aspects of the SMCS project.

State

Policies of the California Department of Transportation (Caltrans) are applicable to the project, and to the extent relevant, are incorporated into the standards of significance to be used to evaluate the significance of project impacts.

Local

City of Sacramento General Plan

The City of Sacramento General Plan is the City's long-range planning document and serves as a 20-year policy guide for physical and economic growth and renewal of the City. The City is currently in the process of updating its current 1988 General Plan. The existing General Plan goals and policies applicable to the SMCS project are listed below.

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.

¹ The parking supply and occupancy data was recorded in Spring 2005 as part of the ongoing City of Sacramento Central City Parking Master Plan.

- 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.

Central City Community Plan

The CCCP was adopted by the City of Sacramento in 1980 and is a guide for the public and private development and revitalization of the Central City area. 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.

The CCCP 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 public 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 “Existing with SMCS Project” scenario consists of estimating the traffic “generated” by the SMCS 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 used to determine roadway operating conditions. The conditions are then compared to existing conditions in accordance with the standards of significance to determine the significance of project traffic impacts.

Trip Generation

Trip generation of the SMCS project and project alternatives is based upon data collected specifically for this study as well as information on trip generation compiled by the Institute of Transportation Engineers (*Trip Generation, Seventh Edition*). Table 6.7-13 summarizes the project trip generation during the a.m. and p.m. peak hours.

Table 6.7-13

Vehicular Trip Generation

Trip Generation Rates									
Land Use	Source	Code	Unit	A.M. Peak Hour			P.M. Peak Hour		
				Trip Rate (trips per unit)	Percent Entering	Percent Exiting	Trip Rate (trips per unit)	Percent Entering	Percent Exiting
Hospital	Survey ¹	-	1,000 sf	1.02	53%	47%	0.83	37%	63%
Medical Office Building	ITE	720	1,000 sf	2.48	79%	21%	3.72	27%	73%
Apartments	ITE	220	Units	0.51	20%	80%	0.62	65%	35%
Retail ²	ITE	820	1,000 sf	0.52	61%	39%	1.88	48%	52%
Live Theatre ³	ITE	441	Seats	0.02	90%	10%	0.02	10%	90%
Church	ITE	560	1,000 sf	0.72	54%	46%	0.66	52%	48%
Trip Generation Volumes – New Trips									
Land Use	Size⁴	Unit	A.M. Peak Hour			P.M. Peak Hour			
			Total Trips	Entering Trips	Exiting Trips	Total Trips	Entering Trips	Exiting Trips	
SMCS Project									
Hospital	504.176	1,000 sf	515	273	242	419	155	264	
Medical Office Building	122.571	1,000 sf	304	240	64	456	123	333	
Apartments	27	Units	14	3	11	17	11	6	
Retail	9	1,000 sf	5	3	2	17	8	9	
Total			838	519	319	909	297	612	
SMCS Program									
SMCS Project			838	519	319	909	297	612	
Theatre	565	Seats	11	9	2	11	2	9	
Total			849	528	321	920	299	621	
Trinity Cathedral Project									
Cathedral	44.284	1,000 sf	32	17	15	29	15	14	

Notes:

1. Based on trip generation and parking occupancy surveys conducted at Sutter Memorial Hospital.
2. Rates reduced 50 percent to reflect the primary orientation of the use to people already in the site vicinity.
3. Incomplete ITE data. A.M. peak hour trip generation rate and entering / exiting percentages based on local observations.
4. Change in size (proposed size minus existing size).

Source: Institute of Transportation Engineers' *Trip Generation, Seventh Edition*: DKS Associates, 2005.

SMCS Project

The SMCS project is estimated to generate 838 vehicle trips during the a.m. peak hour, and 909 vehicle trips during the p.m. peak hour.

In addition to these trips, additional trips would be generated between pick-up/drop-off areas and parking facilities. Some of these trips would be valet and some would be self-parkers. The SMCS project proposes that pick-up/drop-off areas and valet parking would be provided at the following locations:

- Private drive running north/south east of the Buhler Building and west of the proposed WCC; and
- Private drive running north/south west of the proposed SMF Building.

The number of additional trips is estimated to be 290 vehicle trips during the a.m. peak hour and 294 vehicle trips during the p.m. peak hour. These trips would travel between the pick-up/drop-off areas and the proposed parking facilities. Valet parking would be provided in the Community Parking Structure as well as the south lot under the freeway.

The above trip generation volumes, used for traffic analysis purposes, are based upon trip generation rates recorded specifically for this study and rates compiled by the Institute of Transportation Engineers at similar facilities. The following factors are expected to reduce the project trip generation:

- Transportation Systems Management (TSM) Plan – SMCS currently is implementing an alternative commute plan that reduces the number of automobile trips to the site. As described in Chapter 2, Project Description, SMCS is now required to prepare and implement a TSM plan. Many of the existing alternative commute strategies have been included in the SMCS project and are expected to reduce project trip generation. However, since the quantification of such reductions is inexact, no credit has been taken for TSM measures.
- Consolidation and internalization – One purpose of the SMCS project is to consolidate Sutter General and Sutter Memorial Hospitals onto one campus to achieve better and more efficient services at less cost. Anticipated efficiency gains are related to consolidation and reduction in staff levels, and reductions in lost time by doctors and staff traveling between facilities. Overall operational improvements could result in a staff reduction of five to ten percent, resulting in corresponding trip generation reductions in employee trips. However, since project approval is related to building characteristics and not employee levels, no trip generation reduction has been taken for consolidation and internalization.
- SMF Medical office building characteristics – The proposed SMF medical office building includes specialty care services, cardiac rehabilitation, and imaging services rather than typical primary care offices located in many medical office buildings. The number of employees, number of patients and duration of visits varies between these uses, because the types of medical uses differs from a more traditional medical office; however, no trip generation reduction has been taken because little quantifiable information is currently available.

SMCS Program

In addition to the elements of the SMCS project, the SMCS program would include a theatre component (Children's Theatre of California) that includes two theatres with a total of 565 seats. The theatre is anticipated to generate relatively few trips during the a.m. and p.m. peak commuter hours, due to its proposed operating schedule. Most theatre events occur in the evenings (after the p.m. peak commuter hour) and on weekends. Midday weekday events are limited to matinees that typically end about 3:00 p.m., before the beginning of the p.m. peak commuter hour. The theatre is projected to generate 11 vehicle trips during each of the a.m. and p.m. peak commuter hours. Therefore, the SMCS program is estimated to generate 849 vehicle trips during the a.m. peak hour, and 920 vehicle trips during the p.m. peak hour.

Trinity Cathedral Project

The Trinity Cathedral project is estimated to generate 32 vehicle trips during the a.m. peak hour and 29 vehicle trips during the p.m. peak hour.

Parking

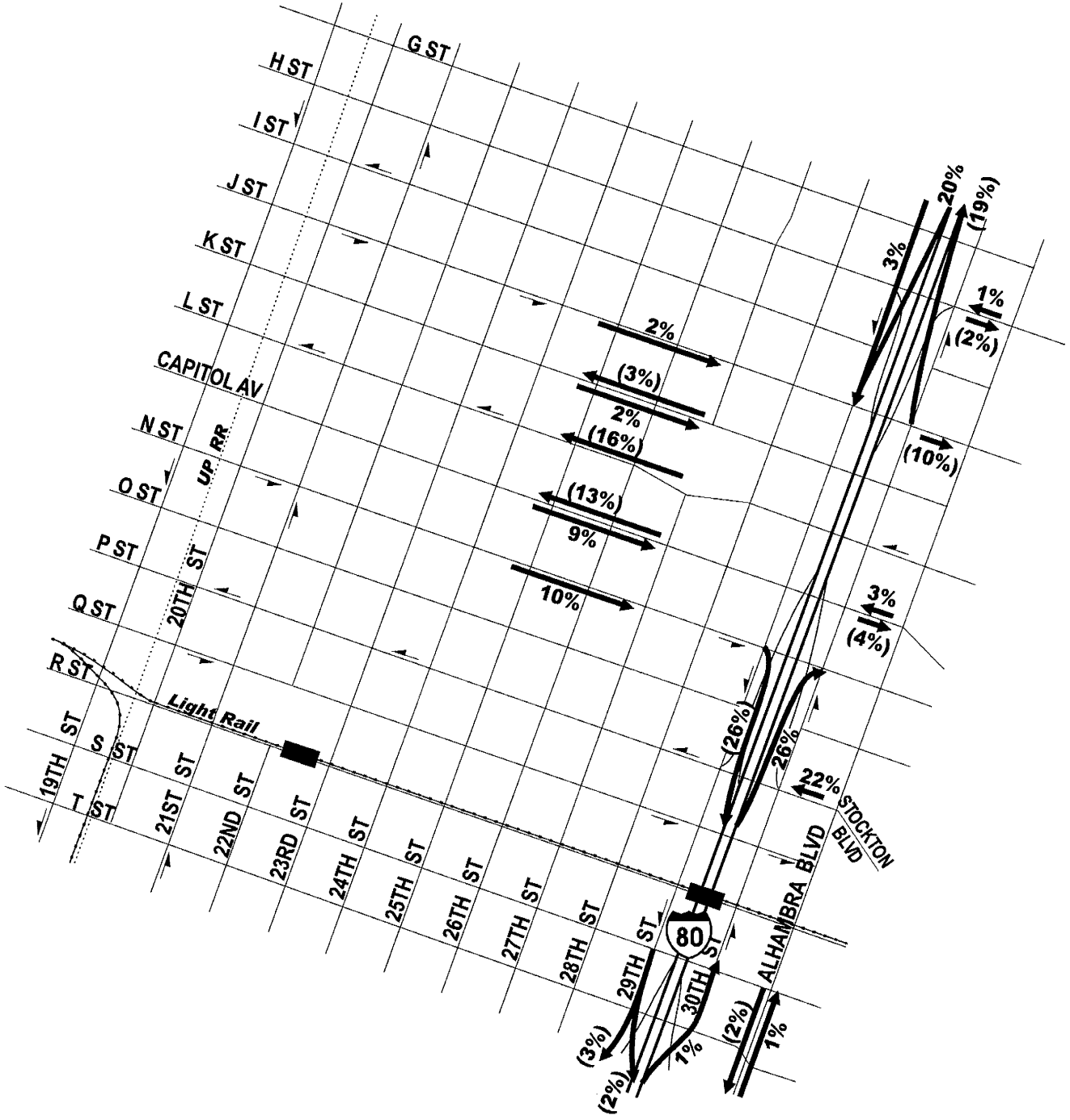
Title 17, Chapter 17.64 of the City's Zoning Code identifies parking requirements for different land uses. The City of Sacramento zoning requirements for parking were established to ensure that the typical project would have adequate off-street parking, such that unserved parking demand would not result in adverse effects to other members of the community. The City's current zoning requirements do not address the individual characteristics of each project; rather, they are specified such that they provide adequate parking for the majority of projects. The current zoning requirements are currently being studied as part of the City's Central City Parking Master Plan project. The requirements might or might not be changed at a future date as a result of the study.

Because a hospital project is a very specialized use, and since many characteristics of medical care have changed since the zoning requirements were established, detailed parking analyses were conducted to estimate the parking demand associated with the SMCS project. These studies include localized parking surveys (e.g., Sutter Memorial Hospital) as well as a review of data compiled by the Institute of Transportation Engineers (Parking Generation, Third Edition).

Table 6.7-14 includes the City's parking requirements for the project. The parking demand rates used for the SMCS project are shown in Table 6.7-19.

Trip Distribution and Assignment

The distribution and assignment of project trips to the roadway network was accomplished through the utilization of a specialized travel model developed for the City of Sacramento. This travel model is currently being used in the analysis of the City's Central City Two-Way Conversion Study. The travel model distributes project trips throughout the region, and assigns the trips to specific roadway paths. Figure 6.7-8 illustrates the distribution of vehicular trips oriented to the SMCS project.



LEGEND

- 0% - Entering
- (0%) - Exiting



**Figure 6.7-8
 EXISTING DISTRIBUTION**

Table 6.7-14
City's Parking Requirements

Building/Use	Type of Use	SF	Zoning Requirement (spaces)
Women's and Children's Center	Hospital	398,362/272 beds	272 ¹
SGH	Hospital	71,300	N/A ²
SMF Building	Medical Office	129,137	646 ³
Specialty Care Offices		63,366	
Ambulatory Surgery		34,514	
Cardiac Rehabilitation		6,130	
Imaging		21,557	
Laboratory		3,570	
Retail	Retail	2,600	6.5 ⁴
Future MOB	Medical Office	35,000	175 ³
Residential	Residential	32 units	34 ⁵
Retail (Parking Structure)	Retail	9,000	22 ⁴
Trinity Cathedral	Church	1,000 seats	250 ⁶
Theatre	Theatre	565 seats	188 ⁷
Total			1,593.5

Notes:

1. 1 per patient bed.
2. New space does not include any beds.
3. 5 spaces per 1,000 sf.
4. 1 space per 400 sf.
5. 1 space per du + 1 guest space per 15 units.
6. 1 space per 4 seats.
7. 1 space per 3 seats.

Source: City of Sacramento Zoning Code, Title 17 Zoning, Chapter 17.64 Parking Regulations; Mark Kraft, July 2005.

Standards of Significance

The standards of significance in this analysis are based upon the City of Sacramento standards and current practice of the appropriate regulatory agencies.

Intersections

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

- Degrade peak period level of service from A, B, or C (without project) to D, E, or F (with project); or,
- Increase the peak period average vehicle delay by five seconds or more if the LOS (without project) is D, E, or F.

Freeway System

For the purposes of this EIR, impacts to the freeway system are considered significant if the SMCS project would:

- Result in off-ramps with vehicle queues that extend into the ramp's deceleration area or onto the freeway;
- Add traffic to a freeway facility that is already operating at LOS "F";
- Increase traffic volumes to cause any ramp's merge / diverge level of service to be worse than the freeway's level of service; or
- Project traffic increases that cause the freeway level of service to deteriorate beyond level of service "E".

Bikeways

For the purposes of this EIR, impacts to existing bikeways are considered significant if the SMCS project would:

- Hinder or eliminate an existing designated bikeway, or if the project interfered with implementation of a proposed bikeway; or
- Result in unsafe conditions for bicyclists, including unsafe bicycle/pedestrian or bicycle/motor vehicle conflicts.

Pedestrian Facilities

For the purposes of this EIR, impacts to existing pedestrian facilities are considered significant if the SMCS project would:

- Result in unsafe conditions for pedestrians, including unsafe increase pedestrian/ bicycle or pedestrian/motor vehicle conflicts.

Transit System

For the purposes of this EIR, impacts to the existing transit system are considered significant if the SMCS project would:

- Generate ridership, when added to existing or future ridership, which exceeds available or planned system capacity. Capacity is defined as the total number of passengers the system of buses and light rail vehicles can carry during the peak hours of operation.

Parking

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

- Result in an increase in parking demand that exceeds the estimated parking supply.

Impact 6.7-1: Intersections – The SMCS project and the Children’s Theatre would increase traffic volumes at study intersections.		
	SMCS Project	Theatre
Significance Before Mitigation	Less than Significant	Less than Significant
Mitigation Measures	None available	None available
Significance After Mitigation	N/A	N/A

SMCS Project

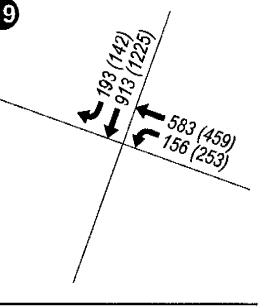
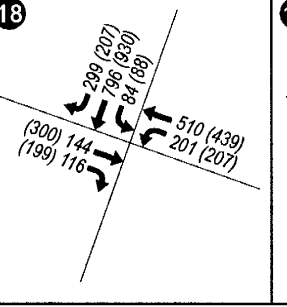
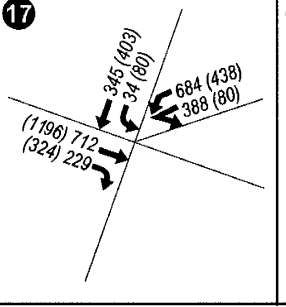
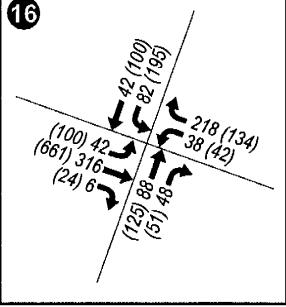
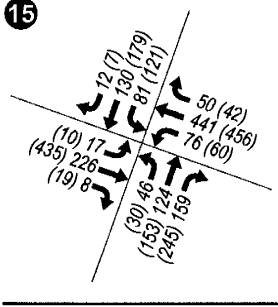
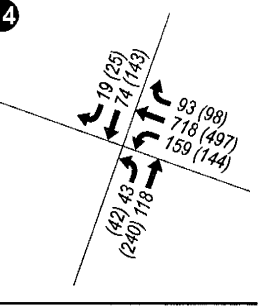
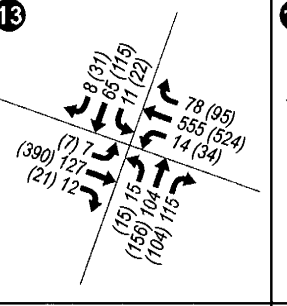
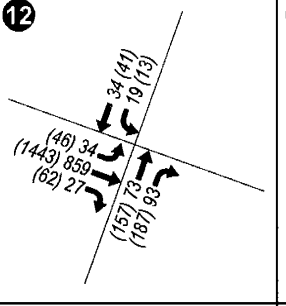
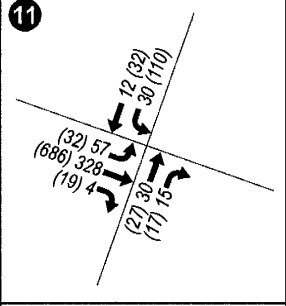
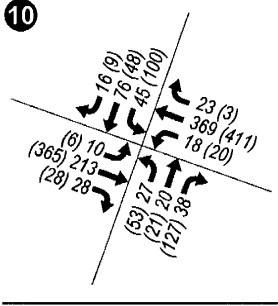
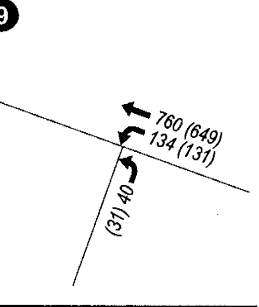
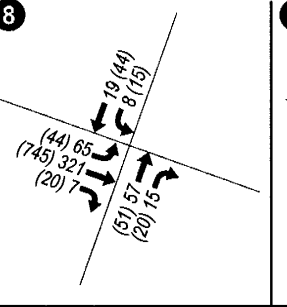
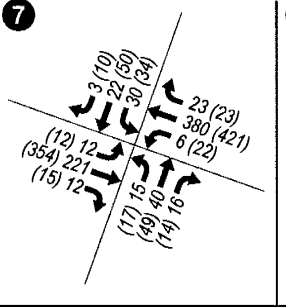
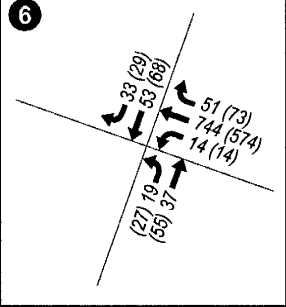
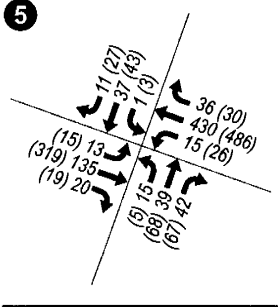
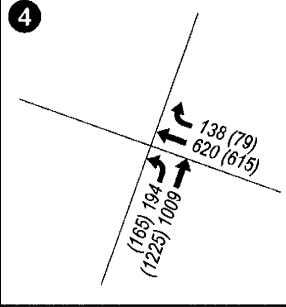
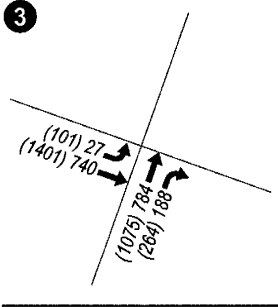
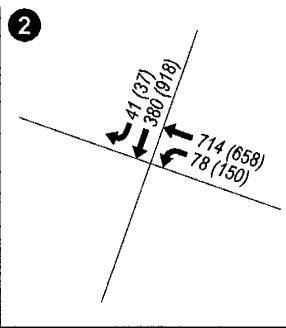
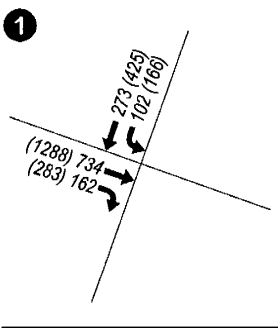
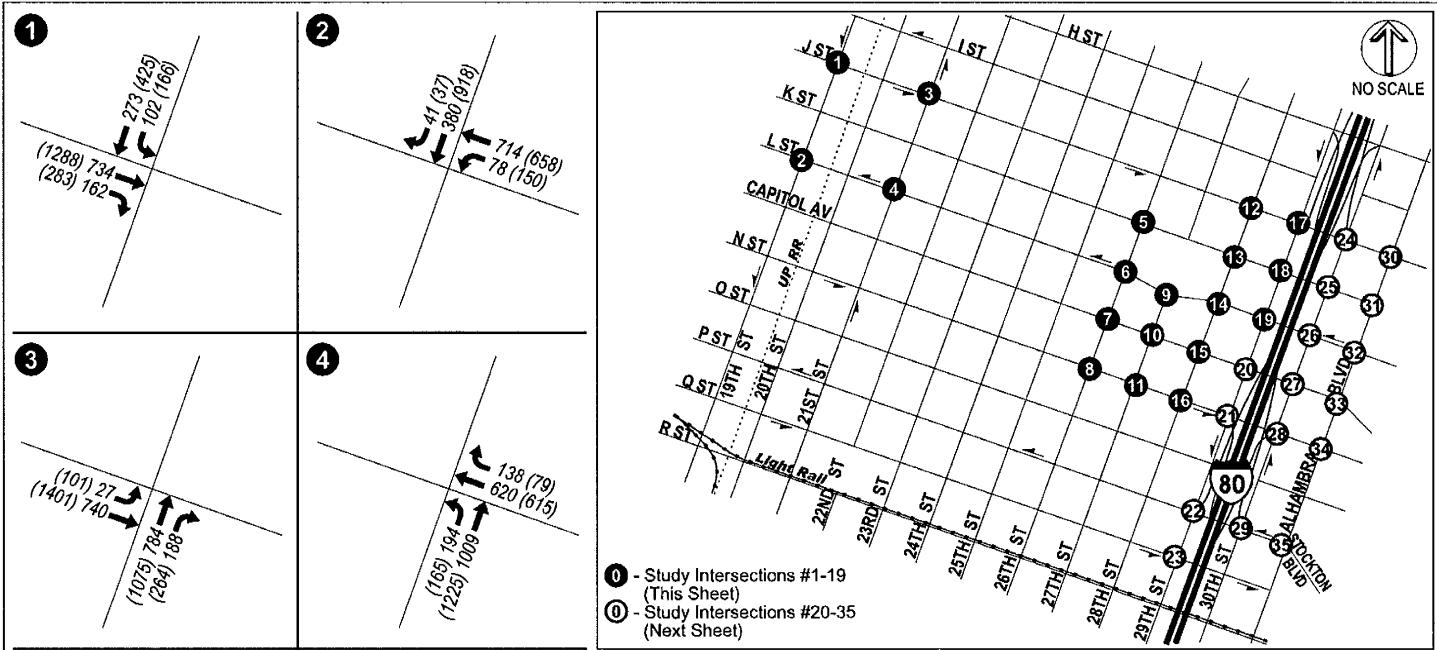
The SMCS project would increase traffic volumes at study area intersections. Figure 6.7-9 illustrates the a.m. and p.m. peak hour intersection volumes. Intersection geometry is illustrated in Figure 6.7-4. Table 6.7-15 summarizes the change in LOS and delay associated with the project. The changes in intersection operating conditions with the addition of project-generated traffic do not exceed the standards of significance for impacts to intersections. Therefore, the impacts are considered *less than significant*.

Theatre

The Children’s Theatre of California would increase traffic volumes at study area intersections. Although quantitative analyses of Existing plus Theatre traffic have not been conducted at this time, the theatre is anticipated to generate only 11 vehicle trips during each of the a.m. and p.m. peak hours. Due to the small number of vehicle trips anticipated to occur, the impacts are considered *less than significant*.

Mitigation Measures

None required.



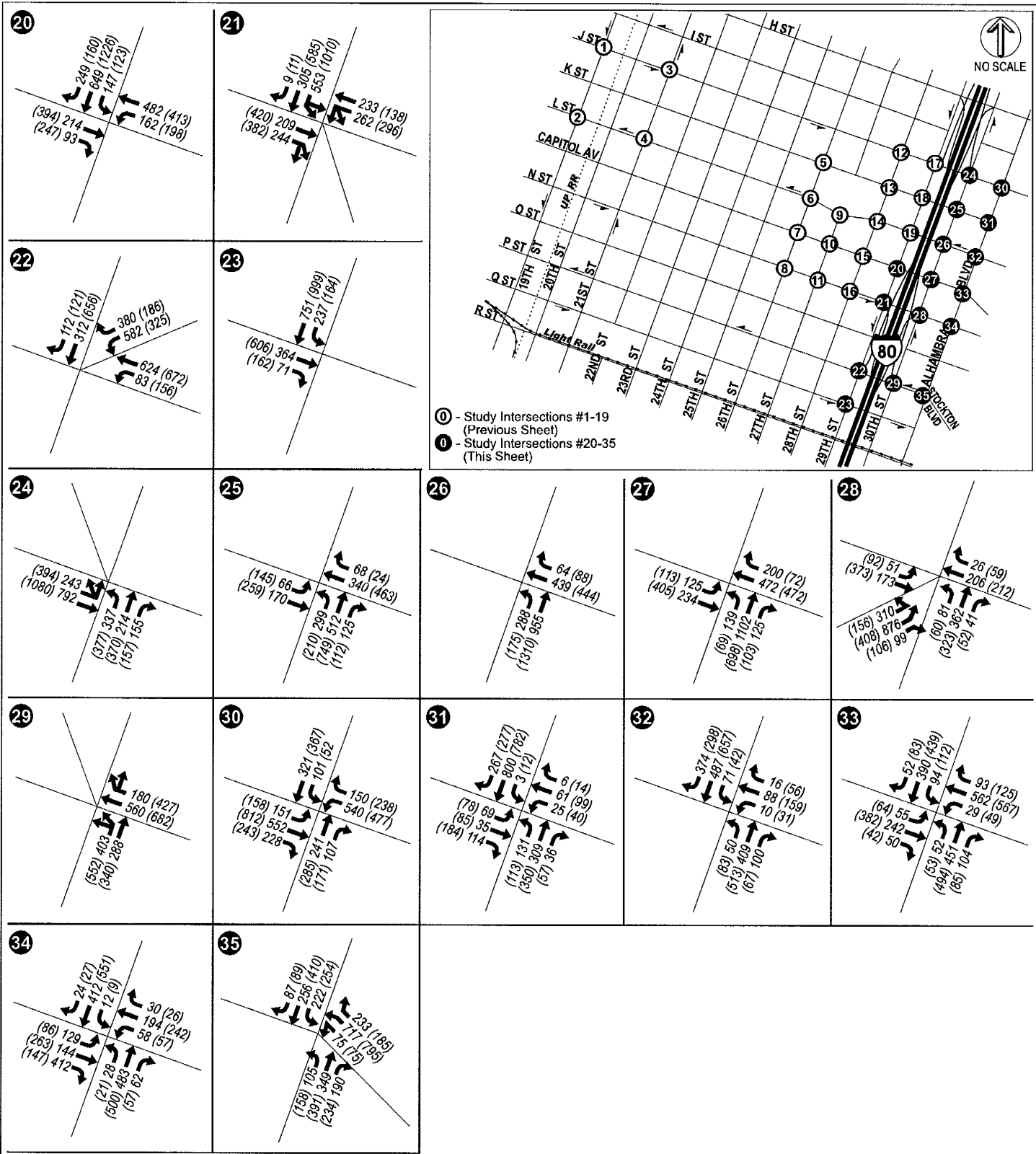
Study Intersections Continued Next Page

LEGEND

1 - Study Intersection & Number
 ← AM (PM) - Peak Hour Traffic Volume

NO SCALE
DKS Associates
 TRANSPORTATION SOLUTIONS

Figure 6.7-9 (1 of 2)
EXISTING
WITH SUTTER PROJECT VOLUMES



Study Intersections Continued from Previous Page

LEGEND

- - Study Intersection & Number
- ← AM (PM) - Peak Hour Traffic Volume

NO SCALE

DKS Associates

TRANSPORTATION SOLUTIONS

Figure 6.7-9 (2 of 2)

EXISTING

WITH SUTTER PROJECT VOLUMES

Table 6.7-15

Existing Plus SMCS Project Intersection Operating Conditions

Intersection	A.M. Peak Hour				P.M. Peak Hour			
	Without Project		With Project		Without Project		With Project	
	LOS	Delay (seconds)	LOS	Delay (seconds)	LOS	Delay (seconds)	LOS	Delay (seconds)
1. 19 th and J Streets	A	9.9	A	10.0	B	11.0	B	11.1
2. 19 th and L Streets	A	6.3	A	6.7	A	6.9	A	7.4
3. 21 st and J Streets	A	3.0	A	3.7	A	5.5	A	6.1
4. 21 st and L Streets	A	8.8	A	9.1	B	10.1	A	10.0
5. 26 th and K Streets	A	2.5	A	2.9	A	3.5	A	4.2
6. 26 th and L Streets	B	10.9	B	10.6	A	9.8	B	10.3
7. 26 th Street and Capitol Avenue	B	9.9	B	10.1	B	10.8	B	10.2
8. 26 th and N Streets	A	8.2	A	8.4	B	12.3	B	10.1
9. 27 th and L Streets	A	0.9	A	2.0	A	0.7	A	2.1
10. 27 th St. and Capitol Avenue	A	1.4	A	4.9	A	1.7	B	10.7
11. 27 th and N Streets	A	1.5	A	3.3	A	1.1	A	3.4
12. 28 th and J Streets	B	12.8	B	13.5	B	15.9	B	16.0
13. 28 th and K Streets	B	10.5	B	11.6	B	10.1	A	8.8
14. 28 th and L Streets	A	7.6	A	7.4	A	9.9	A	8.8
15. 28 th St. and Capitol Avenue	B	7.9	B	12.8	B	10.9	B	14.7
16. 28 th and N Streets	B	18.7	B	13.8	B	15.3	C	20.6
17. 29 th and J Streets	B	19.9	C	22.0	B	17.0	B	17.6
18. 29 th and K Streets	B	10.7	B	10.4	B	11.4	B	11.1
19. 29 th and L Streets	A	6.8	A	7.9	B	10.2	B	14.9
20. 29 th St. and Capitol Avenue	A	5.4	A	5.4	A	7.9	A	7.8
21. 29 th and N Streets	B	20.0	C	22.4	C	21.9	C	23.8
22. 29 th and P Streets	B	17.3	B	17.1	B	14.4	B	15.4
23. 29 th and Q Streets	A	6.0	A	6.3	A	9.2	A	8.8
24. 30 th and J Streets	A	7.8	A	8.2	A	5.8	A	4.3
25. 30 th and K Streets	A	7.6	A	7.0	B	10.2	A	8.7
26. 30 th and L Streets	A	6.9	A	6.8	A	9.1	B	10.5
27. 30 th Street and Capitol Avenue	B	10.9	B	10.8	B	12.3	B	15.8
28. 30 th and N Streets	B	19.7	C	21.4	B	16.8	B	17.0
29. 30 th and P Streets	A	8.6	A	8.5	A	9.2	A	8.9
30. Alhambra Blvd. and J Street	B	19.0	C	20.7	C	21.1	C	20.8
31. Alhambra Blvd. and K Street	A	8.1	A	9.3	A	8.6	A	8.1
32. Alhambra Blvd. and L Street	B	16.4	B	20.0	B	10.3	B	10.7
33. Alhambra Blvd. and Capitol Avenue	C	25.2	C	25.9	C	28.7	C	29.6
34. Alhambra Blvd. and N Street	B	13.3	B	13.5	B	17.1	B	15.8
35. Alhambra Blvd. and P Street	C	24.5	C	25.9	C	28.0	C	30.2

Source: DKS Associates, 2005.

Impact 6.7-2: Freeway System – The SMCS project and Children’s Theatre would increase traffic volumes on the freeway system.		
	SMCS Project	Theatre
Significance Before Mitigation	Significant	Significant
Mitigation Measures	None available	None available
Significance After Mitigation	Significant and Unavoidable	Significant and Unavoidable

SMCS Project

The SMCS project would increase traffic volumes on the freeway system. Tables 6.7-16 through 6.7-18 summarize the volume of traffic anticipated and the volume/capacity ratio and LOS. The changes in freeway system operating conditions with the addition of project-generated traffic would add traffic to a freeway facility that is already operating at a LOS “F”. Intersection queuing on freeway exit ramps is not anticipated to extend into critical areas. Because the SMCS project would add traffic, the impact is considered **significant**.

Theatre

The Children’s Theatre would increase traffic volumes on the freeway system. Although quantitative analyses of Existing plus Theatre traffic have not been conducted, the theatre is anticipated to generate approximately 11 vehicle trips during each of the a.m. and p.m. peak hours. The impact is considered **significant**. Because the Children’s Theatre would add traffic to a freeway facility that is already operating at a LOS “F,” no mitigation measures are available to avoid traffic to the freeway system. Therefore, the impact is considered **significant and unavoidable**.

Mitigation Measures

None available.

Table 6.7-16

**Existing Plus SMCS Project Peak Hour Capital City Freeway
Mainline Operating Conditions**

Direction	Location	Through Lanes	Auxiliary Lanes	Volume	Volume / Capacity Ratio	LOS
A.M. Peak Hour						
Northbound	South of N Street Exit	4	1	7,545	0.73	C
	N Street Exit to P Street Entrance	4	0	6,256	0.71	C
	P Street Entrance to H Street Exit	4	1	6,709	0.65	C
	H Street Exit to J Street Entrance	4	0	6,067	0.69	C
	North of J Street Entrance	3	0	6,554	0.99	E
Southbound	North of J Street Exit	3	0	6,411	0.97	E
	J Street Exit to H Street Entrance	3	0	5,337	0.81	D
	H Street Entrance to P Street Exit	3	1	5,843	0.71	C
	P Street Exit to N Street Entrance	3	0	4,883	0.74	C
	South of N Street Entrance	3	1	5,779	0.70	C
P.M. Peak Hour						
Northbound	South of N Street Exit	4	1	5,567	0.54	F ¹
	N Street Exit to P Street Entrance	4	0	5,126	0.58	F ¹
	P Street Entrance to H Street Exit	4	1	5,503	0.53	F ¹
	H Street Exit to J Street Entrance	4	0	4,904	0.56	F ¹
	North of J Street Entrance	3	0	5,694	0.86	F ¹
Southbound	North of J Street Exit	3	0	5,821	0.88	D
	J Street Exit to H Street Entrance	3	0	5,139	0.78	D
	H Street Entrance to P Street Exit	3	1	5,941	0.72	C
	P Street Exit to N Street Entrance	3	0	5,424	0.82	D
	South of N Street Entrance	3	1	6,852	0.84	D

Notes:

1. LOS "F" conditions due to queuing from downstream bottleneck.

Source: DKS Associates, 2005.

Table 6.7-17

**Existing Plus SMCS Project Peak Hour Capital City Freeway
Ramp Junction Operating Conditions**

Direction	Location	Junction Type	Ramp Volume	LOS
A.M. Peak Hour				
Northbound	N Street Exit	Lane Drop	1,289	D
	P Street Entrance	Lane Addition	453	C
	H Street Exit	Lane Drop	642	C
	J Street Entrance	Single lane on ramp	531	B
Southbound	J Street Exit	Single lane off ramp	1,172	E
	H Street Entrance	Lane Addition	506	C
	P Street Exit	Lane Drop	960	C
	N Street Entrance	Lane Addition	896	C
P.M. Peak Hour				
Northbound	N Street Exit	Lane Drop	441	F ¹
	P Street Entrance	Lane Addition	377	F ¹
	H Street Exit	Lane Drop	599	F ¹
	J Street Entrance	Single lane on ramp	862	F ¹
Southbound	J Street Exit	Single lane off ramp	744	E
	H Street Entrance	Lane Addition	802	C
	P Street Exit	Lane Drop	517	C
	N Street Entrance	Lane Addition	1,428	D

Notes:

1. LOS "F" conditions due to queuing from downstream bottleneck.

Source: DKS Associates, 2005.

Table 6.7-18

**Existing Plus SMCS Project Peak Hour Capital City Freeway
Weaving Segment Operating Conditions**

Direction	Location	Weaving Segment Speed (mph)	Weaving Segment Density (pcplph)	LOS
A.M. Peak Hour				
Northbound	U.S. 50 Entrance to N Street Exit	41.5	39.6	E
	P Street Entrance to H Street Exit	55.3	26.5	C
Southbound	H Street Entrance to P Street Exit	48.9	32.6	D
	N Street Entrance to U.S. 50 Exit	42.6	29.6	D
P.M. Peak Hour				
Northbound	U.S. 50 Entrance to N Street Exit	47.4	25.6	F ¹
	P Street Entrance to H Street Exit	57.6	20.8	F ¹
Southbound	H Street Entrance to P Street Exit	50.0	32.4	D
	N Street Entrance to U.S. 50 Exit	37.6	39.8	E

Notes:

1. LOS "F" conditions due to queuing from downstream bottleneck.

Source: DKS Associates, 2005.

Impact 6.7-3: Bikeways – The SMCS project and Children’s Theatre would result in the addition of employees, residents, patrons, and visitors to the site, some of whom would travel by bicycle.		
	SMCS Project	Theatre
Significance Before Mitigation	Less than Significant	Less than Significant
Mitigation Measures	None required	None required
Significance After Mitigation	N/A	N/A

SMCS Project

The SMCS project would result in the addition of employees, residents, patrons, and visitors to the site, some of whom would travel by bicycle. The SMCS project would not result in any substantial changes to the existing or future bikeway system. The project is not anticipated to hinder or eliminate an existing designated bikeway, or interfere with implementation of a proposed bikeway. On-street bikeways would be maintained on L Street between 27th and 29th Streets, and along Capitol Avenue between 26th and 29th Streets. The project is not anticipated to result in unsafe conditions for bicyclists, including unsafe bicycle/pedestrian or bicycle/motor vehicle conflicts. Therefore, bicycle impacts are considered **less than significant**.

Theatre

The Children’s Theatre would result in the addition of employees, patrons, and visitors to the site, some of whom would travel by bicycle. The theatre would not result in any substantial changes to the existing or future bikeway system. The theatre is not anticipated to hinder or eliminate an existing designated bikeway, or interfere with implementation of a proposed bikeway. The theatre is not anticipated to result in unsafe conditions for bicyclists, including unsafe bicycle/pedestrian or bicycle/motor vehicle conflicts. Therefore, bicycle impacts are considered **less than significant**.

Mitigation Measures

None required.

Impact 6.7-4: Pedestrian Facilities – The SMCS project and Children’s Theatre would result in the addition of employees, residents, patrons, and visitors to the site.		
	SMCS Project	Theatre
Significance Before Mitigation	Less than Significant	Less than Significant
Mitigation Measures	None required	None required
Significance After Mitigation	N/A	N/A

SMCS Project

The SMCS project would result in the addition of employees, residents, 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 sidewalks would be provided on both sides of L Street between 27th and 29th Streets and three new pedestrian bridges are proposed to connect the medical complex. A new 3-story spanning structure is proposed over L Street to connect the existing Sutter General Hospital and the proposed WCC. In addition, a pedestrian bridge is proposed over 29th Street connecting the WCC to the public parking lot (south lot). A third pedestrian bridge is proposed over 28th Street connecting the Buhler Building with the new SMF Building. Pedestrian impacts are considered **less than significant**.

Theatre

The Children’s Theatre would result in the addition of employees, residents, patrons, and visitors to the site. The theatre is not anticipated to result in unsafe conditions for pedestrians, including unsafe bicycle/pedestrian or pedestrian/motor vehicle conflicts. Sidewalks would be maintained along Capitol Avenue and 27th Street. Therefore, pedestrian impacts are considered **less than significant**.

Mitigation Measures

None required.

Impact 6.7-5: Transit Services – The SMCS project and Children’s Theatre would increase demand for transit services.		
	SMCS Project	Theatre
Significance Before Mitigation	Less than Significant	Less than Significant
Mitigation Measures	None required	None required
Significance After Mitigation	N/A	N/A

SMCS Project

The SMCS project would increase demand for transit services. The SMCS project would result in the addition of employees, residents, 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. Therefore, the impact of the project on the transit system is considered **less than significant**.

Theatre

The Children’s Theatre would increase demand for transit services. The theatre 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. Therefore, the impact of the project on the transit system is considered **less than significant**.

Mitigation Measures

None required.

Impact 6.7-6: Parking – The SMCS project and Children’s Theatre would increase demand for parking.		
	SMCS Project	Theatre
Significance Before Mitigation	Potentially Significant	Potentially Significant
Mitigation Measures	Mitigation Measure 6.7-1	Mitigation Measure 6.7-1
Significance After Mitigation	Potentially Significant and Unavoidable	Potentially Significant and Unavoidable

SMCS Project

The SMCS project would increase the demand for and supply of parking. The project proposes to increase the off-street parking supply from 1,847 spaces to 2,737 spaces, an additional supply of 890 spaces. This calculation of additional parking spaces accounts for replacement of existing parking spaces to be displaced by the project, such as the Paragary’s surface lot. As shown in Table 6.7-19, the SMCS project could result in an estimated parking demand of 1,427 spaces. Combined with Trinity Cathedral the demand would increase to 1,452 spaces and 1,576 spaces including the Children’s Theatre. The combined effect of these supply and demand changes could be a parking shortfall of up to 537 spaces for the SMCS project.

The project would provide 25 spaces for the Trinity Cathedral project, resulting in a total demand of 1,452 spaces. A shortage of on-site parking could result in parking in inappropriate areas (including residential neighborhoods), and create unnecessary circulation of vehicles on City streets as parking is sought. A shortage of on-site parking would particularly affect patients and other visitors, since they would not be as aware of parking alternatives, and since many would arrive in the peak midday parking demand period. Taken together, the SMCS and Trinity Cathedral projects could result in a parking shortfall of 562 spaces.

In order to reduce the potential for parking demand in excess of available supply, the SMCS project includes a Parking Management Program to reduce parking demand, monitor parking demand on an on-going basis, and provide additional parking supply (including remote parking) if necessary. The Parking Management Program is described in Chapter 2, Project Description.

Table 6.7-19
Estimated Parking Demand

Land Use	Size	Parking Rate	Source	Parking Need (spaces)
SMCS Project				
Women's and Children's Center	398,362 sf	2.09 / ksf	Survey ¹	833
SMF Building – Medical Office Building	97,223 sf	3.53 / ksf	ITE	343
SMF Building – Ambulatory Surgery	13 suites	5.67 / suite	ITE	74
Future Medical Office Building	35,000 sf	3.53 / ksf	ITE	124
Removal of Existing Medical Office Buildings	(9,652 sf)	3.53 / ksf	ITE	(34)
Apartments	27 du	1 / du	ITE	27
Retail	9,000 sf	2.65 / ksf	ITE	24
Pioneer Church	-	-	Project Description	36
Total				1,427³
Trinity Project				
Trinity Cathedral	-	-	Project Description	25
Total				1,452³
Theatre				
Theatre ²	-	-		124
Total				1,576³

Notes:

1. Based on trip generation and parking occupancy surveys conducted at Sutter Memorial Hospital.
2. See text for derivation of midday parking demand for the Theatre.
3. factors such as consolidation and internalization, as well as available capacity in the existing SMCS parking, could reduce these estimates by up to 471 spaces.

Source: Institute of Transportation Engineers' *Parking Generation, Third Edition*; DKS Associates, 2005.

Because a hospital project is a very specialized use, and since many characteristics of medical care have changed since the zoning requirements were established, detailed parking analyses were conducted to estimate the parking demand of the SMCS project. These studies include localized parking surveys (e.g., Sutter Memorial Hospital) as well as a review of data compiled by the Institute of Transportation Engineers (*Parking Generation, Third Edition*). The resulting estimate of demand is considered conservative, based on typical free-standing hospitals served primarily by automobiles. In the case of the proposed SMCS project, the following factors could potentially reduce the project parking demand:

- Medical office building characteristics – The proposed SMF medical office building space would include specialty care services, cardiac rehabilitation, and imaging rather than typical primary care offices located in many medical office buildings. The number of employees, number of patients and duration of visits varies between these uses because the type of medical activity is different than what has typically been assumed. However, no parking demand reduction has been taken because little quantifiable information is available to document the parking demand reduction as a result of the specific uses planned for the SMF Building.

- Consolidation and internalization – One purpose of the SMCS project is to consolidate Sutter General and Sutter Memorial Hospitals onto one medical complex to achieve better and more efficient services at less cost. Anticipated efficiency gains are related to consolidation and reduction in staff levels, and reductions in lost time by doctors and staff traveling between facilities. There would also be reduction in patient travel between facilities. Overall operational improvements could result in a staff reduction of five to ten percent, resulting in midday parking demand reductions of approximately 100 to 200 spaces. However, no parking demand reduction has been taken for consolidation and internalization.
- Existing parking vacancies – Based on current surveys, the existing SMCS parking facilities had 420 vacant spaces on a typical weekday. The previously entitled Sutter General Hospital expansion of 71,300 sf results in a demand of 149 spaces, which can be accommodated within the existing facilities. However, no credit has been taken for the remaining 271 vacant spaces.

Taking into account the quantifiable factors discussed above, the SMCS project parking shortfall could be as low as 66 spaces, and the combined SMCS and Trinity projects shortfall could be as low as 91 spaces.

It is difficult to determine the precise number of spaces that could be reduced as a result of the factors listed above. It is reasonable to expect that the SMCS TSM and Parking Management Program, described in Chapter 2, Project Description, would ensure parking supply is available to meet the parking demands of the project, primarily because of the stated commitment to provide adequate parking to meet demand, even in remote parking lots if necessary. The adequacy of parking supply would be the subject of a specific monitoring effort. Nonetheless, there is the potential that if monitoring determines that parking demand reduction measures have not adequately reduced parking demand, there could be temporary parking shortfalls as new parking spaces are being made available. The Community Parking Structure is the first project component to be constructed which would ensure adequate parking is available as the new uses are developed. However, because there is the potential that there could be periods of time where parking demand may exceed supply as the project is being constructed this is considered a **potentially significant impact**.

Theatre

The Children's Theatre project would also increase the demand for parking. Midday theatre parking demand is based upon an adult matinee event planned for the 200-seat theatre. Matinee performances would occur from 1:00 to 3:00 p.m., overlapping the peak midday parking period. Assuming 80 percent theatre occupancy and an effective 2.5 persons per automobile (including consideration of alternative modes), it is anticipated the theatre would generate a patron parking demand of 64 spaces. In addition, 60 spaces are to be provided for theatre staff. Therefore, during the time of performances the total theatre midday parking demand of 124 spaces is in addition to the 1,427-space demand of the SMCS project and 25 spaces provided for the Trinity Cathedral project resulting in a demand that exceeds the proposed supply. The SMCS Parking Management Program, described above, is designed to provide sufficient parking through demand management, on-going monitoring, and increases in parking supply as necessary.

Taken together, the SMCS, Trinity Cathedral, and Children's Theatre projects could result in a parking shortfall of up to 686 spaces. Taking into account the quantifiable factors discussed

above, the combined SMCS, Trinity, and Children’s Theatre projects parking shortfall could be as low as 215 spaces. Therefore, this is considered a **potentially significant impact**.

Mitigation Measures

Compliance with Mitigation Measure 6.7-1 would ensure SMCS provide parking if a shortfall is identified. However, this would still be considered a *potentially significant and unavoidable impact*.

(SMCS/Theater)

6.7-1 *In the event the TSM/Parking Management Program monitoring identifies parking demand that exceeds available supply, SMCS shall make additional parking supplies available in an expeditious fashion such that parking supply is equal to or exceeds demand.*

Impact 6.7-7: Parking – The Children’s Theatre would increase demand for oversized vehicle parking.		
	SMCS Project	Theatre
Significance Before Mitigation	N/A	Potentially Significant
Mitigation Measures	N/A	Mitigation Measure 6.7-2
Significance After Mitigation	N/A	Less than Significant

Theatre

In addition, daytime events oriented to children would result in the need for parking for school buses and vans. There is no current provision in the SMCS project or Children’s Theatre plans at this time to accommodate oversized vehicles. Therefore, this is considered a **potentially significant impact**.

Mitigation Measure

Compliance with Mitigation Measure 6.7-2 would ensure adequate parking is provided for any buses or oversized vehicles resulting in a *less-than-significant impact* for the Children’s Theatre after mitigation.

(Theater)

6.7-2 *The Children’s Theatre shall provide off-street and/or off-site parking for school buses and other oversized vehicles destined to theatre midday events without displacing occupied on-street parking spaces.*

CUMULATIVE IMPACTS

Analysis of cumulative impacts is based upon projection of transportation conditions in the year 2025. These projections are based upon land use and transportation network assumptions adopted by the Sacramento Area Council of Governments (SACOG).

Cumulative impacts on intersections and the freeway system are evaluated in this section. Impacts on bikeways, pedestrian facilities, and the transit system are not evaluated separately, since these impacts are the same as project impacts discussed earlier. Similarly, impacts on parking are presented in this section only when different from previously identified conditions.

Planned Transportation Improvements

Metropolitan Transportation Plan

Table 6.7-20 summarizes planned transportation improvements in the study vicinity. These improvements are taken from the regional Metropolitan Transportation Plan adopted by SACOG.

Table 6.7-20

Selected Planned Transportation Improvements

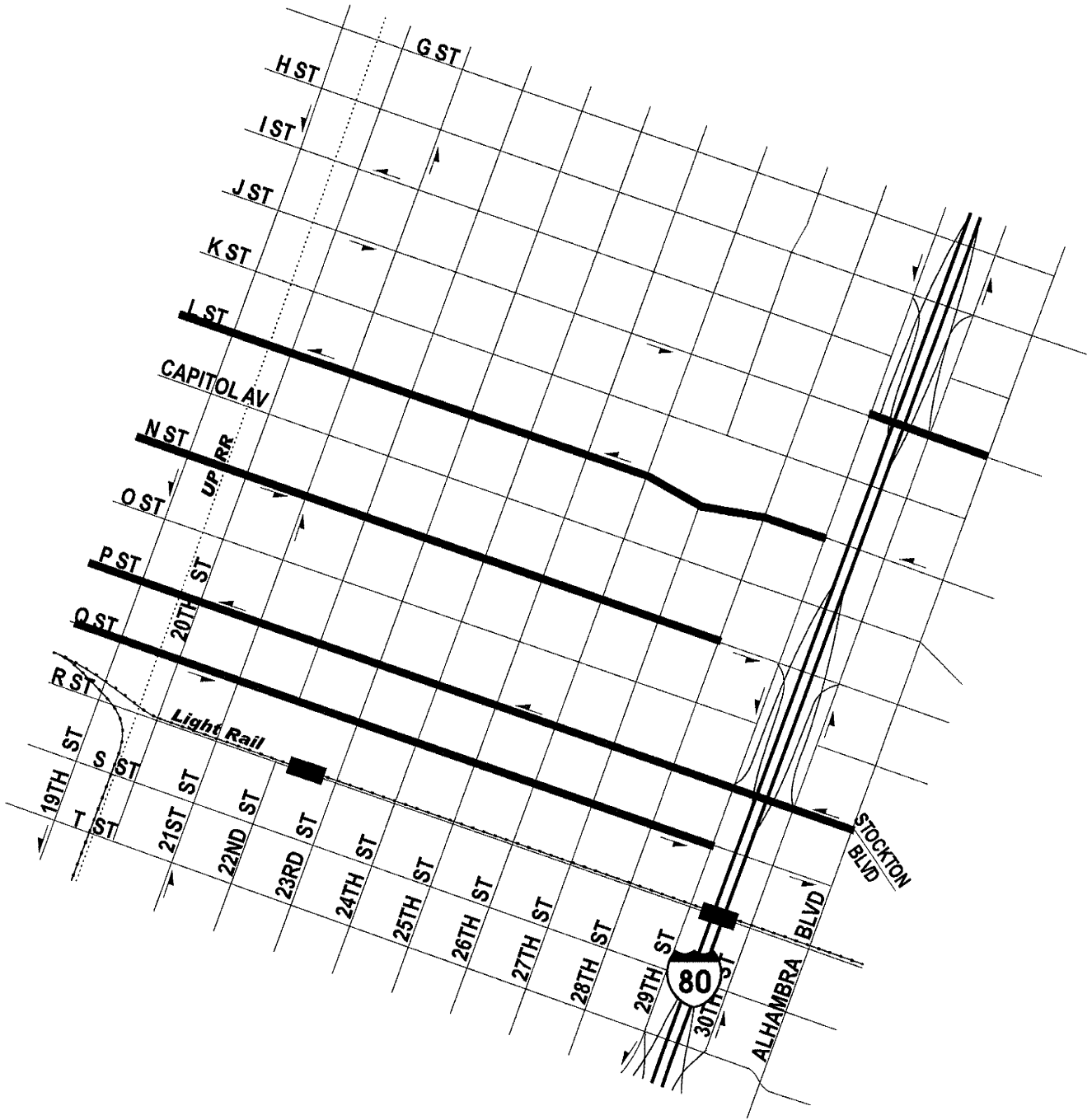
Facility	Description
SR 99 and US 50	Add carpool connectors between SR 99 and US 50
29 th Street Light Rail Station	Build transit center
Downtown-Natomas-Airport Corridor	Construct light rail extension to Sacramento International Airport
Folsom Corridor	Construct light rail extension to Folsom
South Line Corridor	Construct light rail extension to Elk Grove

Source: Sacramento Area Council of Governments, Metropolitan Transportation Plan.

Central City Two-Way Conversion Study

The City of Sacramento is currently studying the conversion of a number of Central City streets from one-way to two-way operations. Figure 6.7-10 illustrates the currently proposed streets to be converted. The following streets in the study area are included:

- 3rd Street - I Street to J Street
- J Street - 9th Street to Alhambra Blvd
- L Street - 16th Street to 29th Street
- N Street - 16th Street to 28th Street
- P and Q Street - 16th Street to 29th Street (P Street to Alhambra Boulevard)



LEGEND

— - Streets Proposed to be Converted to Two-way Operations



NO SCALE

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**Figure 6.7-10
CENTRAL CITY TWO-WAY
CONVERSION**

- 19th and 21st Streets - H/I Street to W Street (3 lanes one-way - 2 lanes one-way way conversion)
- 9th and 10th Streets - E Street to G Street

At this time, no decision has been made to convert any or all of these streets. However, such conversion would substantially affect traffic flow patterns in the site vicinity. Therefore, the cumulative analyses have been conducted with and without the proposed conversion. With the two-way conversion, it is assumed that all streets listed above would be converted. Figure 6.7-11 illustrates intersection geometry with the proposed conversion.

Trip Distribution and Assignment

The distribution and assignment of project trips to the roadway network was accomplished through a specialized travel model developed for the City of Sacramento. This travel model is currently being used in the analysis of the City's Central City Two-Way Conversion Study. The travel model distributes project trips throughout the region, and assigns trips to specific roadway paths. Figure 6.7-12 illustrates the distribution of project traffic in the cumulative scenarios.

Cumulative Without SMCS Project Operating Conditions

Intersections

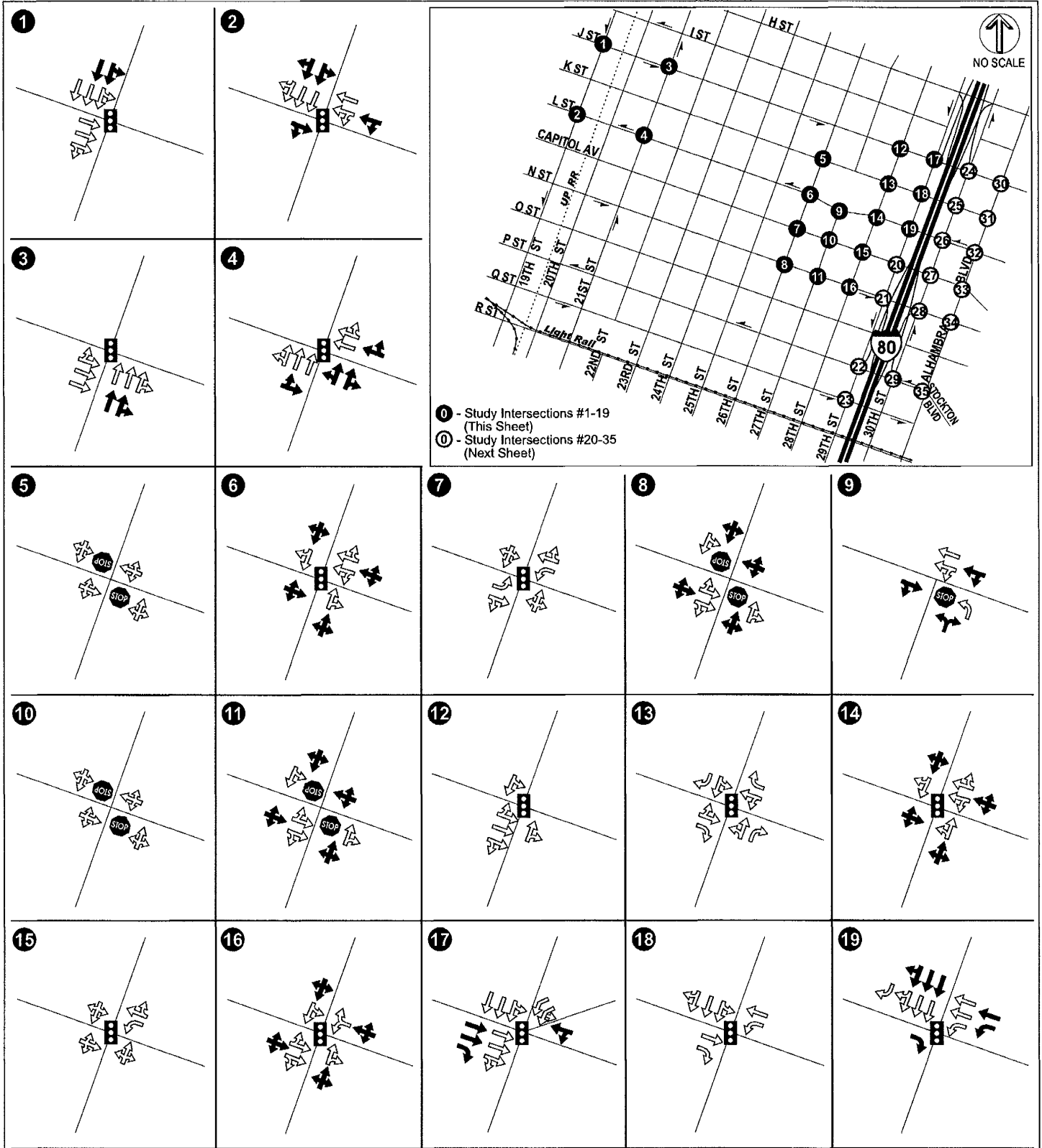
Figure 6.7-13 illustrates the a.m. and p.m. peak hour intersection volumes. Intersection geometry is illustrated in Figure 6.7-4. Table 6.7-21 summarizes the a.m. and p.m. peak hour operating conditions at the study area intersections. At unsignalized intersections, the average intersection level of service is used to determine conformity with the City's goal. Individual movements may operate at worse levels of service. The following intersections under cumulative conditions without the SMCS project would violate the City's level of service "C" standard:

- Alhambra Boulevard and Capitol Avenue – LOS "D" during a.m. and p.m. peak hours;
- Alhambra Boulevard and P Street – LOS "D" during p.m. peak hour; and
- 29th and N Street - LOS "D" during p.m. peak hour.

Freeway System

Tables 6.7-21 through 6.7-24 summarize the a.m. and p.m. peak hour operating conditions on the freeway system under cumulative conditions without the SMCS project. The freeway in the study area is expected to operate within Caltrans' LOS "E" goal with the following exceptions:

- Northbound freeway during the p.m. peak hour. This segment would operate at LOS "F" due to downstream queuing, as discussed earlier under existing conditions.



Study Intersections Continued Next Page

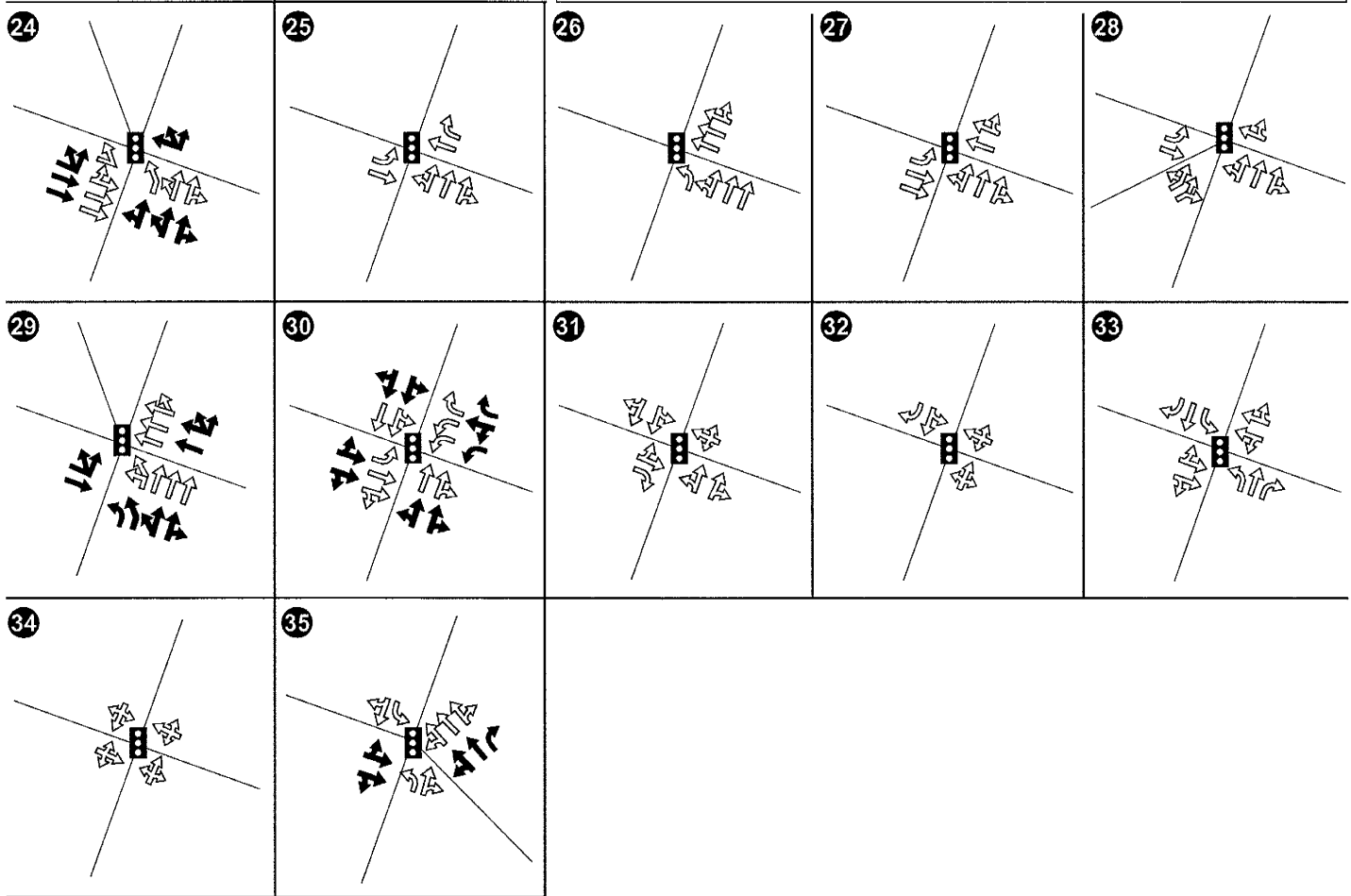
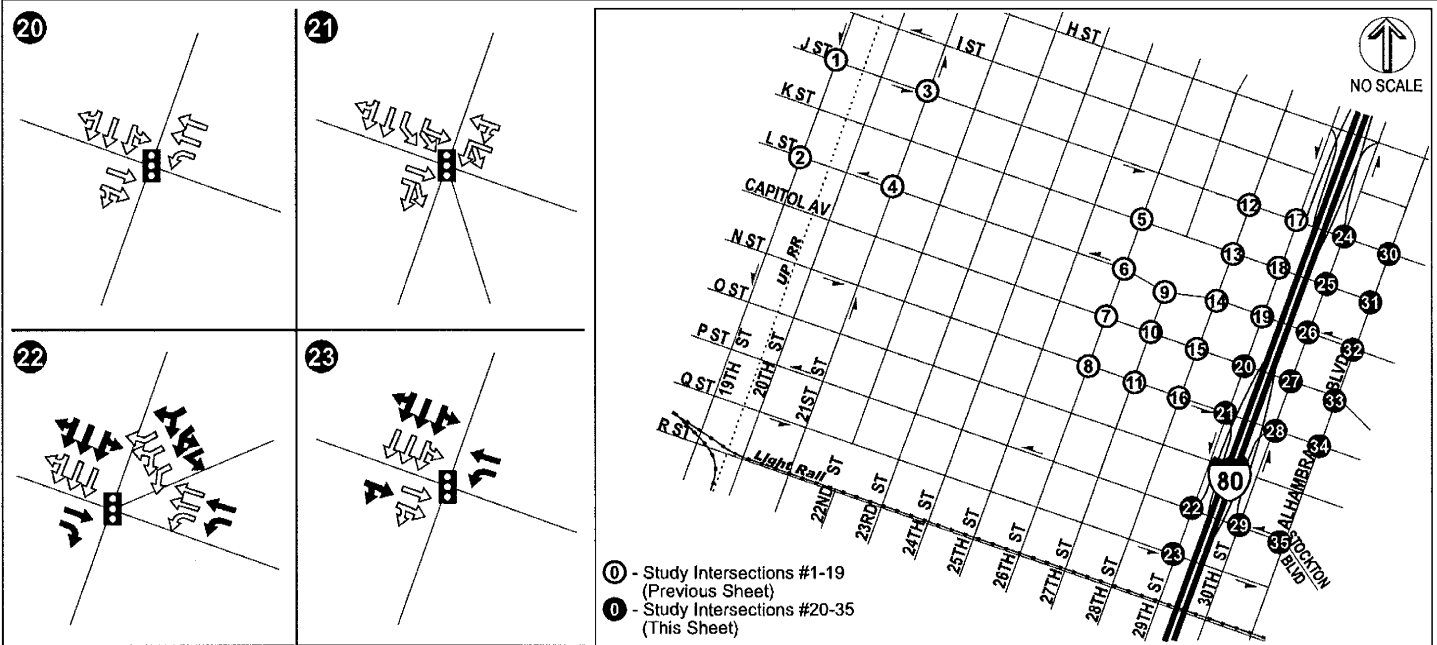
LEGEND

0 - Study Intersection & Number	↔ - Existing Lane Configuration
Ⓚ - Signal Control	← - Two-way Conversion Lane Configuration
STOP - Stop Control	

NO SCALE

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Figure 6.7-11 (1 of 2)
TWO-WAY CONVERSION INTERSECTION GEOMETRY

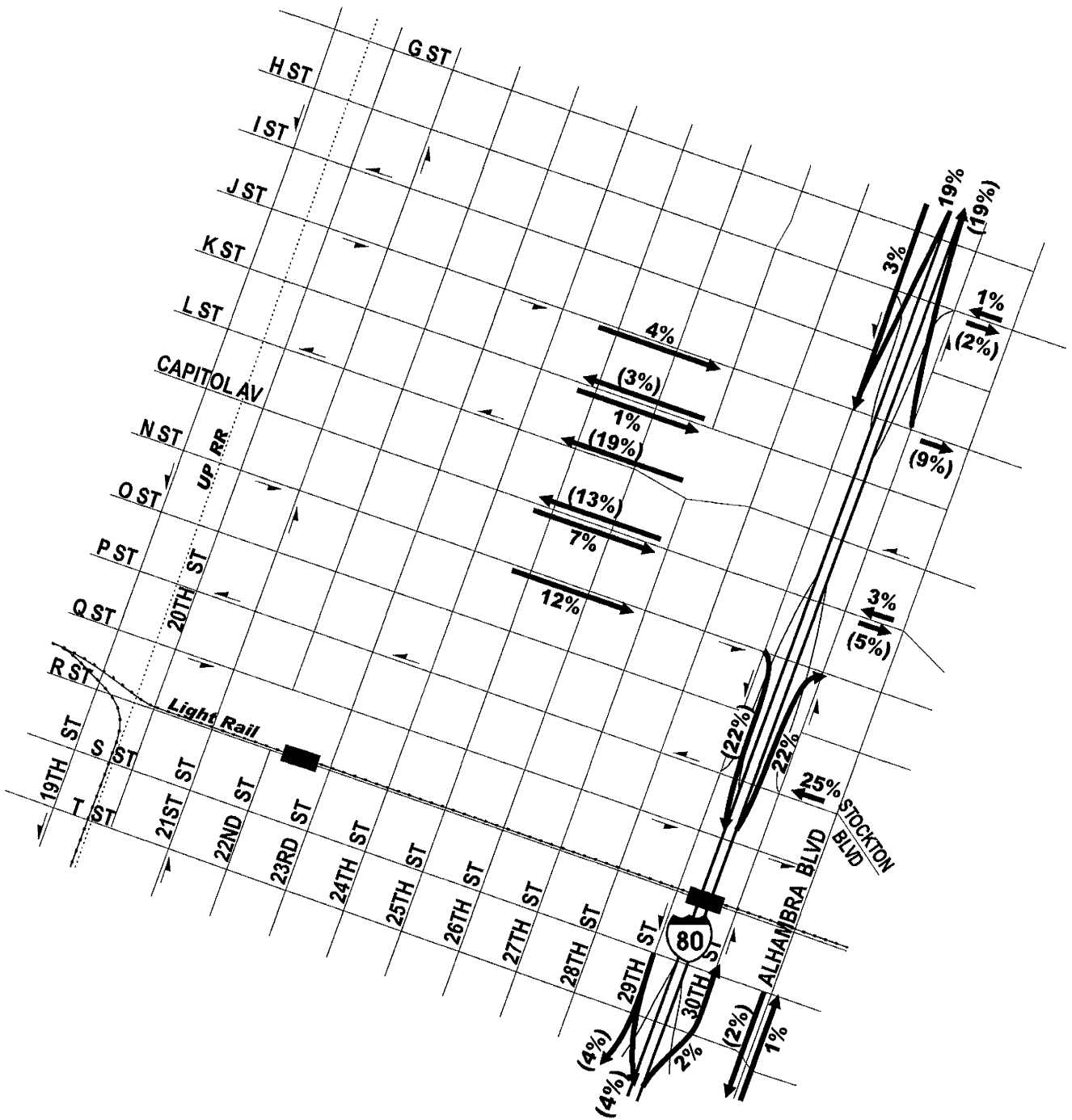


Study Intersections Continued from Previous Page

LEGEND	
① - Study Intersection & Number	← - Existing Lane Configuration
Ⓜ - Signal Control	↔ - Two-way Conversion Lane Configuration
STOP - Stop Control	


 NO SCALE
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Figure 6.7-11 (2 of 2)
TWO-WAY CONVERSION
INTERSECTION GEOMETRY

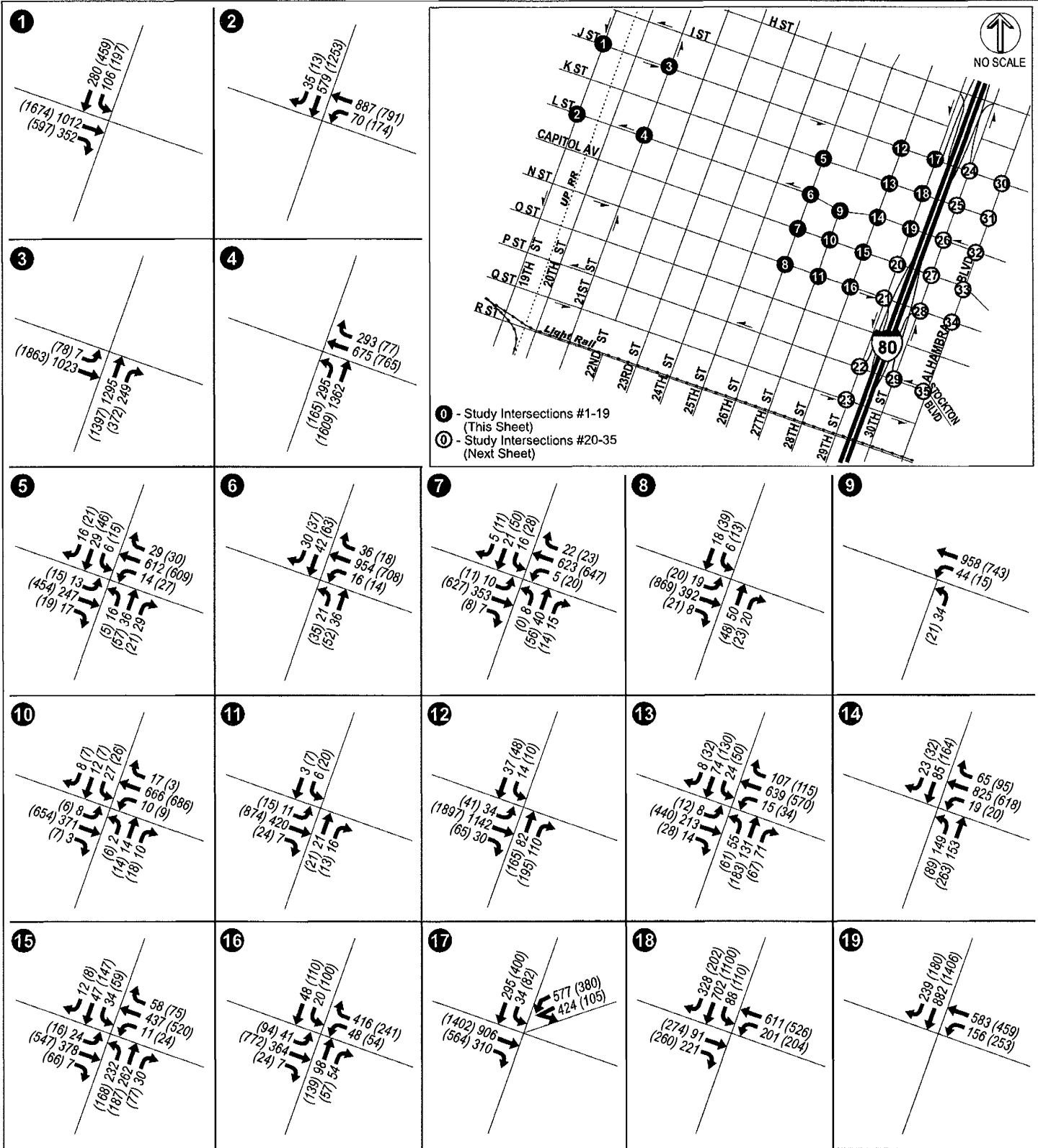


LEGEND

- 0% - Entering
- ↑↓ - (0%) - Exiting

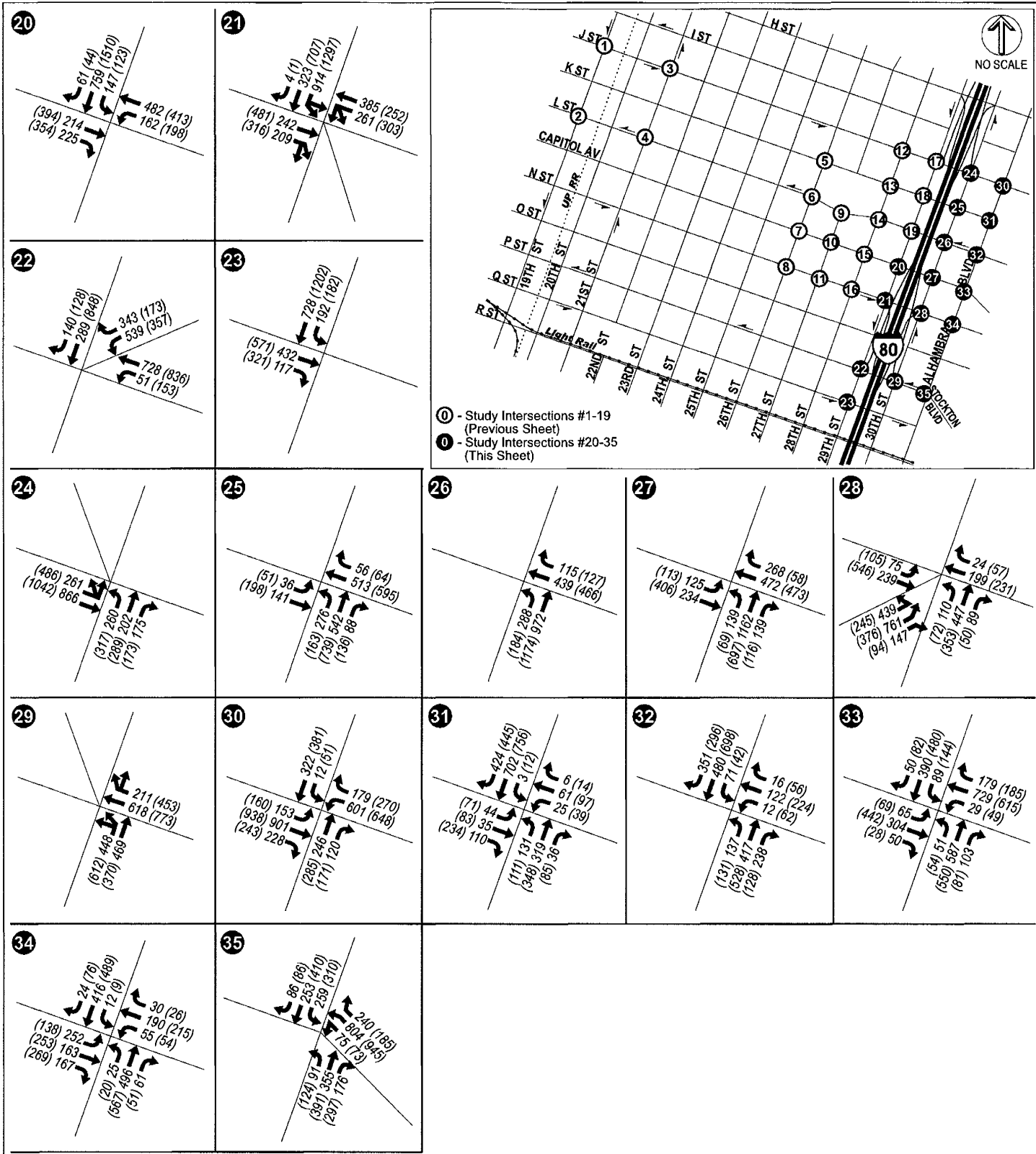


Figure 6.7-12
CUMULATIVE DISTRIBUTION



Study Intersections Continued Next Page

Figure 6.7-13 (1 of 2)
CUMULATIVE WITHOUT PROJECT VOLUMES



Study Intersections Continued from Previous Page

Figure 6.7-13 (2 of 2)
CUMULATIVE WITHOUT PROJECT VOLUMES

LEGEND

- - Study Intersection & Number
- ← AM (PM) - Peak Hour Traffic Volume



NO SCALE

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Table 6.7-21

Cumulative without SMCS Project Intersection Operating Conditions

Intersection	A.M. Peak Hour		P.M. Peak Hour	
	LOS	Delay (seconds)	LOS	Delay (seconds)
1. 19 th and J Streets	B	10.9	B	13.3
2. 19 th and L Streets	A	7.5	A	9.7
3. 21 st and J Streets	A	5.7	B	11.5
4. 21 st and L Streets	B	11.8	B	13.0
5. 26 th and K Streets	A	2.7	A	2.7
6. 26 th and L Streets	B	10.5	B	11.1
7. 26 th Street and Capitol Avenue	B	12.5	B	11.4
8. 26 th and N Streets	A	8.4	B	10.6
9. 27 th and L Streets	A	0.8	A	0.5
10. 27 th Street and Capitol Avenue	A	1.7	A	2.0
11. 27 th and N Streets	A	1.2	A	1.1
12. 28 th and J Streets	B	14.7	C	20.5
13. 28 th and K Streets	B	11.3	B	16.0
14. 28 th and L Streets	B	10.2	B	11.0
15. 28 th Street and Capitol Avenue	B	18.5	C	21.2
16. 28 th and N Streets	B	14.4	C	29.4
17. 29 th and J Streets	C	22.3	B	18.6
18. 29 th and K Streets	B	13.6	B	15.6
19. 29 th and L Streets	A	9.7	A	9.6
20. 29 th Street and Capitol Avenue	A	8.6	B	12.3
21. 29 th and N Streets	C	23.2	D	36.4
22. 29 th and P Streets	C	18.7	B	18.3
23. 29 th and Q Streets	A	7.6	B	11.5
24. 30 th and J Streets	B	6.1	A	4.5
25. 30 th and K Streets	B	11.9	B	15.0
26. 30 th and L Streets	A	6.7	A	7.5
27. 30 th Street and Capitol Avenue	B	18.7	B	15.1
28. 30 th and N Streets	C	29.0	C	28.4
29. 30 th and P Streets	A	8.5	B	11.2
30. Alhambra Boulevard and J Street	C	24.4	C	29.4
31. Alhambra Boulevard and K Street	A	8.7	B	10.9
32. Alhambra Boulevard and L Street	A	9.6	C	27.8
33. Alhambra Boulevard and Capitol Avenue	D	40.8	D	38.5
34. Alhambra Boulevard and N Street	C	29.7	C	22.3
35. Alhambra Boulevard and P Street	C	29.4	D	40.8

Source: DKS Associates, 2005.

Table 6.7-22

**Cumulative without SMCS Project Peak Hour Capital City Freeway
Mainline Operating Conditions**

Direction	Location	Through Lanes	Auxiliary Lanes	Volume	Volume / Capacity Ratio	LOS
A.M. Peak Hour						
Northbound	South of N Street Exit	4	1	7,874	0.76	D
	N Street Exit to P Street Entrance	4	0	6,790	0.77	D
	P Street Entrance to H Street Exit	4	1	7,299	0.70	C
	H Street Exit to J Street Entrance	4	0	6,346	0.72	C
	North of J Street Entrance	3	0	6,751	1.02	F
Southbound	North of J Street Exit	3	0	6,494	0.98	E
	J Street Exit to H Street Entrance	3	0	5,491	0.83	D
	H Street Entrance to P Street Exit	3	1	6,092	0.74	D
	P Street Exit to N Street Entrance	3	0	5,214	0.79	D
	South of N Street Entrance	3	1	6,290	0.77	D
P.M. Peak Hour						
Northbound	South of N Street Exit	4	1	6,100	0.59	F ¹
	N Street Exit to P Street Entrance	4	0	5,652	0.64	F ¹
	P Street Entrance to H Street Exit	4	1	6,046	0.58	F ¹
	H Street Exit to J Street Entrance	4	0	5,167	0.59	F ¹
	North of J Street Entrance	3	0	5,921	0.90	F ¹
Southbound	North of J Street Exit	3	0	5,949	0.90	E
	J Street Exit to H Street Entrance	3	0	5,301	0.80	D
	H Street Entrance to P Street Exit	3	1	6,303	0.77	D
	P Street Exit to N Street Entrance	3	0	5,767	0.87	D
	South of N Street Entrance	3	1	7,197	0.88	D

Notes:

1. LOS "F" conditions due to queuing from downstream bottleneck.

Source: DKS Associates, 2005.

Table 6.7-23

**Cumulative without SMCS Project Peak Hour Capital City Freeway
Ramp Junction Operating Conditions**

Direction	Location	Junction Type	Ramp Volume	LOS
A.M. Peak Hour				
Northbound	N Street Exit	Lane Drop	1,084	C
	P Street Entrance	Lane Addition	509	C
	H Street Exit	Lane Drop	953	C
	J Street Entrance	Single lane on ramp	442	B
Southbound	J Street Exit	Single lane off ramp	1,094	E
	H Street Entrance	Lane Addition	601	C
	P Street Exit	Lane Drop	878	C
	N Street Entrance	Lane Addition	1,076	C
P.M. Peak Hour				
Northbound	N Street Exit	Lane Drop	448	F ¹
	P Street Entrance	Lane Addition	394	F ¹
	H Street Exit	Lane Drop	879	F ¹
	J Street Entrance	Single lane on ramp	823	F ¹
Southbound	J Street Exit	Single lane off ramp	708	E
	H Street Entrance	Lane Addition	1,002	C
	P Street Exit	Lane Drop	536	C
	N Street Entrance	Lane Addition	1,430	D

Notes:

1. LOS "F" conditions due to queuing from downstream bottleneck.

Source: DKS Associates, 2005.

Table 6.7-24

**Cumulative without SMCS Project Peak Hour Capital City Freeway
Weaving Segment Operating Conditions**

Direction	Location	Weaving Segment Speed (mph)	Weaving Segment Density (pcplph)	LOS
A.M. Peak Hour				
Northbound	U.S. 50 Entrance to N Street Exit	41.6	41.3	E
	P Street Entrance to H Street Exit	52.1	30.6	D
Southbound	H Street Entrance to P Street Exit	48.5	34.2	D
	N Street Entrance to U.S. 50 Exit	41.3	33.3	D
P.M. Peak Hour				
Northbound	U.S. 50 Entrance to N Street Exit	47.2	28.2	F ¹
	P Street Entrance to H Street Exit	54.0	24.4	F ¹
Southbound	H Street Entrance to P Street Exit	47.9	35.9	E
	N Street Entrance to U.S. 50 Exit	37.6	41.7	E

Notes:

1. LOS "F" conditions due to queuing from downstream bottleneck.

Source: DKS Associates, 2005.

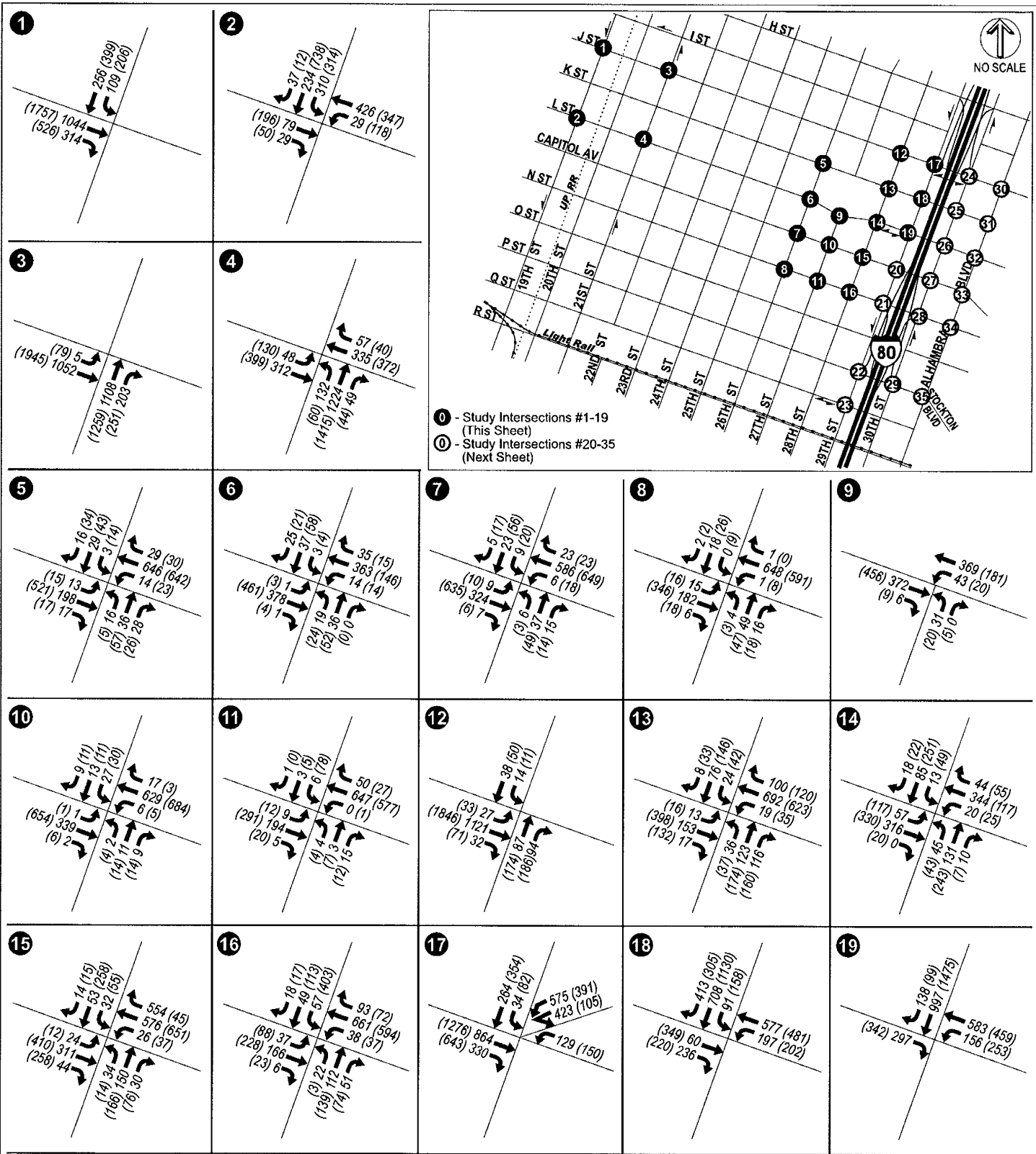
- Northbound freeway north of J Street entrance during the a.m. peak hour. This segment would operate at LOS "F" due to high volumes.

**Cumulative Without SMCS Project with Two-Way Conversion
Operating Conditions**

Intersections

Figure 6.7-14 illustrates the a.m. and p.m. peak hour intersection volumes under cumulative conditions without the SMCS project but assuming the City's Two-Way Conversion project is approved. Intersection geometry is illustrated in Figure 6.7-11. Table 6.7-25 summarizes the 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. The following intersections would violate the City's level of service "C" standard:

- 21st and L Streets – LOS "D" during the p.m. peak hour;
- 28th and N Streets – LOS "D" during the p.m. peak hour;
- 29th and N Streets – LOS "D" during the a.m. and p.m. peak hours;



Study Intersections Continued Next Page

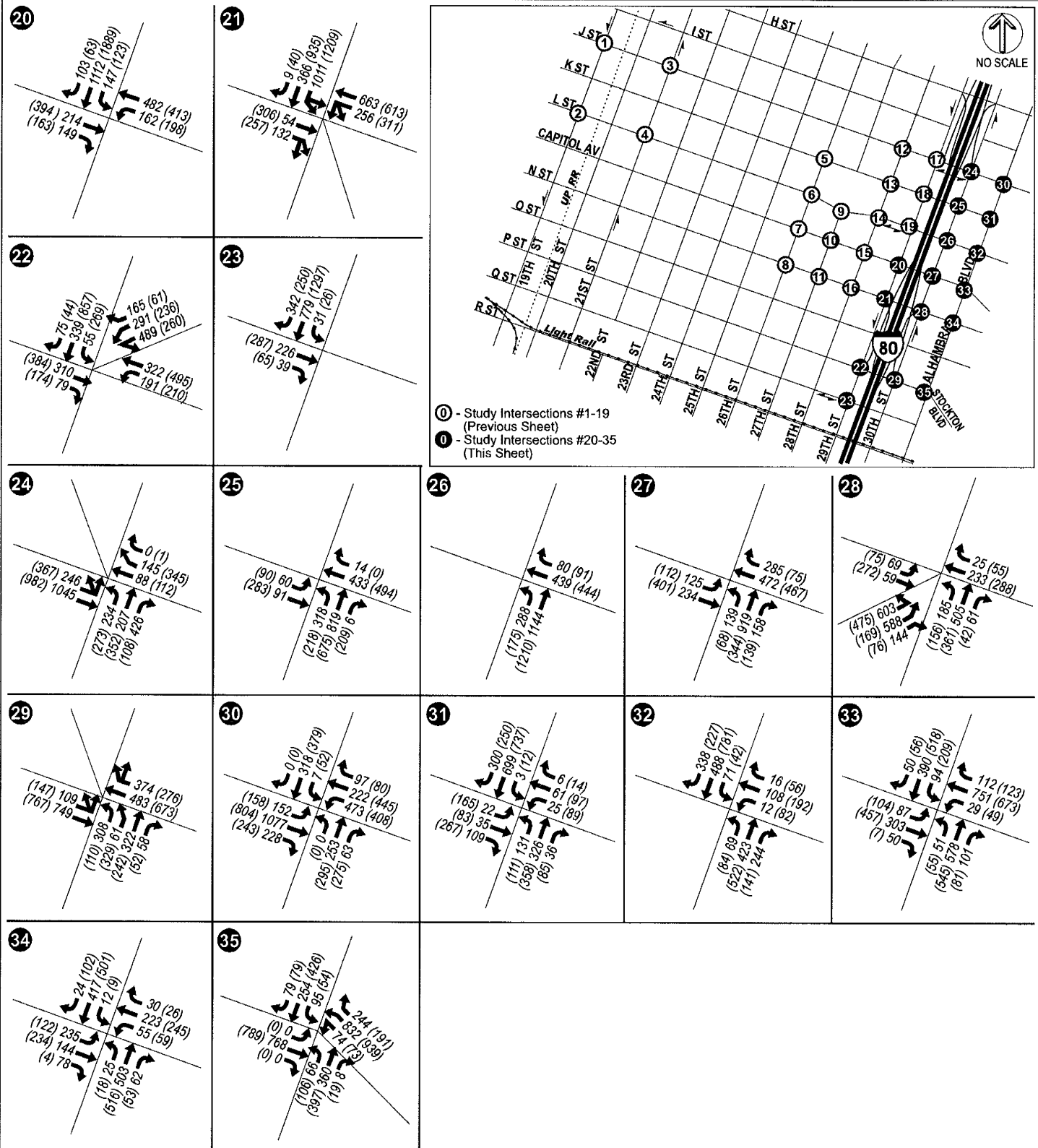
LEGEND

① - Study Intersection & Number

← AM (PM) - Peak Hour Traffic Volume



Figure 6.7-14 (1 of 2)
CUMULATIVE WITHOUT PROJECT
WITH TWO-WAY CONVERSION
VOLUMES



Study Intersections Continued from Previous Page

LEGEND

- ① - Study Intersection & Number
- ← AM (PM) - Peak Hour Traffic Volume



NO SCALE

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Figure 6.7-14 (2 of 2)
CUMULATIVE WITHOUT PROJECT
WITH TWO-WAY CONVERSION
VOLUMES

Table 6.7-25

**Cumulative without SMCS Project with Two-Way Conversion
Intersection Operating Conditions**

Intersection	A.M. Peak Hour		P.M. Peak Hour	
	LOS	Delay (seconds)	LOS	Delay (seconds)
1. 19 th and J Streets	B	11.7	B	14.3
2. 19 th and L Streets	B	10.3	B	13.5
3. 21 st and J Streets	A	7.7	C	24.0
4. 21 st and L Streets	B	16.5	D	49.2
5. 26 th and K Streets	A	2.6	A	5.1
6. 26 th and L Streets	A	9.7	A	5.5
7. 26 th Street and Capitol Avenue	B	10.2	B	11.5
8. 26 th and N Streets	C	18.0	C	17.5
9. 27 th and L Streets	A	1.1	A	0.7
10. 27 th Street and Capitol Avenue	A	1.5	A	2.2
11. 27 th and N Streets	A	0.6	A	2.7
12. 28 th and J Streets	B	12.7	B	16.9
13. 28 th and K Streets	B	12.0	B	12.8
14. 28 th and L Streets	B	9.9	B	14.5
15. 28 th Street and Capitol Avenue	B	10.8	B	12.9
16. 28 th and N Streets	B	12.8	D	40.7
17. 29 th and J Streets	C	30.7	C	32.5
18. 29 th and K Streets	B	14.6	B	14.8
19. 29 th and L Streets	B	11.0	B	12.2
20. 29 th Street and Capitol Avenue	A	8.7	B	12.1
21. 29 th and N Streets	D	42.8	D	44.5
22. 29 th and P Streets	C	27.8	C	23.0
23. 29 th and Q Streets	B	10.0	B	10.1
24. 30 th and J Streets	B	12.2	B	11.9
25. 30 th and K Streets	B	10.1	A	9.4
26. 30 th and L Streets	A	6.4	A	9.7
27. 30 th Street and Capitol Avenue	B	12.7	B	13.6
28. 30 th and N Streets	C	29.4	C	24.0
29. 30 th and P Streets	B	12.2	B	11.3
30. Alhambra Boulevard and J Street	D	42.8	D	39.0
31. Alhambra Boulevard and K Street	A	6.1	B	14.7
32. Alhambra Boulevard and L Street	A	8.9	C	19.1
33. Alhambra Boulevard and Capitol Avenue	C	32.7	D	45.8
34. Alhambra Boulevard and N Street	C	23.0	B	16.0
35. Alhambra Boulevard and P Street	B	18.7	C	23.9

Source: DKS Associates, 2005.

- Alhambra Boulevard and J Street – LOS “D” during the a.m. and p.m. peak hours; and
- Alhambra Boulevard and Capitol Avenue – LOS “D” during p.m. peak hour.

Freeway System

Tables 6.7-26 through 6.7-28 summarize the a.m. and p.m. peak hour operating conditions on the freeway system under cumulative conditions without the SMCS project but assuming the City's Two-Way Conversion project is approved. The freeway in the study area is expected to operate within Caltrans' LOS "E" goal with the following exceptions:

- Northbound freeway during the p.m. peak hour. This segment would operate at LOS "F" due to downstream queuing, as discussed earlier under existing conditions.
- Northbound freeway north of J Street entrance during the a.m. peak hour. This segment would operate at LOS "F" due to high volumes.

Table 6.7-26

Cumulative without Project with Two-Way Conversion Peak Hour Capital City Freeway Mainline Operating Conditions

Direction	Location	Through Lanes	Auxiliary Lanes	Volume	Volume/Capacity Ratio	LOS
A.M. Peak Hour						
Northbound	South of N Street Exit	4	1	7,908	0.76	D
	N Street Exit to P Street Entrance	4	0	6,842	0.78	D
	P Street Entrance to H Street Exit	4	1	7,372	0.71	C
	H Street Exit to J Street Entrance	4	0	6,381	0.73	C
	North of J Street Entrance	3	0	6,852	1.04	F
Southbound	North of J Street Exit	3	0	6,505	0.99	E
	J Street Exit to H Street Entrance	3	0	5,505	0.83	D
	H Street Entrance to P Street Exit	3	1	6,120	0.75	D
	P Street Exit to N Street Entrance	3	0	5,178	0.78	D
	South of N Street Entrance	3	1	6,241	0.76	D
P.M. Peak Hour						
Northbound	South of N Street Exit	4	1	6,126	0.59	F ¹
	N Street Exit to P Street Entrance	4	0	5,670	0.64	F ¹
	P Street Entrance to H Street Exit	4	1	6,094	0.59	F ¹
	H Street Exit to J Street Entrance	4	0	5,198	0.59	F ¹
	North of J Street Entrance	3	0	6,134	0.93	F ¹
Southbound	North of J Street Exit	3	0	5,949	0.90	E
	J Street Exit to H Street Entrance	3	0	5,290	0.80	D
	H Street Entrance to P Street Exit	3	1	6,323	0.77	D
	P Street Exit to N Street Entrance	3	0	5,761	0.87	D
	South of N Street Entrance	3	1	7,222	0.88	D

Notes:

1. LOS "F" conditions due to queuing from downstream bottleneck.

Source: DKS Associates, 2005.

Table 6.7-27

**Cumulative without SMCS Project with Two-Way Conversion Peak
Hour Capital City Freeway Ramp Junction Operating Conditions**

Direction	Location	Junction Type	Ramp Volume	LOS
A.M. Peak Hour				
Northbound	N Street Exit	Lane Drop	1,066	C
	P Street Entrance	Lane Addition	530	C
	H Street Exit	Lane Drop	991	C
	J Street Entrance	Single lane on ramp	514	B
Southbound	J Street Exit	Single lane off ramp	1,091	E
	H Street Entrance	Lane Addition	615	C
	P Street Exit	Lane Drop	942	C
	N Street Entrance	Lane Addition	1,063	C
P.M. Peak Hour				
Northbound	N Street Exit	Lane Drop	456	F ¹
	P Street Entrance	Lane Addition	424	F ¹
	H Street Exit	Lane Drop	896	F ¹
	J Street Entrance	Single lane on ramp	1,021	F ¹
Southbound	J Street Exit	Single lane off ramp	720	E
	H Street Entrance	Lane Addition	1,033	C
	P Street Exit	Lane Drop	562	C
	N Street Entrance	Lane Addition	1,461	D

Notes:

1. LOS "F" conditions due to queuing from downstream bottleneck.

Source: DKS Associates, 2005.

Table 6.7-28

Cumulative without SMCS Project with Two-Way Conversion Peak Hour Capital City Freeway Weaving Segment Operating Conditions

Direction	Location	Weaving Segment Speed (mph)	Weaving Segment Density (pcplph)	LOS
A.M. Peak Hour				
Northbound	U.S. 50 Entrance to N Street Exit	41.0	42.1	E
	P Street Entrance to H Street Exit	51.5	31.2	D
Southbound	H Street Entrance to P Street Exit	48.5	34.4	D
	N Street Entrance to U.S. 50 Exit	40.8	33.3	D
P.M. Peak Hour				
Northbound	U.S. 50 Entrance to N Street Exit	46.4	28.8	F ¹
	P Street Entrance to H Street Exit	53.5	24.9	F ¹
Southbound	H Street Entrance to P Street Exit	48.0	35.9	E
	N Street Entrance to U.S. 50 Exit	36.8	42.8	E

Notes:

1. LOS "F" conditions due to queuing from downstream bottleneck.

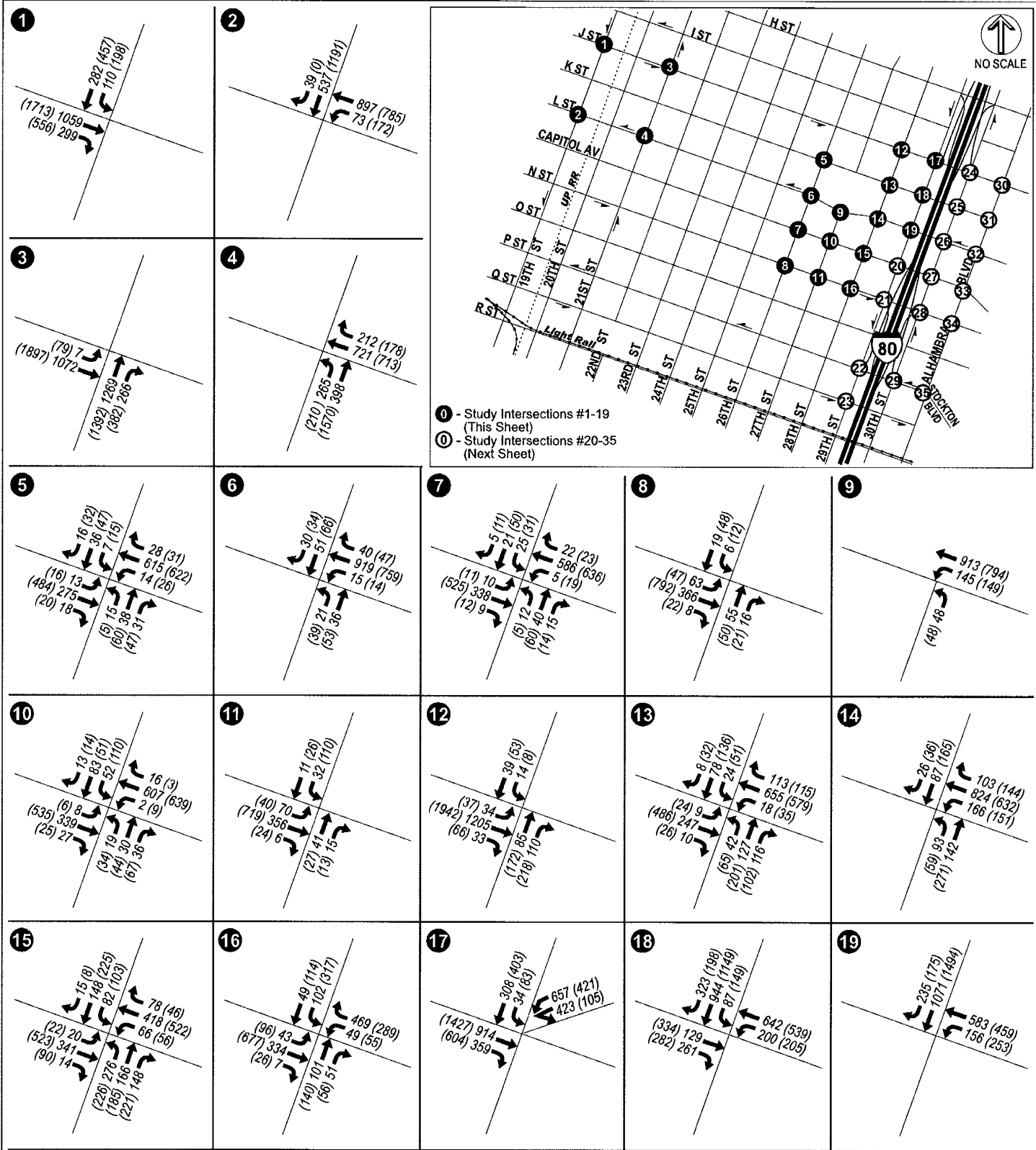
Source: DKS Associates, 2005.

Impact 6.7-8: Intersections – The SMCS project would increase traffic volumes at study intersections under 2025 conditions.

	Cumulative With SMCS Project
Significance Before Mitigation	Significant
Mitigation Measures	Mitigation Measure 6.7-3
Significance After Mitigation	Less than Significant

Cumulative with SMCS Project

The SMCS project would increase traffic volumes at study area intersections under year 2025 conditions. Figure 6.7-15 illustrates the a.m. and p.m. peak hour intersection volumes. Intersection geometry is illustrated in Figure 6.7-4. Table 6.7-29 summarizes conditions both with and without the SMCS project. As discussed below, the changes in intersection operating conditions with the addition of project-generated traffic exceed the standards of significance for impacts to intersections. Operating conditions at the intersection at 27th Street and Capitol Avenue would degrade from LOS "A" to LOS "E" during the p.m. peak hour resulting in a **significant cumulative impact**.



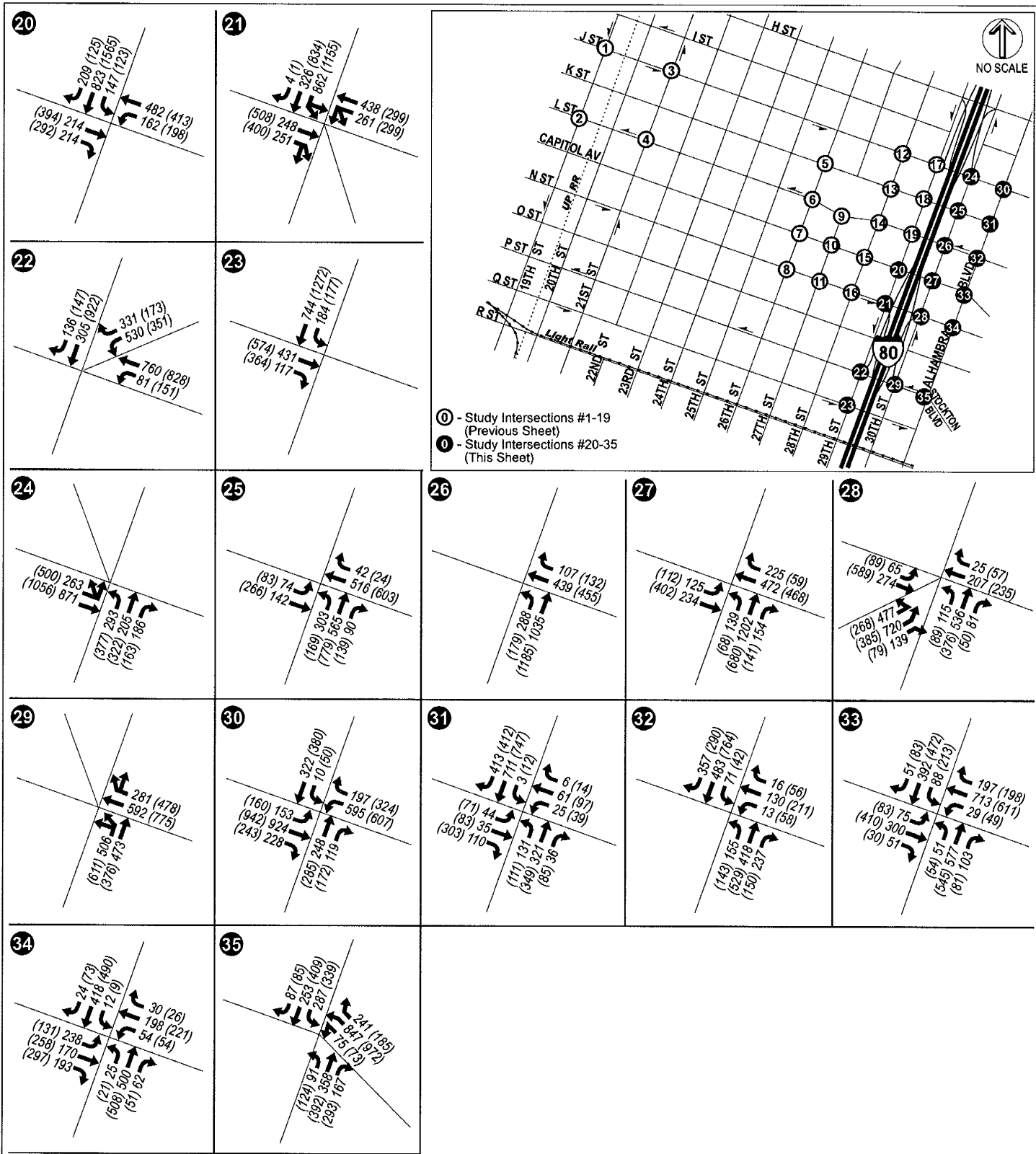
Study Intersections Continued Next Page

LEGEND

1 - Study Intersection & Number
 ← AM (PM) - Peak Hour Traffic Volume

NO SCALE
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Figure 6.7-15 (1 of 2)
CUMULATIVE WITH SUTTER
PROJECT VOLUMES



Study Intersections Continued from Previous Page

LEGEND

○ - Study Intersection & Number
 ← AM (PM) - Peak Hour Traffic Volume

NO SCALE

DKS Associates
 TRANSPORTATION SOLUTIONS

Figure 6.7-15 (2 of 2)
CUMULATIVE WITH SUTTER
PROJECT VOLUMES

Table 6.7-29

Cumulative with SMCS Project Intersection Operating Conditions

Intersection	A.M. Peak Hour				P.M. Peak Hour			
	Without SMCS Project		With SMCS Project		Without SMCS Project		With SMCS Project	
	LOS	Delay (seconds)	LOS	Delay (seconds)	LOS	Delay (seconds)	LOS	Delay (seconds)
1. 19 th and J Streets	B	10.9	B	10.9	B	13.3	B	13.2
2. 19 th and L Streets	A	7.5	A	6.8	A	9.7	A	9.6
3. 21 st and J Streets	A	5.7	A	5.3	B	11.5	B	12.2
4. 21 st and L Streets	B	11.8	B	11.6	B	13.0	B	13.8
5. 26 th and K Streets	A	2.7	A	3.0	A	2.7	A	5.7
6. 26 th and L Streets	B	10.5	B	11.0	B	11.1	B	11.0
7. 26 th Street and Capitol Ave.	B	12.5	B	11.6	B	11.4	B	10.8
8. 26 th and N Streets	A	8.4	A	8.5	B	10.6	B	10.4
9. 27 th and L Streets	A	0.8	A	1.9	A	0.5	A	2.2
10. 27 th St. and Capitol Ave.	A	1.7	A	7.2	A	2.0	E	37.1
11. 27 th and N Streets	A	1.2	A	3.6	A	1.1	A	3.3
12. 28 th and J Streets	B	14.7	B	15.8	C	20.5	C	20.7
13. 28 th and K Streets	B	11.3	B	10.6	B	16.0	B	13.0
14. 28 th and L Streets	B	10.2	B	11.0	B	11.0	B	14.3
15. 28 th St. and Capitol Ave.	B	18.5	C	26.7	C	21.2	D	46.4
16. 28 th and N Streets	B	14.4	C	31.4	C	29.4	C	27.7
17. 29 th and J Streets	C	22.3	C	25.2	B	18.6	B	20.0
18. 29 th and K Streets	B	13.6	B	15.8	B	15.6	B	14.8
19. 29 th and L Streets	A	9.7	B	11.6	A	9.6	A	9.5
20. 29 th St. and Capitol Ave.	A	8.6	A	6.8	B	12.3	B	14.2
21. 29 th and N Streets	C	23.2	C	25.3	D	36.4	D	41.0
22. 29 th and P Streets	C	18.7	C	20.9	B	18.3	C	20.7
23. 29 th and Q Streets	A	7.6	A	9.5	B	11.5	B	11.9
24. 30 th and J Streets	B	6.1	A	6.9	A	4.5	A	3.9
25. 30 th and K Streets	B	11.9	A	9.9	B	15.0	B	12.2
26. 30 th and L Streets	A	6.7	A	5.0	A	7.5	A	6.9
27. 30 th St. and Capitol Ave.	B	18.7	B	17.1	B	15.1	B	13.6
28. 30 th and N Streets	C	29.0	C	31.7	C	28.4	C	24.3
29. 30 th and P Streets	A	8.5	A	9.9	B	11.2	B	10.1
30. Alhambra Blvd. and J St.	C	24.4	C	25.0	C	29.4	C	27.5
31. Alhambra Blvd. and K St.	A	8.7	B	12.4	B	10.9	B	13.0
32. Alhambra Blvd. and L St.	A	9.6	B	16.5	C	27.8	D	38.6
33. Alhambra B. and Capitol Ave.	D	40.8	C	34.6	D	38.5	D	49.3
34. Alhambra Blvd. and N St.	C	29.7	C	24.7	C	22.3	C	23.5
35. Alhambra Blvd. and P St.	C	29.4	C	32.1	D	40.8	D	43.1
With Mitigation								
10. 27 th St. and Capitol Ave.	-	-	-	-	-	-	B	10.9
15. 28 th St. and Capitol Ave.	-	-	-	-	-	-	B	17.3
32. Alhambra Blvd. and L St.	-	-	-	-	-	-	C	23.3
33. Alhambra B. and Capitol Ave.	-	-	-	-	-	-	C	23.7

Source: DKS Associates, 2005.

- 28th Street and Capitol Avenue – Operating conditions degrade from LOS “C” to LOS “D” during the p.m. peak hour.
- Alhambra Boulevard and L Street - Operating conditions degrade from LOS “B” to LOS “D” during the p.m. peak hour.
- Alhambra Boulevard and Capitol Avenue – Operating conditions degrade from LOS “C” to LOS “D” during the p.m. peak hour.

Mitigation Measures

Compliance with Mitigation Measure 6.7-3 would ensure cumulative impacts to intersections would be reduced to a *less-than-significant level*.

(SMCS)

- 6.7-3 (a) *The SMCS project shall pay its fair share to fund the future construction of a traffic signal at 27th Street and Capitol Avenue intersection*

With this mitigation, operating conditions would improve to LOS “B” during the p.m. peak hour.

- (b) *The SMCS project shall pay to restripe the northbound and southbound intersection approaches at 28th Street and Capitol Avenue to provide one left turn lane and one through – right turn lane.*

With this mitigation, operating conditions would improve to LOS “B” during the p.m. peak hour. This mitigation measure would involve the removal of parking and bike lanes near the intersection.

- (c) *The SMCS project shall pay to add a northbound left turn lane at Alhambra Boulevard and L Street by restriping the northbound approach to provide one left turn lane and one through – right turn lane.*

With this mitigation, operating conditions would improve to LOS “C” during the p.m. peak hour.

- (d) *The SMCS project shall pay to convert all intersection approaches to one left turn, one through, and one right turn lane on Alhambra Boulevard and Capitol Avenue.*

With this mitigation, operating conditions would improve to LOS “C” during the p.m. peak hour. This mitigation measure would involve the removal of parking on the south side of Capitol Avenue west of Alhambra Boulevard.

Impact 6.7-9: Freeway System – The SMCS project would increase traffic volumes on the freeway system under year 2025 conditions.	
	Cumulative With SMCS Project
Significance Before Mitigation	Significant
Mitigation Measures	None available
Significance After Mitigation	Significant and Unavoidable

Cumulative with SMCS Project

The SMCS project would increase traffic volumes on the study area freeway system. Tables 6.7-30 through 6.7-32 summarize the resultant conditions. The changes in freeway system operating conditions under year 2025 conditions with the addition of project-generated traffic would add traffic to a freeway system that is currently operating at LOS "F" which would exceed the level of significance. Intersection queuing on freeway exit ramps is not anticipated to extend into critical areas. Therefore, impacts to freeway systems are considered **significant**.

Mitigation Measures

No mitigation measures are available to avoid adding more traffic to the freeway system under cumulative conditions. Therefore, the impact would be *significant and unavoidable*.

None available.

Table 6.7-30

**Cumulative with SMCS Project Peak Hour Capital City Freeway
Mainline Operating Conditions**

Direction	Location	Through Lanes	Auxiliary Lanes	Volume	Volume / Capacity Ratio	LOS
A.M. Peak Hour						
Northbound	South of N Street Exit	4	1	7,888	0.76	D
	N Street Exit to P Street Entrance	4	0	6,820	0.78	D
	P Street Entrance to H Street Exit	4	1	7,317	0.70	C
	H Street Exit to J Street Entrance	4	0	6,326	0.72	C
	North of J Street Entrance	3	0	6,762	1.02	F
Southbound	North of J Street Exit	3	0	6,527	0.99	E
	J Street Exit to H Street Entrance	3	0	5,444	0.82	D
	H Street Entrance to P Street Exit	3	1	6,046	0.74	C
	P Street Exit to N Street Entrance	3	0	5,188	0.79	D
	South of N Street Entrance	3	1	6,326	0.77	D
P.M. Peak Hour						
Northbound	South of N Street Exit	4	1	6,109	0.59	F ¹
	N Street Exit to P Street Entrance	4	0	5,647	0.64	F ¹
	P Street Entrance to H Street Exit	4	1	6,031	0.58	F ¹
	H Street Exit to J Street Entrance	4	0	5,127	0.58	F ¹
	North of J Street Entrance	3	0	5,922	0.90	F ¹
Southbound	North of J Street Exit	3	0	5,960	0.90	E
	J Street Exit to H Street Entrance	3	0	5,271	0.80	D
	H Street Entrance to P Street Exit	3	1	6,300	0.77	D
	P Street Exit to N Street Entrance	3	0	5,771	0.87	D
	South of N Street Entrance	3	1	7,191	0.88	D

Notes:

1. LOS "F" conditions due to queuing from downstream bottleneck.

Source: DKS Associates, 2005.

Table 6.7-31

**Cumulative with SMCS Project Peak Hour Capital City Freeway
Ramp Junction Operating Conditions**

Direction	Location	Junction Type	Ramp Volume	LOS
A.M. Peak Hour				
Northbound	N Street Exit	Lane Drop	1,068	C
	P Street Entrance	Lane Addition	497	C
	H Street Exit	Lane Drop	991	C
	J Street Entrance	Single lane on ramp	476	B
Southbound	J Street Exit	Single lane off ramp	1,181	E
	H Street Entrance	Lane Addition	602	C
	P Street Exit	Lane Drop	858	C
	N Street Entrance	Lane Addition	1,138	C
P.M. Peak Hour				
Northbound	N Street Exit	Lane Drop	462	F ¹
	P Street Entrance	Lane Addition	384	F ¹
	H Street Exit	Lane Drop	904	F ¹
	J Street Entrance	Single lane on ramp	867	F ¹
Southbound	J Street Exit	Single lane off ramp	753	E
	H Street Entrance	Lane Addition	1,029	C
	P Street Exit	Lane Drop	529	C
	N Street Entrance	Lane Addition	1,420	D

Notes:

1. LOS "F" conditions due to queuing from downstream bottleneck.

Source: DKS Associates, 2005.

Table 6.7-32

**Cumulative with SMCS Project Peak Hour Capital City Freeway
Weaving Segment Operating Conditions**

Direction	Location	Weaving Segment Speed (mph)	Weaving Segment Density (pcplph)	LOS
A.M. Peak Hour				
Northbound	U.S. 50 Entrance to N Street Exit	40.8	42.2	E
	P Street Entrance to H Street Exit	51.8	30.8	D
Southbound	H Street Entrance to P Street Exit	49.3	33.4	D
	N Street Entrance to U.S. 50 Exit	40.0	34.5	D
P.M. Peak Hour				
Northbound	U.S. 50 Entrance to N Street Exit	46.3	28.8	F ¹
	P Street Entrance to H Street Exit	53.8	24.4	F ¹
Southbound	H Street Entrance to P Street Exit	48.3	35.6	E
	N Street Entrance to U.S. 50 Exit	36.7	42.8	E

Notes:

1. LOS "F" conditions due to queuing from downstream bottleneck.

Source: DKS Associates, 2005.

Impact 6.7-10: Intersections – The SMCS program and Trinity Cathedral project would increase traffic volumes at study intersections under year 2025 conditions.	
	Cumulative With SMCS Program and Trinity Cathedral Project
Significance Before Mitigation	Significant
Mitigation Measures	Mitigation Measure 6.7-4
Significance After Mitigation	Significant and Unavoidable

Cumulative with SMCS Program and Trinity Cathedral Project

The SMCS program (includes Children’s Theatre) in combination with the Trinity Cathedral project would increase traffic volumes at study area intersections. Figure 6.7-16 illustrates the a.m. and p.m. peak hour intersection volumes. Intersection geometry is illustrated in Figure 6.7-4. Table 6.7-33 summarizes the resultant conditions. As discussed in the Trip Generation section, TSM measures could reduce trip generation and result in fewer impacts to intersections. The changes in intersection operating conditions with the addition of project-generated traffic exceed the standards of significance for the following intersections:

- 27th Street and Capitol Avenue – Operating conditions degrade from LOS “B” to LOS “E” during the p.m. peak hour;
- 28th Street and Capitol Avenue – Operating conditions degrade from LOS “C” to LOS “D” during the p.m. peak hour;
- 29th and N Streets - Operating conditions degrade from LOS “C” to LOS “D” during the p.m. peak hour; and
- Alhambra Boulevard and Capitol Avenue – Operating conditions remain at LOS “D” during the p.m. peak hour, with an increase in average vehicular delay of 13.5 seconds.

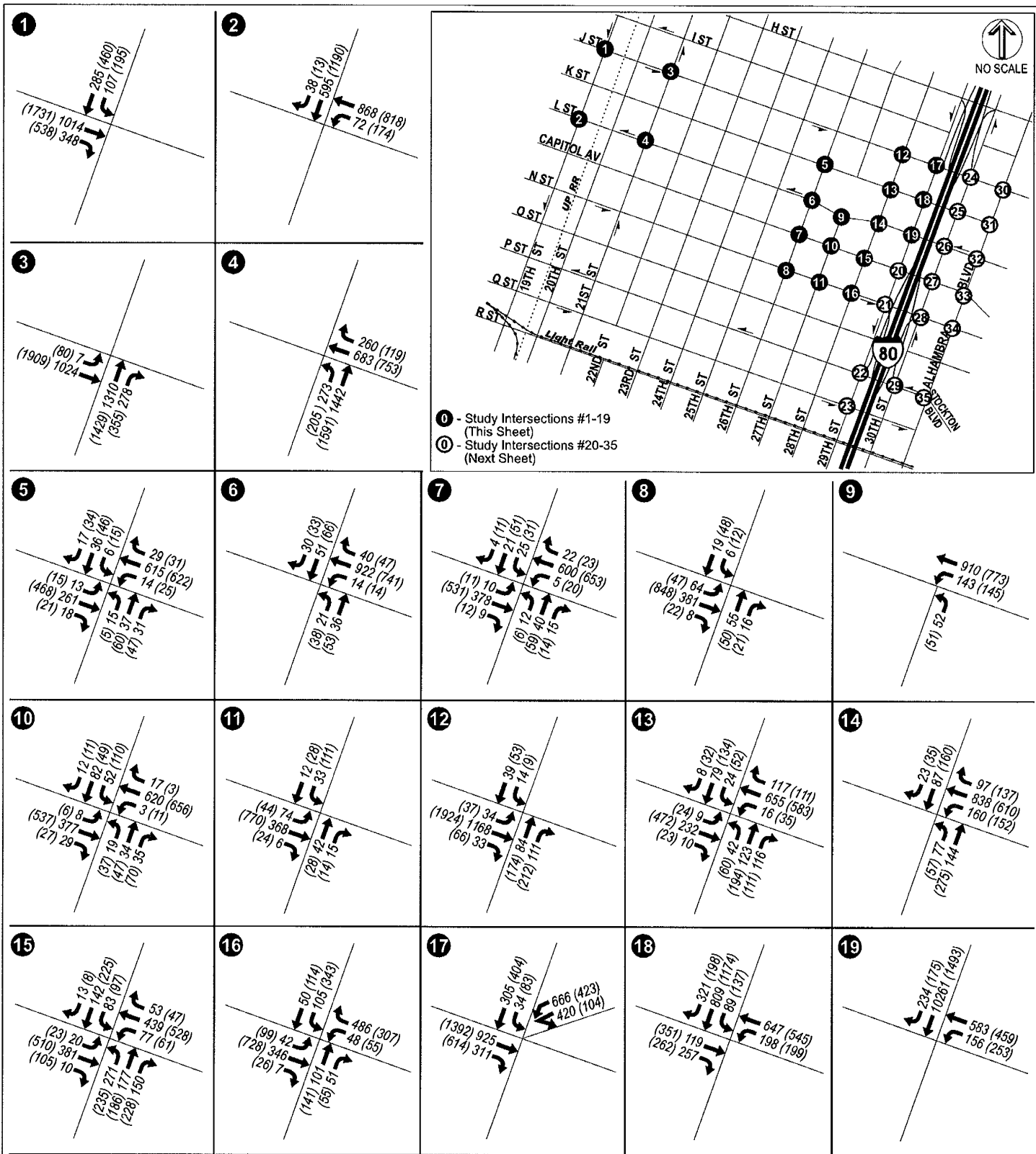
The SMCS program in combination with the Trinity Cathedral project, would result in **significant impacts** to study intersections.

Mitigation Measures

Compliance with Mitigation Measure 6.7-4 would help to reduce impacts on the intersections identified to a *less-than-significant level*.

(SMCS)

- 6.7-4 (a) *The SMCS project shall pay its fair share to signalize the intersection at 27th Street and Capitol Avenue.*



Study Intersections Continued Next Page

LEGEND

① - Study Intersection & Number

← AM (PM) - Peak Hour Traffic Volume

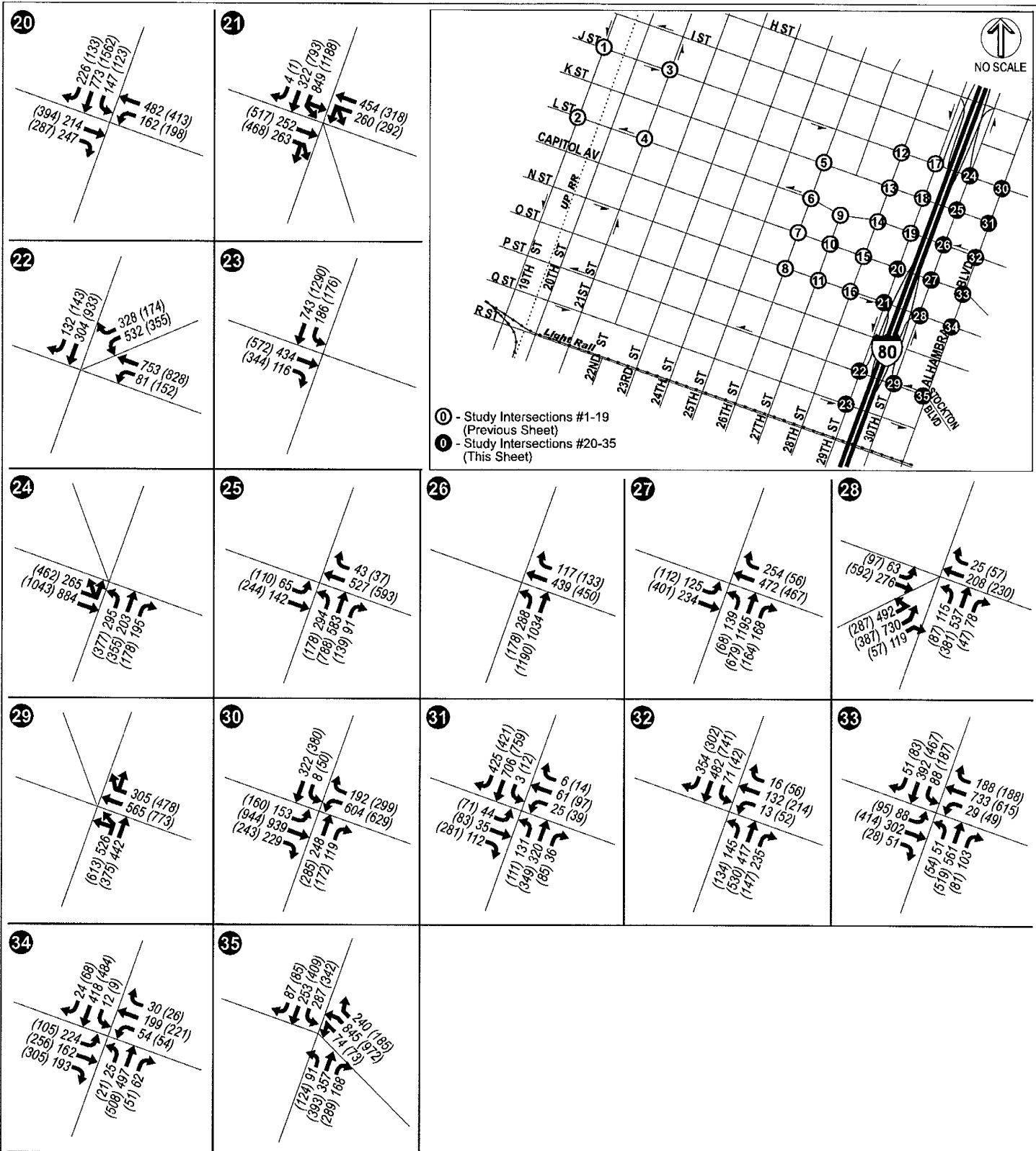
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TRANSPORTATION SOLUTIONS

Figure 6.7-16 (1 of 2)

CUMULATIVE WITH SUTTER PROGRAM AND TRINITY PROJECT VOLUMES



Study Intersections Continued from Previous Page

LEGEND

- ① - Study Intersection & Number
- ← AM (PM) - Peak Hour Traffic Volume



NO SCALE

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Figure 6.7-16 (2 of 2)
CUMULATIVE WITH SUTTER PROGRAM
AND TRINITY PROJECT VOLUMES

Table 6.7-33

**Cumulative with SMCS Program and
Trinity Project Intersection Operating Conditions**

Intersection	A.M. Peak Hour				P.M. Peak Hour			
	Without Project		With SMCS Program and Trinity Project		Without Project		With SMCS Program and Trinity Project	
	LOS	Delay (seconds)	LOS	Delay (seconds)	LOS	Delay (seconds)	LOS	Delay (seconds)
1. 19 th and J Streets	B	10.9	B	10.9	B	13.3	B	13.2
2. 19 th and L Streets	A	7.5	A	7.2	A	9.7	A	9.5
3. 21 st and J Streets	A	5.7	A	5.4	B	11.5	B	12.4
4. 21 st and L Streets	B	11.8	B	12.0	B	13.0	B	13.2
5. 26 th and K Streets	A	2.7	A	2.9	A	2.7	B	5.5
6. 26 th and L Streets	B	10.5	B	11.0	B	11.1	B	11.4
7. 26 th Street and Capitol Ave.	B	12.5	B	12.0	B	11.4	B	11.0
8. 26 th and N Streets	A	8.4	A	8.6	B	10.6	B	10.7
9. 27 th and L Streets	A	0.8	A	2.0	A	0.5	A	2.2
10. 27 th St. and Capitol Ave.	A	1.7	B	8.2	A	2.0	E	41.0
11. 27 th and N Streets	A	1.2	A	3.7	A	1.1	A	3.4
12. 28 th and J Streets	B	14.7	B	16.1	C	20.5	B	19.1
13. 28 th and K Streets	B	11.3	B	10.7	B	16.0	B	15.1
14. 28 th and L Streets	B	10.2	B	10.8	B	11.0	B	10.7
15. 28 th St. and Capitol Ave.	B	18.5	C	27.5	C	21.2	D	49.6
16. 28 th and N Streets	B	14.4	C	34.5	C	29.4	C	32.4
17. 29 th and J Streets	C	22.3	C	25.0	B	18.6	C	21.7
18. 29 th and K Streets	B	13.6	B	14.5	B	15.6	B	18.0
19. 29 th and L Streets	A	9.7	B	10.9	A	9.6	A	9.0
20. 29 th St. and Capitol Ave.	A	8.6	A	7.3	B	12.3	B	12.4
21. 29 th and N Streets	C	23.2	C	26.0	D	36.4	D	43.5
22. 29 th and P Streets	C	18.7	C	21.1	B	18.3	B	15.8
23. 29 th and Q Streets	A	7.6	A	9.6	B	11.5	B	10.8
24. 30 th and J Streets	B	6.1	A	7.3	A	4.5	A	6.1
25. 30 th and K Streets	B	11.9	B	11.0	B	15.0	B	10.3
26. 30 th and L Streets	A	6.7	A	6.6	A	7.5	B	11.0
27. 30 th St. and Capitol Ave.	B	18.7	B	14.7	B	15.1	C	20.4
28. 30 th and N Streets	C	29.0	C	32.1	C	28.4	C	23.8
29. 30 th and P Streets	A	8.5	B	10.2	B	11.2	B	11.6
30. Alhambra Blvd. and J St.	C	24.4	C	25.1	C	29.4	C	28.3
31. Alhambra Blvd. and K St.	A	8.7	B	11.2	B	10.9	B	14.7
32. Alhambra Blvd. and L St.	A	9.6	B	14.9	C	27.8	C	28.9
33. Alhambra B. and Capitol Ave.	D	40.8	D	38.0	D	38.5	D	51.5
34. Alhambra Blvd. and N St.	C	29.7	C	21.8	C	22.3	B	15.9
35. Alhambra Blvd. and P St.	C	29.4	C	32.1	D	40.8	D	42.5
With Mitigation								
10. 27 th St. and Capitol Ave.	-	-	-	-	-	-	B	10.8
15. 28 th St. and Capitol Ave.	-	-	-	-	-	-	B	17.6
21. 29 th and N Streets	-	-	-	-	-	-	D	39.8
33. Alhambra B. and Capitol Ave.	-	-	-	-	-	-	C	21.2

Source: DKS Associates, 2005.

With this mitigation, operating conditions would improve to LOS “B” during the p.m. peak hour.

- (b) *The SMCS project shall pay to restripe northbound and southbound intersection approaches at 28th Street and Capitol Avenue to provide one left turn lane and one through – right turn lane.*

With this mitigation, operating conditions would improve to LOS “B” during the p.m. peak hour. This mitigation measure would involve the removal of parking and bike lanes near the intersection.

- (c) *The SMCS project shall pay to restripe the southbound intersection approach to 29th and N Streets to provide one through – right turn lane, one through lane, two left turn lanes to the freeway, and one left turn lane to N Street.*

With this mitigation, operating conditions would remain at LOS “D” with more than 5 seconds of delay compared to the No Project condition. This mitigation reduces the impact to a less-than-significant level. This mitigation measure would involve the removal of parking on the west side of 29th Street near the intersection.

- (d) *The SMCS project shall pay to convert intersection approaches at Alhambra Boulevard and Capitol Avenue to one left turn, one through, and one right turn lane.*

With this mitigation, operating conditions would improve to LOS “C” during the p.m. peak hour. This mitigation measure would involve the removal of parking on the south side of Capitol Avenue west of Alhambra Boulevard.

Impact 6.7-11: Freeway System – The SMCS program and Trinity Cathedral project would increase traffic volumes on the freeway system under year 2025 conditions.	
	Cumulative With SMCS Program and Trinity Cathedral Project
Significance Before Mitigation	Significant
Mitigation Measures	Mitigation Measure 6.7-5
Significance After Mitigation	Significant and Unavoidable

Cumulative with SMCS Program and Trinity Cathedral Project

The SMCS program (includes Children’s Theatre) would increase traffic volumes on the study area freeway system. Tables 6.7-34 through 6.7-36 summarize the resultant conditions. Intersection queuing on freeway exit ramps is not anticipated to extend into critical areas. Operating conditions in the weaving area on southbound Capital City Freeway between the N Street entrance and the U.S. 50 exit would degrade from LOS “E” to LOS “F” in the p.m. peak hour. Because the project would contribute cars to a freeway system that is currently operating at LOS “F”, the impacts are considered **significant**.

Table 6.7-34

**Cumulative with SMCS Program and Trinity Project Peak Hour Capital
City Freeway Mainline Operating Conditions**

Direction	Location	Through Lanes	Auxiliary Lanes	Volume	Volume / Capacity Ratio	LOS
A.M. Peak Hour						
Northbound	South of N Street Exit	4	1	7,877	0.76	D
	N Street Exit to P Street Entrance	4	0	6,821	0.78	D
	P Street Entrance to H Street Exit	4	1	7,313	0.70	C
	H Street Exit to J Street Entrance	4	0	6,327	0.72	C
	North of J Street Entrance	3	0	6,765	1.03	F
Southbound	North of J Street Exit	3	0	6,531	0.99	E
	J Street Exit to H Street Entrance	3	0	5,443	0.82	D
	H Street Entrance to P Street Exit	3	1	6,046	0.74	C
	P Street Exit to N Street Entrance	3	0	5,188	0.79	D
	South of N Street Entrance	3	1	6,327	0.77	D
P.M. Peak Hour						
Northbound	South of N Street Exit	4	1	6,109	0.59	F ¹
	N Street Exit to P Street Entrance	4	0	5,646	0.64	F ¹
	P Street Entrance to H Street Exit	4	1	6,031	0.58	F ¹
	H Street Exit to J Street Entrance	4	0	5,127	0.58	F ¹
	North of J Street Entrance	3	0	5,936	0.90	F ¹
Southbound	North of J Street Exit	3	0	5,964	0.90	E
	J Street Exit to H Street Entrance	3	0	5,274	0.80	D
	H Street Entrance to P Street Exit	3	1	6,297	0.77	D
	P Street Exit to N Street Entrance	3	0	5,761	0.87	D
	South of N Street Entrance	3	1	7,222	0.88	D

Notes:

1. LOS "F" conditions due to queuing from downstream bottleneck.

Source: DKS Associates, 2005.

Table 6.7-35

Cumulative with SMCS Program and Trinity Project Peak Hour Capital City Freeway Ramp Junction Operating Conditions

Direction	Location	Junction Type	Ramp Volume	LOS
A.M. Peak Hour				
Northbound	N Street Exit	Lane Drop	1,056	C
	P Street Entrance	Lane Addition	492	C
	H Street Exit	Lane Drop	986	C
	J Street Entrance	Single lane on ramp	478	B
Southbound	J Street Exit	Single lane off ramp	1,187	E
	H Street Entrance	Lane Addition	603	C
	P Street Exit	Lane Drop	858	C
	N Street Entrance	Lane Addition	1,139	C
P.M. Peak Hour				
Northbound	N Street Exit	Lane Drop	463	F ¹
	P Street Entrance	Lane Addition	385	F ¹
	H Street Exit	Lane Drop	904	F ¹
	J Street Entrance	Single lane on ramp	883	F ¹
Southbound	J Street Exit	Single lane off ramp	754	E
	H Street Entrance	Lane Addition	1,023	C
	P Street Exit	Lane Drop	536	C
	N Street Entrance	Lane Addition	1,461	D

Notes:

1. LOS "F" conditions due to queuing from downstream bottleneck.

Source: DKS Associates, 2005.

Table 6.7-36

Cumulative with SMCS Program and Trinity Project Peak Hour Capital City Freeway Weaving Segment Operating Conditions

Direction	Location	Weaving Segment Speed (mph)	Weaving Segment Density (pcplph)	LOS
A.M. Peak Hour				
Northbound	U.S. 50 Entrance to N Street Exit	40.8	42.1	E
	P Street Entrance to H Street Exit	51.9	30.7	D
Southbound	H Street Entrance to P Street Exit	49.3	33.4	D
	N Street Entrance to U.S. 50 Exit	40.0	34.5	D
P.M. Peak Hour				
Northbound	U.S. 50 Entrance to N Street Exit	46.2	28.8	F ¹
	P Street Entrance to H Street Exit	53.8	24.4	F ¹
Southbound	H Street Entrance to P Street Exit	48.3	35.5	E
	N Street Entrance to U.S. 50 Exit	36.5	43.2	F

Notes:

1. LOS "F" conditions due to queuing from downstream bottleneck.

Source: DKS Associates, 2005.

Mitigation Measure

Compliance with Mitigation Measure 6.7-5 would ensure traffic flows would be metered onto the highway; however, because there would be an increase in vehicles, the impact is considered *significant and unavoidable*.

(SMCS)

6.7-5 SMCS shall pay to implement p.m. peak hour ramp metering on the southbound Business Route 80 entrance ramp from N Street.

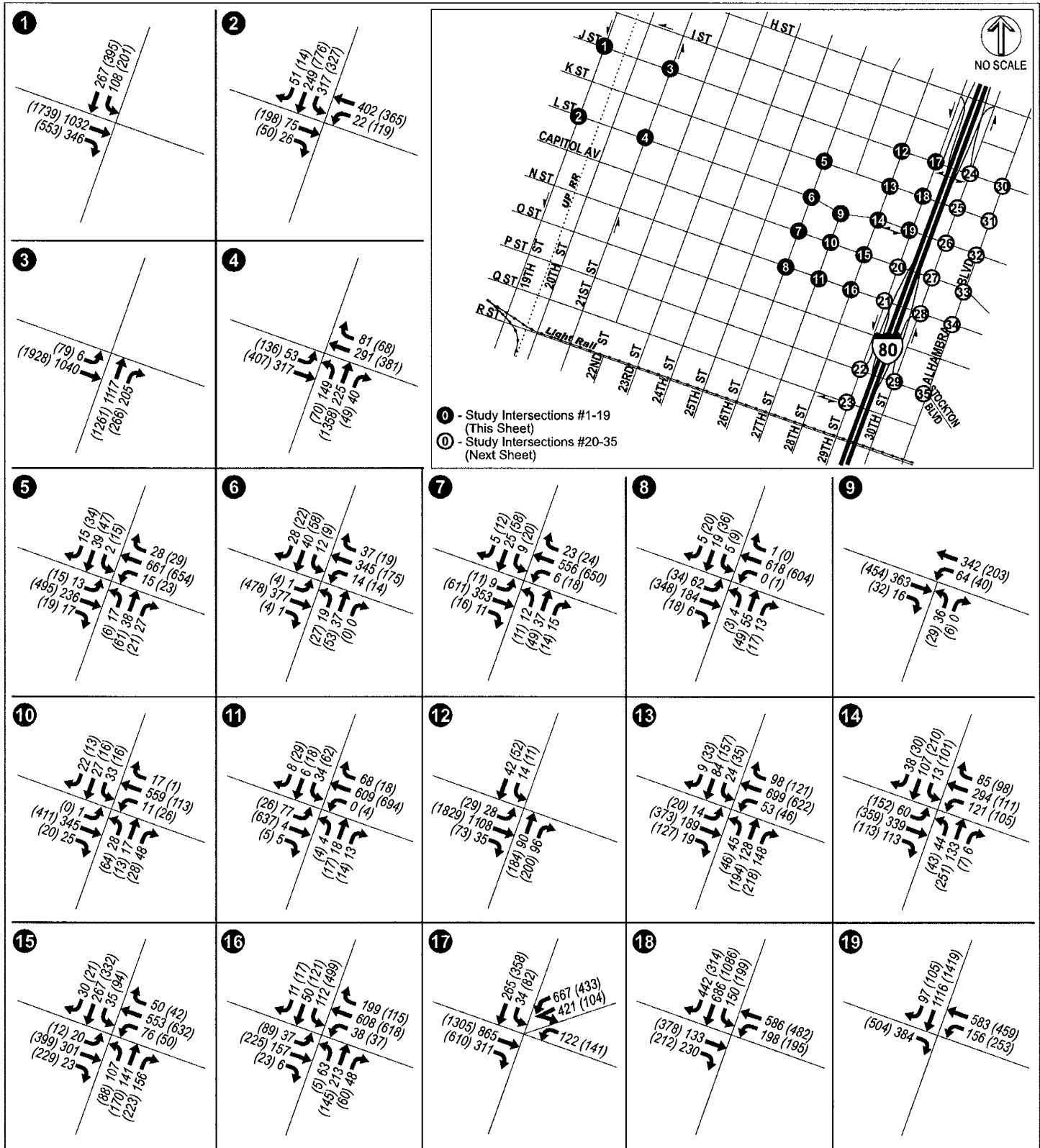
This mitigation measure could result in queuing into the intersection of 29th and N Street, affecting intersection operations at that location.

Impact 6.7-12: Intersections – The SMCS project (with Two-Way Conversion) would increase traffic volumes at study intersections under year 2025 conditions.	
	Cumulative With SMCS Project With Two-Way Conversion
Significance Before Mitigation	Potentially Significant
Mitigation Measures	Mitigation Measure 6.7-6
Significance After Mitigation	Significant and Unavoidable

Cumulative with SMCS Project with Two-Way Conversion

The SMCS project would increase traffic volumes at study area intersections. Figure 6.7-17 illustrates the a.m. and p.m. peak hour intersection volumes of the SMCS project with the City's Two-Way Conversion project. Intersection geometry is illustrated in Figure 6.7-11. Table 6.7-37 summarizes the resultant conditions. As discussed in the Trip Generation section, TSM measures could reduce trip generation and result in fewer impacts to intersections. The changes in intersection operating conditions with the addition of project-generated traffic exceed the standards of significance for impacts to intersections. Therefore, the impacts are considered *potentially significant*.

- 28th and N Streets - Operating conditions degrade from LOS "C" to LOS "F" during the p.m. peak hour.
- 29th and N Streets – During the a.m. and p.m. peak hours, operating conditions would degrade from LOS "D" to LOS "E."
- Alhambra Boulevard and Capitol Avenue - During the p.m. peak hour, operating conditions would remain at LOS "D" with an increase in average vehicular delay of 5.8 seconds.

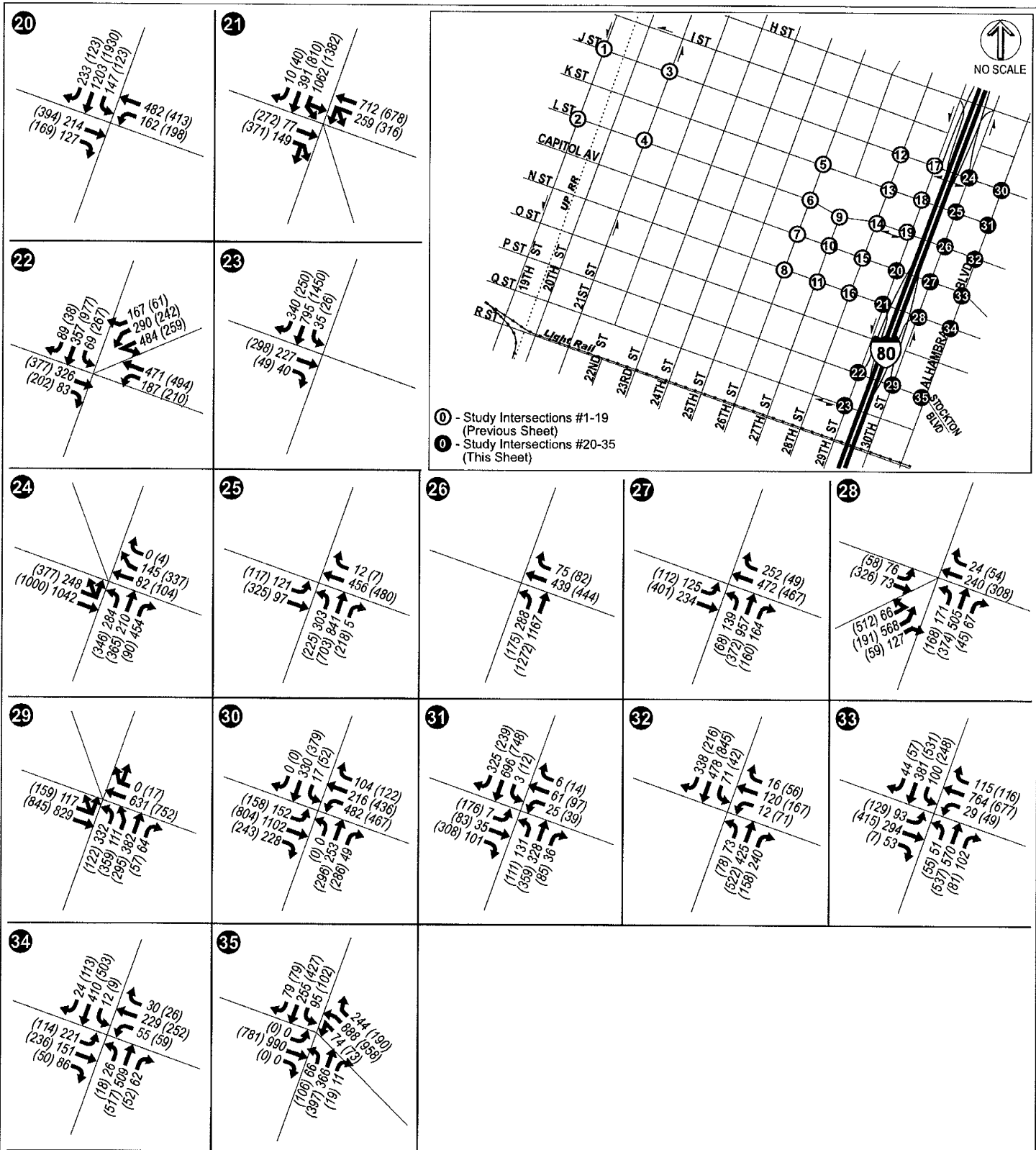


Study Intersections Continued Next Page

LEGEND
0 - Study Intersection & Number
 ← AM (PM) - Peak Hour Traffic Volume



Figure 6.7-17 (1 of 2)
CUMULATIVE WITH SUTTER PROJECT
WITH TWO-WAY CONVERSION
VOLUMES



Study Intersections Continued from Previous Page

LEGEND

- ① - Study Intersection & Number
- ← AM (PM) - Peak Hour Traffic Volume



NO SCALE

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Figure 6.7-17 (2 of 2)
CUMULATIVE WITH SUTTER PROJECT
WITH TWO-WAY CONVERSION
VOLUMES

Table 6.7-37

**Cumulative with SMCS Project with Two-Way Conversion Intersection
Operating Conditions**

Intersection	A.M. Peak Hour				P.M. Peak Hour			
	Without SMCS Project		With SMCS Project		Without SMCS Project		With SMCS Project	
	LOS	Delay (seconds)	LOS	Delay (seconds)	LOS	Delay (seconds)	LOS	Delay (seconds)
1. 19 th and J Streets	B	11.7	B	11.8	B	14.3	B	14.3
2. 19 th and L Streets	B	10.3	B	10.5	B	13.5	B	15.2
3. 21 st and J Streets	A	7.7	A	7.9	C	24.0	C	22.6
4. 21 st and L Streets	B	16.5	B	16.6	D	49.2	D	53.7
5. 26 th and K Streets	A	2.6	A	3.0	A	5.1	B	5.6
6. 26 th and L Streets	A	9.7	A	9.7	A	5.5	A	6.0
7. 26 th Street and Capitol Ave.	B	10.2	A	9.9	B	11.5	B	11.4
8. 26 th and N Streets	C	18.0	C	16.9	C	17.5	C	19.1
9. 27 th and L Streets	A	1.1	A	1.4	A	0.7	A	1.1
10. 27 th St. and Capitol Ave.	A	1.5	A	3.5	A	2.2	A	3.3
11. 27 th and N Streets	A	0.6	A	2.6	A	2.7	B	8.1
12. 28 th and J Streets	B	12.7	B	13.2	B	16.9	B	17.6
13. 28 th and K Streets	B	12.0	B	12.4	B	12.8	B	13.3
14. 28 th and L Streets	B	9.9	B	10.4	B	14.5	B	19.7
15. 28 th St. and Capitol Ave.	B	10.8	B	15.0	B	12.9	C	20.3
16. 28 th and N Streets	B	12.8	C	21.8	D	40.7	F	84.8
17. 29 th and J Streets	C	30.7	C	32.5	C	32.5	C	31.5
18. 29 th and K Streets	B	14.6	B	13.4	B	14.8	B	14.5
19. 29 th and L Streets	B	11.0	B	12.5	B	12.2	B	14.2
20. 29 th St. and Capitol Ave.	A	8.7	A	9.8	B	12.1	B	14.4
21. 29 th and N Streets	D	42.8	E	57.8	D	44.5	E	70.5
22. 29 th and P Streets	C	27.8	C	28.4	C	23.0	C	26.2
23. 29 th and Q Streets	B	10.0	A	9.6	B	10.1	A	9.9
24. 30 th and J Streets	B	12.2	B	12.9	B	11.9	B	12.6
25. 30 th and K Streets	B	10.1	B	10.4	A	9.4	A	9.9
26. 30 th and L Streets	A	6.4	A	6.6	A	9.7	B	10.4
27. 30 th St. and Capitol Ave.	B	12.7	B	14.0	B	13.6	B	11.9
28. 30 th and N Streets	C	29.4	C	28.9	C	24.0	C	25.8
29. 30 th and P Streets	B	12.2	B	16.0	B	11.3	B	14.0
30. Alhambra Blvd. and J St.	D	42.8	D	44.9	D	39.0	D	39.3
31. Alhambra Blvd. and K St.	A	6.1	A	6.8	B	14.7	B	13.6
32. Alhambra Blvd. and L St.	A	8.9	B	11.9	C	19.1	B	16.8
33. Alhambra B. and Capitol A.	C	32.7	C	31.1	D	45.8	D	51.6
34. Alhambra Blvd. and N St.	C	23.0	C	21.9	B	16.0	B	15.8
35. Alhambra Blvd. and P St.	B	18.7	B	19.7	C	23.9	C	25.6
With Mitigation								
16. 28 th and N Streets	-	-	-	-	-	-	D	46.8
21. 29 th and N Streets	-	-	D	54.1	-	-	E	68.9
33. Alhambra B. and Capitol A.	-	-	-	-	-	-	C	34.4

Source: DKS Associates, 2005.

Mitigation Measures

Compliance with Mitigation Measure 6.7-6 would help to minimize impacts to intersections; however, not to a less-than-significant level for all intersections. Therefore, the impact would remain *significant and unavoidable*.

(SMCS)

- 6.7-6 (a) *SMCS shall pay to restripe the southbound intersection approach to 28th and N Streets to provide one left turn and one through lane and restripe the westbound intersection approach to provide one through – left turn and one right turn lane.*

With this mitigation, operating conditions would remain at LOS “D” with more than 5 seconds of delay compared to the No Project condition. This mitigation does not reduce the impact to less than significant. This mitigation measure would require the removal of parking and bicycle lanes on N Street east of 28th Street and on 28th Street north of N Street.

- (b) *SMCS shall pay to restripe the southbound intersection approach to 29th and N Streets to provide one through – right turn lane, one through lane, two left turn lanes to the freeway, and one left turn lane to N Street.*

With this mitigation, operating conditions would be LOS “D” during the a.m. peak hour and at LOS “E” during the p.m. peak hour with more than 5 seconds of delay compared to the no project condition. This mitigation does not reduce the impact to less than significant. This mitigation measure would involve the removal of parking on the west side of 29th Street near the intersection.

- (c) *SMCS shall pay to convert all intersection approaches to one left turn, one through, and one right turn lane at Alhambra Boulevard and Capitol Avenue.*

With this mitigation, operating conditions would improve to LOS “C” during the p.m. peak hour. This mitigation measure would involve the removal of parking on the south side of Capitol Avenue west of Alhambra Boulevard.

Impact 6.7-13: Freeway System – The SMCS project would increase traffic volumes on the freeway system under year 2025 conditions.	
	Cumulative With SMCS Project With Two-Way Conversion
Significance Before Mitigation	Less than Significant
Mitigation Measures	None required
Significance After Mitigation	N/A

Cumulative with SMCS Project with Two-Way Conversion

The project would increase traffic volumes on the study area freeway system. Tables 6.7-38 through 6.7-40 summarize the resultant conditions. The changes in freeway system operating conditions with the addition of project-generated traffic do not exceed the standards of significance for impacts to the freeway system. Intersection queuing on freeway exit ramps is not anticipated to extend into critical areas. Therefore, the impacts are considered *less than significant*.

Mitigation Measure

None required.

Impact 6.7-14: Intersections – The SMCS program and Trinity Cathedral project (with Two-Way Conversion) would increase traffic volumes at study intersections under year 2025 conditions.	
	Cumulative With SMCS Program and Trinity Cathedral Project With Two-Way Conversion
Significance Before Mitigation	Significant
Mitigation Measures	Mitigation Measure 6.7-7
Significance After Mitigation	Significant and Unavoidable

Cumulative with SMCS Program and Trinity Cathedral Project with Two-Way Conversion

The SMCS program (includes Children’s Theatre) in combination with the Trinity Cathedral project would increase traffic volumes at study area intersections. Figure 6.7-18 illustrates the a.m. and p.m. peak hour intersection volumes. Intersection geometry is illustrated in Figure 6.7-11. Table 6.7-41 summarizes the resultant conditions. As discussed in the Trip Generation section, TSM measures could reduce trip generation rates resulting in fewer impacts to intersections. The changes in intersection operating conditions with the addition of project-generated traffic under the city’s Two-Way Conversion project would exceed the standards of significance for impacts to intersections. Therefore, the impacts are considered *significant*.

- 28th and N Streets - Operating conditions degrade from LOS “D” to LOS “F” during the p.m. peak hour.
- 29th and J Streets - Operating conditions degrade from LOS “C” to LOS “D” during the p.m. peak hour.
- 29th and N Streets - Operating conditions degrade from LOS “D” to LOS “E” during the a.m. and p.m. peak hours.
- Alhambra Boulevard and Capitol Avenue – Operating conditions degrade from LOS “D” to LOS “E” during the p.m. peak hour.

Table 6.7-38

**Cumulative with SMCS Project with Two-Way Conversion Peak Hour
Capital City Freeway Mainline Operating Conditions**

Direction	Location	Through Lanes	Auxiliary Lanes	Volume	Volume / Capacity Ratio	LOS
A.M. Peak Hour						
Northbound	South of N Street Exit	4	1	7,925	0.76	D
	N Street Exit to P Street Entrance	4	0	6,850	0.78	D
	P Street Entrance to H Street Exit	4	1	7,375	0.71	C
	H Street Exit to J Street Entrance	4	0	6,348	0.72	C
	North of J Street Entrance	3	0	6,869	1.04	F
Southbound	North of J Street Exit	3	0	6,540	0.99	E
	J Street Exit to H Street Entrance	3	0	5,474	0.83	D
	H Street Entrance to P Street Exit	3	1	6,093	0.74	D
	P Street Exit to N Street Entrance	3	0	5,153	0.78	D
	South of N Street Entrance	3	1	6,276	0.77	D
P.M. Peak Hour						
Northbound	South of N Street Exit	4	1	6,144	0.59	F ¹
	N Street Exit to P Street Entrance	4	0	5,648	0.64	F ¹
	P Street Entrance to H Street Exit	4	1	6,068	0.58	F ¹
	H Street Exit to J Street Entrance	4	0	5,156	0.59	F ¹
	North of J Street Entrance	3	0	6,163	0.93	F ¹
Southbound	North of J Street Exit	3	0	5,965	0.90	E
	J Street Exit to H Street Entrance	3	0	5,264	0.80	D
	H Street Entrance to P Street Exit	3	1	6,342	0.77	D
	P Street Exit to N Street Entrance	3	0	5,775	0.88	D
	South of N Street Entrance	3	1	7,217	0.88	D

Notes:

1. LOS "F" conditions due to queuing from downstream bottleneck.

Source: DKS Associates, 2005.

Table 6.7-39

**Cumulative with SMCS Project with Two-Way Conversion Peak Hour
Capital City Freeway Ramp Junction Operating Conditions**

Direction	Location	Junction Type	Ramp Volume	LOS
A.M. Peak Hour				
Northbound	N Street Exit	Lane Drop	1,075	C
	P Street Entrance	Lane Addition	525	C
	H Street Exit	Lane Drop	1,027	C
	J Street Entrance	Single lane on ramp	568	B
Southbound	J Street Exit	Single lane off ramp	1,163	E
	H Street Entrance	Lane Addition	619	C
	P Street Exit	Lane Drop	940	C
	N Street Entrance	Lane Addition	1,123	C
P.M. Peak Hour				
Northbound	N Street Exit	Lane Drop	496	F ¹
	P Street Entrance	Lane Addition	420	F ¹
	H Street Exit	Lane Drop	912	F ¹
	J Street Entrance	Single lane on ramp	1,099	F ¹
Southbound	J Street Exit	Single lane off ramp	766	E
	H Street Entrance	Lane Addition	1,078	C
	P Street Exit	Lane Drop	567	C
	N Street Entrance	Lane Addition	1,442	D

Notes:

1. LOS "F" conditions due to queuing from downstream bottleneck.

Source: DKS Associates, 2005.

Table 6.7-40

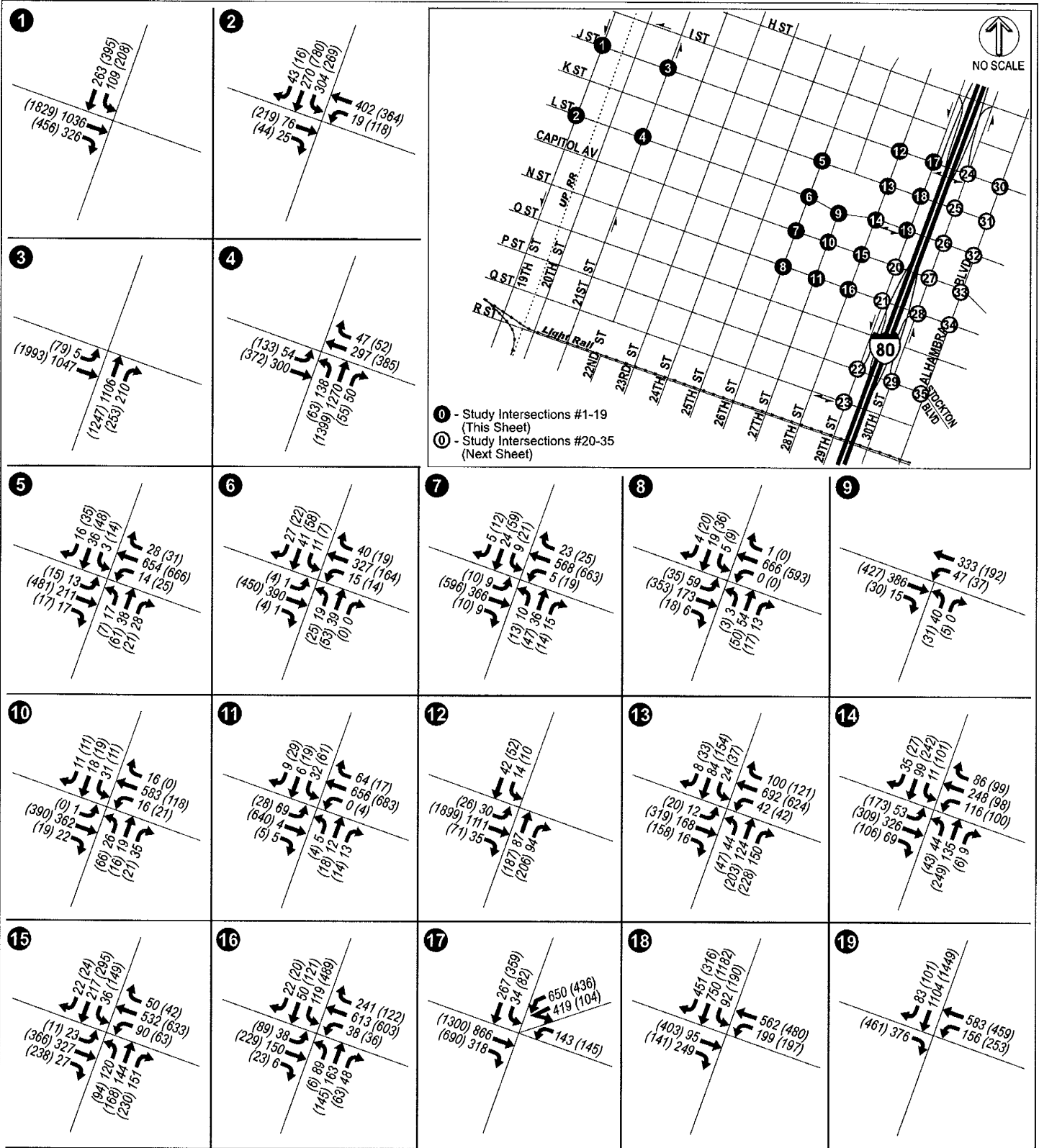
**Cumulative with SMCS Project with Two-Way Conversion Peak Hour
Capital City Freeway Weaving Segment Operating Conditions**

Direction	Location	Weaving Segment Speed (mph)	Weaving Segment Density (pcplph)	LOS
A.M. Peak Hour				
Northbound	U.S. 50 Entrance to N Street Exit	40.7	42.5	E
	P Street Entrance to H Street Exit	51.2	31.4	D
Southbound	H Street Entrance to P Street Exit	48.5	34.3	D
	N Street Entrance to U.S. 50 Exit	40.3	34.0	D
P.M. Peak Hour				
Northbound	U.S. 50 Entrance to N Street Exit	46.2	28.8	F ¹
	P Street Entrance to H Street Exit	53.3	24.8	F ¹
Southbound	H Street Entrance to P Street Exit	36.3	36.3	E
	N Street Entrance to U.S. 50 Exit	36.7	43.0	E

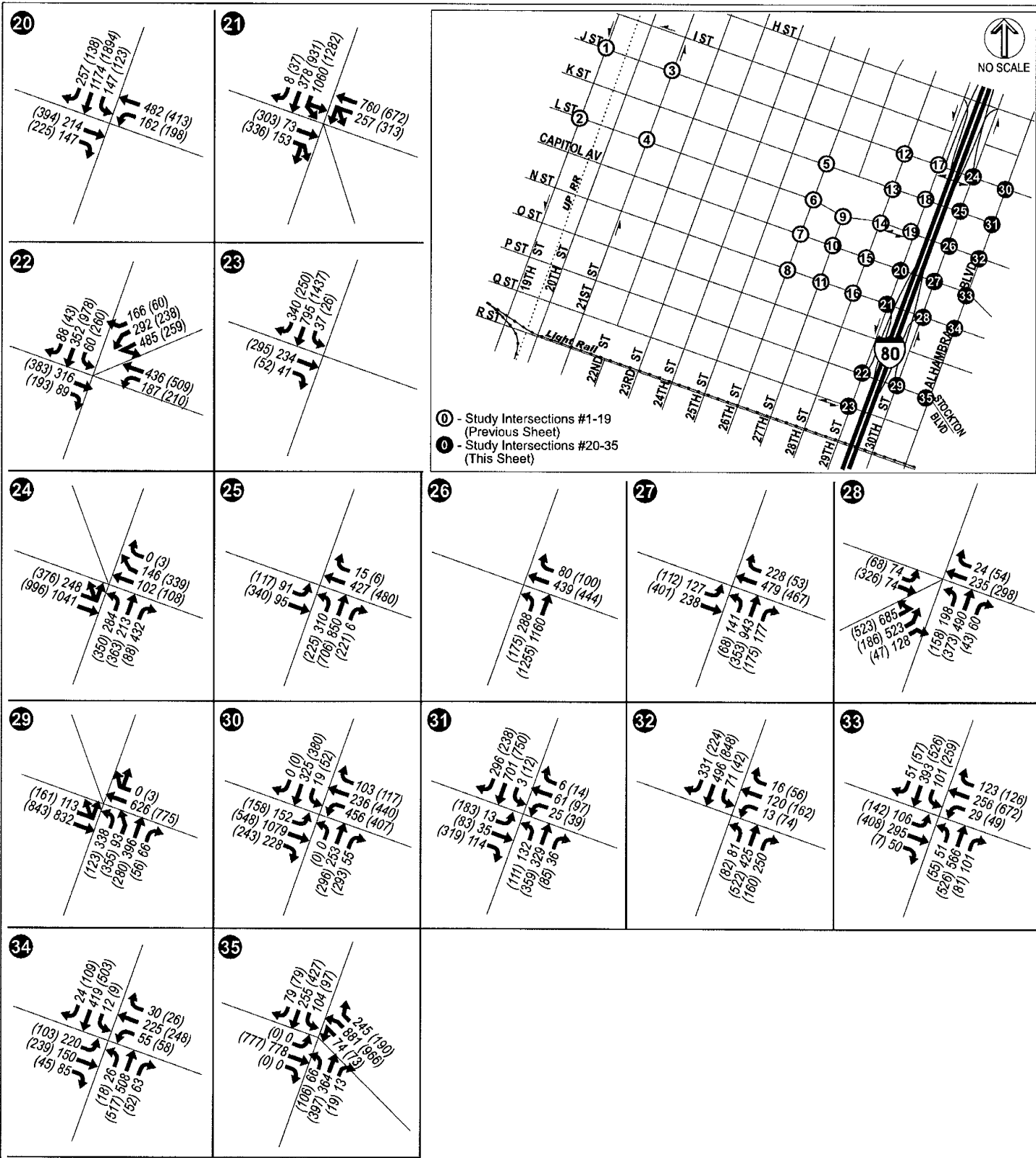
Notes:

1. LOS "F" conditions due to queuing from downstream bottleneck.

Source: DKS Associates, 2005.



Study Intersections
Continued Next Page



Study Intersections Continued from Previous Page

LEGEND
 ① - Study Intersection & Number
 ← AM (PM) - Peak Hour Traffic Volume



Figure 6.7-18 (2 of 2)
CUMULATIVE WITH SUTTER PROGRAM
AND TRINITY PROJECT WITH
TWO-WAY CONVERSION VOLUMES

Table 6.7-41

**Cumulative with SMCS Program and Trinity Project with Two-Way
Conversion Intersection Operating Conditions**

Intersection	A.M. Peak Hour				P.M. Peak Hour			
	Without Project		With SMCS Program and Trinity Project		Without Project		With SMCS Program and Trinity Project	
	LOS	Delay (seconds)	LOS	Delay (seconds)	LOS	Delay (seconds)	LOS	Delay (seconds)
1. 19 th and J Streets	B	11.7	B	11.7	B	14.3	B	14.2
2. 19 th and L Streets	B	10.3	B	10.0	B	13.5	B	13.4
3. 21 st and J Streets	A	7.7	A	7.9	C	24.0	C	23.7
4. 21 st and L Streets	B	16.5	B	16.4	D	49.2	D	50.2
5. 26 th and K Streets	A	2.6	A	2.9	A	5.1	B	5.8
6. 26 th and L Streets	A	9.7	A	9.7	A	5.5	A	6.2
7. 26 th Street and Capitol Ave.	B	10.2	B	10.1	B	11.5	B	11.5
8. 26 th and N Streets	C	18.0	C	19.9	C	17.5	C	18.5
9. 27 th and L Streets	A	1.1	A	1.3	A	0.7	A	1.2
10. 27 th St. and Capitol Ave.	A	1.5	A	3.0	A	2.2	A	3.3
11. 27 th and N Streets	A	0.6	A	2.3	A	2.7	B	8.1
12. 28 th and J Streets	B	12.7	B	12.7	B	16.9	B	19.1
13. 28 th and K Streets	B	12.0	B	11.4	B	12.8	B	12.4
14. 28 th and L Streets	B	9.9	B	10.3	B	14.5	C	21.5
15. 28 th St. and Capitol Ave.	B	10.8	B	16.0	B	12.9	C	22.2
16. 28 th and N Streets	B	12.8	C	23.1	D	40.7	F	81.3
17. 29 th and J Streets	C	30.7	C	33.9	C	32.5	D	40.7
18. 29 th and K Streets	B	14.6	B	14.3	B	14.8	B	14.9
19. 29 th and L Streets	B	11.0	B	11.3	B	12.2	B	12.9
20. 29 th St. and Capitol Ave.	A	8.7	A	9.8	B	12.1	B	15.0
21. 29 th and N Streets	D	42.8	E	66.3	D	44.5	E	62.6
22. 29 th and P Streets	C	27.8	C	29.4	C	23.0	C	26.6
23. 29 th and Q Streets	B	10.0	B	10.0	B	10.1	A	9.9
24. 30 th and J Streets	B	12.2	B	13.2	B	11.9	B	15.8
25. 30 th and K Streets	B	10.1	B	10.0	A	9.4	B	12.9
26. 30 th and L Streets	A	6.4	A	6.5	A	9.7	B	10.9
27. 30 th St. and Capitol Ave.	B	12.7	B	14.5	B	13.6	B	15.5
28. 30 th and N Streets	C	29.4	C	28.4	C	24.0	C	20.2
29. 30 th and P Streets	B	12.2	B	14.9	B	11.3	B	15.2
30. Alhambra Blvd. and J St.	D	42.8	D	42.4	D	39.0	C	31.1
31. Alhambra Blvd. and K St.	A	6.1	A	6.4	B	14.7	B	16.0
32. Alhambra Blvd. and L St.	A	8.9	B	10.5	C	19.1	B	18.6
33. Alhambra B. and Capitol Ave.	C	32.7	C	32.6	D	45.8	E	60.6
34. Alhambra Blvd. and N St.	C	23.0	C	22.3	B	16.0	B	15.2
35. Alhambra Blvd. and P St.	B	18.7	B	20.0	C	23.9	C	25.7
With Mitigation								
16. 28 th and N Streets	-	-	-	-	-	-	D	42.0
17. 29 th and J Streets	-	-	-	-	-	-	D	39.9
21. 29 th and N Streets	-	-	E	62.3	-	-	E	64.1
33. Alhambra B. and Capitol Ave.	-	-	-	-	-	-	C	32.1

Source: DKS Associates, 2005.

Mitigation Measures

Compliance with Mitigation Measure 6.7-7 would help to offset impacts associated with the City's two-way conversion project. There is no feasible mitigation measure to address the impact at 29th and J Streets. The cumulative impact to all of the intersections identified with the exception of 28th and N Streets would be considered *significant and unavoidable*.

(SMCS)

- 6.7-7 (a) *SMCS shall pay to restripe the southbound intersection approach at 28th and N Streets to provide one left turn and one through lane and restripe the westbound intersection approach to provide one through – left turn and one right turn lane.*

With this mitigation, operating conditions would remain at LOS "D" with less than 5 seconds of delay compared to the no project condition. This mitigation measure would require the removal of parking and bicycle lanes on N Street east of 28th Street and on 28th Street north of N Street. This mitigation measure would reduce the impact to a less than significant level.

- (b) *SMCS shall pay to restripe the southbound intersection approach at 29th and N Streets to provide one through – right turn lane, one through lane, two left turn lanes to the freeway, and one left turn lane to N Street.*

With this mitigation, operating conditions would be LOS "E" during the a.m. and p.m. peak hours with more than 5 seconds of delay compared to the no project condition. This mitigation does not reduce the impact to less than significant. This mitigation measure would involve the removal of parking on the west side of 29th Street near the intersection.

- (c) *SMCS shall pay to convert all intersection approaches at Alhambra Boulevard and Capitol Avenue to one left turn, one through, and one right turn lane.*

With this mitigation, operating conditions would improve to LOS "C" during the p.m. peak hour. The impact would be reduced to a less-than-significant level. This mitigation measure would involve the removal of parking on the south side of Capitol Avenue west of Alhambra Boulevard.

Impact 6.7-15: Freeway System – The SMCS program and Trinity Cathedral project (with Two-Way Conversion) would increase traffic volumes on the freeway system under year 2025 conditions.	
	Cumulative With SMCS Program and Trinity Cathedral Project with Two-Way Conversion
Significance Before Mitigation	Significant
Mitigation Measures	Mitigation Measure 6.7-8
Significance After Mitigation	Significant and Unavoidable

Cumulative with SMCS Program and Trinity Cathedral Project with Two-Way Conversion

The SMCS program (includes Children's Theatre) in combination with the Trinity Cathedral project would increase traffic volumes on the study area freeway system. Tables 6.7-42 through 6.7-44 summarize the resultant conditions. Intersection queuing on freeway exit ramps is not anticipated to extend into critical areas. Operating conditions in the weaving area on southbound Capital City Freeway between the N Street entrance and the US 50 exit degrade from LOS "E" to LOS "F" in the p.m. peak hour under the City's Two-Way Conversion project. Therefore, the impacts are considered *significant*.

Table 6.7-42

Cumulative with SMCS Program and Trinity Project with Two-Way Conversion Peak Hour Capital City Freeway Mainline Operating Conditions

Direction	Location	Through Lanes	Auxiliary Lanes	Volume	Volume/Capacity Ratio	LOS
A.M. Peak Hour						
Northbound	South of N Street Exit	4	1	7,904	0.76	D
	N Street Exit to P Street Entrance	4	0	6,838	0.78	D
	P Street Entrance to H Street Exit	4	1	7,365	0.71	C
	H Street Exit to J Street Entrance	4	0	6,344	0.72	C
	North of J Street Entrance	3	0	6,866	1.04	F
Southbound	North of J Street Exit	3	0	6,550	0.99	E
	J Street Exit to H Street Entrance	3	0	5,478	0.83	D
	H Street Entrance to P Street Exit	3	1	6,096	0.74	D
	P Street Exit to N Street Entrance	3	0	5,157	0.78	D
	South of N Street Entrance	3	1	6,273	0.77	D
P.M. Peak Hour						
Northbound	South of N Street Exit	4	1	6,143	0.59	F ¹
	N Street Exit to P Street Entrance	4	0	5,652	0.64	F ¹
	P Street Entrance to H Street Exit	4	1	6,071	0.58	F ¹
	H Street Exit to J Street Entrance	4	0	5,159	0.59	F ¹
	North of J Street Entrance	3	0	6,171	0.94	F ¹
Southbound	North of J Street Exit	3	0	5,965	0.90	E
	J Street Exit to H Street Entrance	3	0	5,261	0.80	D
	H Street Entrance to P Street Exit	3	1	6,339	0.77	D
	P Street Exit to N Street Entrance	3	0	5,776	0.88	D
	South of N Street Entrance	3	1	7,228	0.88	D

Notes:

1. LOS "F" conditions due to queuing from downstream bottleneck.

Source: DKS Associates, 2005.

Table 6.7-43

**Cumulative with SMCS Program and Trinity Project with Two-Way
Conversion Peak Hour Capital City Freeway Ramp Junction Operating
Conditions**

Direction	Location	Junction Type	Ramp Volume	LOS
A.M. Peak Hour				
Northbound	N Street Exit	Lane Drop	1,066	C
	P Street Entrance	Lane Addition	527	C
	H Street Exit	Lane Drop	1,021	C
	J Street Entrance	Single lane on ramp	569	B
Southbound	J Street Exit	Single lane off ramp	1,168	E
	H Street Entrance	Lane Addition	618	C
	P Street Exit	Lane Drop	939	C
	N Street Entrance	Lane Addition	1,116	C
P.M. Peak Hour				
Northbound	N Street Exit	Lane Drop	491	F ¹
	P Street Entrance	Lane Addition	419	F ¹
	H Street Exit	Lane Drop	912	F ¹
	J Street Entrance	Single lane on ramp	1,104	F ¹
Southbound	J Street Exit	Single lane off ramp	768	E
	H Street Entrance	Lane Addition	1,078	C
	P Street Exit	Lane Drop	563	C
	N Street Entrance	Lane Addition	1,452	D

Notes:

1. LOS "F" conditions due to queuing from downstream bottleneck.

Source: DKS Associates, 2005.

Table 6.7-44

Cumulative with SMCS Program and Trinity Project with Two-Way Conversion Peak Hour Capital City Freeway Weaving Segment Operating Conditions

Direction	Location	Weaving Segment Speed (mph)	Weaving Segment Density (pcplph)	LOS
A.M. Peak Hour				
Northbound	U.S. 50 Entrance to N Street Exit	40.8	42.2	E
	P Street Entrance to H Street Exit	51.3	31.3	D
Southbound	H Street Entrance to P Street Exit	48.5	34.3	D
	N Street Entrance to U.S. 50 Exit	40.3	34.0	D
P.M. Peak Hour				
Northbound	U.S. 50 Entrance to N Street Exit	46.0	29.2	F ¹
	P Street Entrance to H Street Exit	53.4	24.8	F ¹
Southbound	H Street Entrance to P Street Exit	47.7	36.3	E
	N Street Entrance to U.S. 50 Exit	36.6	43.1	F

Notes:

1. LOS "F" conditions due to queuing from downstream bottleneck.

Source: DKS Associates, 2005.

Mitigation Measure

Compliance with improvements set forth in Mitigation Measure 6.7-4 would help to reduce traffic levels; however, the contribution of any traffic to the freeway system is considered a *significant and unavoidable impact*.

6.7-8 *Implement Mitigation Measure 6.7-4.*

Impact 6.7-16:	Construction – Construction of the SMCS program and Trinity Cathedral project would include the temporary closure of numerous transportation facilities, including portions of City streets, sidewalks, bikeways, and off-street parking.
	SMCS Program and Trinity Project
Significance Before Mitigation	Potentially Significant
Mitigation Measures	Mitigation Measure 6.7-9
Significance After Mitigation	Less than Significant

SMCS Program and Trinity Project

As described in Chapter 2, Project Description, the SMCS project would be constructed over a multi-year period. Construction would include numerous disruptions to the transportation system in and around the project area, including temporary street closures, sidewalk closures, and bikeway closures. Heavy vehicles would access the project area and would need to be staged for construction. The SMCS anticipates using the proposed Children's Theatre site to stage construction vehicles and equipment. These short-term activities would result in degraded roadway operations. The addition of construction personnel would also result in a need for additional parking. The anticipated schedule of on-site parking removal and addition is shown in Table 2-9, in Chapter 2. The parking management program discussed in Chapter 2, Project Description, is intended to provide an adequate balance between parking demand and supply during construction. In addition, construction of the Trinity Cathedral project is anticipated to begin sometime in 2007 and be completed by 2009, resulting in additional impacts to roadways associated with construction traffic. Project construction activities for both the SMCS project and the Trinity Cathedral project could result in impacts to vehicle and pedestrian access in and around the project area, resulting in a ***potentially significant impact***.

Mitigation Measure

Compliance with Mitigation Measure 6.7-9 would reduce impacts associated with project construction to a *less-than-significant level*.

(SMCS)

- 6.7-9 (a) *Prior to beginning of construction, a construction traffic management plan shall be prepared by the project applicant to the satisfaction of the City traffic engineer.*
- (b) *The project applicant shall monitor parking occupancy on a regular basis during construction, particularly upon the closure of any parking facility. Adequate parking for patients/visitors shall be maintained at all times. As necessary, remote parking (with shuttle service) shall be provided for SMCS employees, including construction workers.*

LOCAL PROJECT 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 also conducted. This analysis focuses on the project's parking garage entrances, as well as the valet/drop-off/pick-up areas adjacent to the Women's and Children's Center and the SMF Building. 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.

North Freeway Parking Garage

The North Freeway parking garage has entrances from both 29th and 30th Streets.

- For the 29th Street entrance, the critical time period for analysis is the a.m. peak hour under the Cumulative with SMCS Program and Trinity Project scenario. 200 vehicles are expected to enter the garage during this time period. The current access design can accommodate this volume at a 95 percent probability without queuing onto adjacent sidewalks or City streets.
- For the 30th Street entrance, the critical time period for analysis is the a.m. peak hour under the Cumulative with SMCS Program and Trinity Project with Two-Way Conversion scenario. A total of 213 vehicles are expected to enter the garage during this time period. The current access design can accommodate this volume at a 95 percent probability without queuing onto adjacent sidewalks or City streets.

South Freeway Parking Garage

The South Freeway parking garage has entrances from both 29th and 30th Streets.

- For the 29th Street entrance, the critical time period for analysis is the a.m. peak hour under the Cumulative with SMCS Program and Trinity Project with Two-Way Conversion scenario. A total of 205 vehicles are expected to enter the garage during this time period. The current access design can accommodate this volume at a 95 percent probability without queuing onto adjacent sidewalks or City streets.
- For the 30th Street entrance, the critical time period for analysis is the a.m. peak hour under the Cumulative with SMCS Program and Trinity Project scenario. A total of 230 vehicles are expected to enter the garage during this time period. The current access design can accommodate this volume at a 95 percent probability without queuing onto adjacent sidewalks or City streets.

Community Parking Structure

The Community Parking Structure is proposed to have entrances from both 27th and 28th Streets.

- For the 27th Street entrance, the critical time period for analysis is the a.m. peak hour under the Cumulative with SMCS Program and Trinity Project scenario. A total of 181 vehicles are expected to enter the garage during this time period. The design for this access point is assumed to be a single entry lane with storage for at least two vehicles behind the access gate. This design can accommodate this volume at a 95 percent probability without queuing onto adjacent sidewalks or City streets.
- For the 28th Street entrance, the critical time period for analysis is the a.m. peak hour under the Cumulative with SMCS Program and Trinity Project with Two-Way Conversion scenario. A total of 396 vehicles are expected to enter the garage during this time period. The design for this access point is assumed to be two entry lanes with storage for at least two vehicles behind each access

gate. This design can accommodate this volume at a 95 percent probability without queuing onto adjacent sidewalks or City streets.

Women's and Children's Center Valet Drop-Off / Pickup Area

The proposed valet drop-off/pick-up area located on the west side of the Women's and Children's Center is planned to accommodate a minimum of ten vehicles. The critical time period for analysis is the a.m. peak hour under the Cumulative with SMCS Program and Trinity Project scenario. A total of 317 vehicles are expected to travel through this area during the time period. Assuming an average wait time of 60 seconds per vehicle, the area is adequate to accommodate this volume at a 95 percent probability without queuing onto adjacent sidewalks or City streets.

SMF Building Valet Drop-Off / Pickup Area

The proposed valet drop-off/pick-up area located on the west side of the SMF Building is planned to accommodate a minimum of ten vehicles. The critical time period for analysis is the p.m. peak hour under the Cumulative with Sutter Program and Trinity Project scenario. A total of 194 vehicles are expected to travel through this area during the time period. Assuming an average wait time of 60 seconds per vehicle, the area is adequate to accommodate this volume at a 95 percent probability without queuing onto adjacent sidewalks or City streets.

6.8 Utility Systems

6.8 Utility Systems

INTRODUCTION

This section evaluates the effects of the SMCS project on water distribution and supply, wastewater, storm drainage, and solid waste. This evaluation assesses existing and planned infrastructure and identifies anticipated demand. Three subsections are presented below: water supply and distribution, wastewater and storm drainage, and solid waste. A brief introduction for each section is provided.

The water supply and distribution section includes detailed information on the City's existing and planned water supply, treatment facilities, and conveyance lines. The effect of the Water Forum Agreement on the City's water supply is generally described. The demand factors for water supply were developed in consultation with the City Utilities Department. These factors are used to calculate demand associated with the SMCS project, which is compared to existing and anticipated water supply. A Water Supply Assessment (WSA) was also prepared for the project and is included as Appendix J.

The wastewater and storm drainage section describes the City's existing combined sewer system (CSS) facilities in the City that serve the project area, including pipelines and lift stations. This section describes and quantifies the increased demand on sewer and stormwater facilities that could result from implementation of the SMCS project. Existing storm drainage conditions are discussed based on information obtained from the City. Demand factors for wastewater generation were developed in consultation with the City Utilities Department.

The solid waste section identifies waste disposal services and landfill capacity at the primary landfills that serve the project area. The City's Source Reduction and Recycling Element (SRRE) is described. The amount of solid waste generated from the project is quantified based on factors developed in consultation with City's Utilities Department. Solid waste associated with the SMCS project is compared to existing and future landfill capacity to determine whether the project would substantially shorten the life of a landfill.

This section uses data from various sources, including the City's General Plan, previous environmental documentation prepared for the City of Sacramento, communication with City staff, and information from service providers regarding available service levels and current or anticipated constraints.

Comments received in response to the two Notices of Preparation (NOPs) (see Appendices B and D) requested an analysis of potential impacts to water and sewer lines, and planned installation of utilities to minimize impacts on alleys and roadways. These issues are addressed in this section.

WATER SUPPLY AND DISTRIBUTION

ENVIRONMENTAL SETTING

Existing Water Rights

The City claims pre-1914 rights to divert 75 cubic feet per second (cfs) and secured five additional appropriative water rights with various priorities between October 1947 and 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. Permits 011359 and 011360 authorize re-diversion and consumptive uses of stored water and releases from the Upper American River Project. Currently, City Application 014834S is pending approval from the State Water Resources Board (SWRCB) for the additional allocation of 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. The project falls within the place of use 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. The City is also a signatory of the 2000 Water Forum Agreement (WFA), which explicitly does not impact the USBR annual diversions, but does reduce the diversion in the American River during dry years. The permits and USBR contractual diversions are listed in Table 6.8-1. The 2005 contract amount is 205,500 AFY. The contract amount increases annually to a maximum of 325,800 AFY in 2030 as show in Table 6.8-2.¹

Table 6.8-1

Surface Water Entitlements

Permit	Authorized Diversion	Maximum Permitted Diversion	
		AFY	cfs
1957 USBR 2030 Contractual Maximum ³	American River	245,000	675
	Sacramento River	81,800	225
	Total Combined Diversion	326,800	900
2000 WFA Maximum	American River	245,000	310 ¹
	Sacramento River	81,800	290 ²
	Total Combined Diversion	326,800	900

Notes:

- 310 cfs is a maximum withdrawal rate, additional restrictions apply.
- 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.
- Based on permits 00922, 011358, 011361, 011359, and 11361.

Source: City of Sacramento, Draft Water Supply Assessment for the Proposed SMCS Project, June 2005.

¹ City of Sacramento, *Draft Water Supply Assessment for the Proposed SMCS Project*, June 2005.

Table 6.8-2

USBR Maximum Contracted Annual Surface Water Diversion (AFY)

Source	2005	2010	2015	2020	2025	2030
American River	154,000	170,500	189,000	208,500	228,000	244,000
Sacramento River	81,800	81,800	81,800	81,800	81,800	81,800
TOTAL	235,800	252,300	270,800	290,300	309,800	325,800

Source: City of Sacramento, Draft Water Supply Assessment for the Proposed SMCS Project, June 2005.

The WFA, an agreement between multiple stakeholders of the Sacramento metropolitan area and lower foothill regions, affects water supplies and reliability within the Sacramento region. 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.² 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 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. 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. Subsequent to the WFA, the City has increased water treatment capacity at the Sacramento River Water Treatment Plant and the E.A. Fairbairn WTP.³

The City is continuing to develop a water supply consistent with the WFA. Public Law 106-554 authorized the Sacramento River Reliability Study, which includes a feasibility study for a Sacramento River diversion. The Sacramento River Reliability Study includes development of alternatives, an environmental evaluation, and consultation with federal and State agencies regarding potential impacts. The Draft Planning report is scheduled for completion in Summer 2005. The USBR is the lead agency for federal review and Placer County Water Agency is the lead agency for local review.⁴

The WFA addressed the full extent of water use within City limits and considered the City's water needs at buildout conditions. The WFA estimated the City's future water demands to be 130,600 AFY, a reduction compared to existing demand of 137,750 AFY.⁵ The WFA prompted the City to proceed with expansions and improvements to its water diversion and supply system, including reconstruction of its water supply intakes on the Sacramento and American Rivers, and additional expansion of its Sacramento River and Fairbairn Water Treatment Plants and associated distribution facilities.⁶

2 Water Forum Agreement 2000, page 29.

3 City of Sacramento, *Draft Water Supply Assessment for the Proposed SMCS Project*, June 2005.

4 City of Sacramento, *Draft Water Supply Assessment for the Proposed SMCS Project*, June 2005.

5 Revised Natomas Basin HCP EIR/EIS. November, 1997. Page 3-10. CH2Mhill.

6 Sacramento and Sutter Counties (CH2MHill), *Revised Natomas Basin HCP EIR/EIS*, November 1997, Page 3-10.

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 6.8-3. 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.⁷

Table 6.8-3

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: City of Sacramento, Draft Water Supply Assessment for the Proposed SMCS Project, June 2005.

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 output would be approximately 403,000 AFY.⁸

One of the alternatives being evaluated in the Sacramento River 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 2011. With the addition of the new Sacramento River WTP, the combined production will be 505 mgd (the existing Sacramento River WTP diverts the American River allocation at its full capacity of 160 mgd, the Fairbairn WTP diverts at the maximum rate of 200 mgd, and the new WTP maximizes the Sacramento River allocation at 145 mgd).

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

7 City of Sacramento, *Draft Water Supply Assessment for the Proposed SMCS Project*, June 2005.

8 City of Sacramento, *Draft Water Supply Assessment for the Proposed SMCS Project*, June 2005.

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. 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 the production of 230,000 AFY. With the addition of a new 145 mgd Sacramento River WTP, the total annual production capacity in a "conference year" would be 311,800 AFY.

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, thousands of hydrants, and more than 1,400 hundred miles of pipeline necessary to distribute water to homes and businesses within the City. The City's water infrastructure consists of one pressure zone with two active water treatment plants, 10 storage reservoirs, 47 municipal water wells, and approximately 1,400 miles of water mains ranging in size from four to 60-inches in diameter.⁹

The City's surface water comes from the American and Sacramento Rivers. Average daily demand is 59.2 million gallons (mg) and 56.8 mg for the American and Sacramento River, respectively; the peak daily demand is 93 mg and 106 mg, respectively.¹⁰ With a combined average water demand for the year 2002/2003 of 135,536 AFY (approximately 120 mgd), the City has an excess supply of 54,464 AFY (approximately 50 mgd) of water.¹¹ Water delivered has decreased over recent years; according to the Department of Utilities' Annual Report, water conservation savings for FY 2002/2003 was 4.5 percent, or 2,157 mg.¹²

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 potentially for longer periods during large fire events. The City of Sacramento has nine aboveground storage reservoirs (each with a capacity of three mg) for a total capacity of 27 mg, including those that have either been recently completed or will be constructed in the near future.¹³ The City also has one underground reservoir with a capacity of 15 mg.¹⁴ 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 Fairbairn WTP). Therefore, the total water storage capacity in the City is 76.5 mg. This capacity represents approximately 64 percent of the City's 1999 average daily water demand of 120 mg, or approximately one-third of the 2001 average maximum day demand of 216 mg.¹⁵

9 City of Sacramento Utilities Department, *Annual Report, Operational Statistics Fiscal Year 2002/2003*.

10 Kathy Mullen, City of Sacramento Utilities Department, personal communication, March 25, 2004.

11 City of Sacramento Utilities Department, *Annual Report, Operational Statistics Fiscal Year 2002/2003*.

12 City of Sacramento Department of Utilities. *Annual Report, Operational Statistics. Fiscal Year 2002/2003*.

13 Michelle Carrey, City of Sacramento Utilities Department, personal communication, March 30, 2004.

14 Kathy Mullen, City of Sacramento Utilities Department, personal communication, March 25, 2004.

15 City of Sacramento Utilities Department, *Annual Report, Operational Statistics Fiscal Year 2002/2003*.

Water Conveyance System

Existing water conveyance infrastructure in the project area consists of a series of 8-inch water lines located in public rights-of-way. Water lines that would serve the SMCS project area are located in:

- K Street (from 30th to 28th Street),
- 28th Street (from K to N Street),
- 29th Street (from K to L Street),
- L Street (from 28th to 27th Street),
- 26th Street (from Capitol to L Street), and
- Capitol Avenue (from 28th to 29th Street).

Project Components

The SMCS project would include the demolition of some of the existing structures in the seven block area and the construction of the Women's and Children's Center (WCC), SMF Building, Community Parking Structure with limited retail/commercial uses, Future Medical Office Building (MOB), and 32 residential units. In addition, the Children's Theatre of California/B Street Theatre will be analyzed on a program level. Refer to Chapter 2, Project Description, for a full description of the proposed uses.

The SMCS project includes physical or utility abandonments in three alleys containing 8-inch water mains. To replace the capacity lost due to the abandonments, the SMCS project would construct a new 8-inch water main in 27th Street (from L Street to N Street) which would connect to the main on L Street; in 28th Street (from L Street to Capitol Avenue); and in 29th Street (from N Street to north of Capitol Avenue). The SMCS project would also construct new 12-inch water mains in Capitol Avenue and N Street from 27th to 28th Street. New public fire hydrants would be constructed at the mid-block of every frontage street.

Typical static pressure in the water system varies between 40 pounds per square inch (psi) and 65 psi. The fire flows required would be dependent on the type of construction and separations between buildings. The City Fire Department would determine the actual flow requirements based on the final building designs. The project would be required to comply with standard fire flow regulations.

REGULATORY SETTING

Federal

U.S. Environmental Protection Agency (EPA)

The EPA established primary drinking water standards in the Clean Water Act Section 304. States are required to ensure that potable water for the public meets these standards.

Standards for a total of eighty-one 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 primary and secondary drinking water standards are promulgated in CCR Title 22 Sections 64431-64501. Secondary drinking water standards incorporate non-health risk factors including taste, odor, and appearance.

State

Senate Bill 610

Senate Bill 610 (SB 610), enacted in 2001, is intended to ensure coordination during the land use planning process between water suppliers and local land use planning agencies (i.e., cities and counties) when considering certain large-scale development projects. SB 610 achieves this through two mechanisms that link water supply availability and development approvals. First, it made changes to the requirements for urban water suppliers to prepare an Urban Water Management Plan (UWMP) that contains detailed information regarding their supplies. Second, it obligated cities and counties to request a WSA from all potential suppliers of water for any project meeting the requirements presented below. Specifically, the WSA should include, but is not limited to, information on existing and future supplies of the supplier, quantification of water demand and supply by source in 5-year increments over a 20-year period, and a determination of whether adequate water supplies will be available over that 20-year period to serve the project, including under drought considerations.¹⁶

For this project, and under the provisions of SB 610, the City is identified as both the water supplier and the lead agency. Once the WSA has been prepared, the City, as the water supplier, is required to consider preparation of a Written Verification (WV) of water supply adequacy for inclusion in the administrative record for the project.

Under SB 610, preparation of the WSA is not limited to projects that require preparation of EIRs or amendments to general and/or specific plans. The law requires substantial evidence of adequate water supply for large-scale projects. SB 610 expands the requirement for public water systems to prepare WSA for all large-scale projects. Such projects can include:

- Residential developments over 500 units, or other uses demanding water equivalent to 500 development units or more;
- Shopping center or business with over 1,000 employees or 500,000 sf;
- Commercial/office with over 1,000 employees or 250,000 sf;
- Hotel or motel with over 500 rooms;
- Industrial use or park with over 1,000 employees, 40 acres, or 650,000 sf;
- Mixed use project with one or more uses described above; and
- A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project.

16 City of Sacramento (EDAW), *College Square PUD, Draft Water Supply Assessment*, July 2003.

In addition, SB 610 requires smaller public water systems (those with less than 5,000 connections) to prepare water supply assessments on projects that would increase their service connections by 10 percent or more.

The bill requires that additional information about water supply contracts, capital outlay programs, permits, and regulatory approvals be included in the WSA. SB 610 also increases the time for public water systems to approve their WSAs from 30 days to 90 days. If the city or county cannot identify a public water system to provide the WSA, SB 610 requires the State Department of Water Resources to prepare the assessment. SB 610 increases the requirements for urban water management plans to include additional groundwater supply information.

The SMCS project would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project, and thus would be subject to SB 610.

Urban Water Management Planning Act (California Water Code, Division 6, Part 2.6, Section 10610 *et seq.*)

The Urban Water Management Planning Act (Act) and SB 610 are interrelated; the Urban Water Management Plan (UWMP) is typically relied upon to meet the requirements of SB 610. The Urban Water Management Planning Act was developed to address concerns for potential water supply shortages throughout the State of California. The Act requires information on water supply reliability and water use efficiency measures. Urban water suppliers are required by the Act to develop and implement Urban Water Management Plans to describe their efforts to promote efficient use and management of water resources. Sacramento's Urban Water Management Plan is discussed below. The UWMP and the WSA required by SB 610 differ in that the UWMP is a general overview of water resources and infrastructure in a jurisdiction that is updated every five years, while the WSA is a project-specific assessment ensuring a project's demand on resources and infrastructure are within the parameters detailed in the UWMP.

California Safe Drinking Water Act

Enacted in 1976, the California Safe Drinking Water Act is codified in Title 22 of the California Code of Regulations (CCR). Potable water supply is managed through local agencies and water districts, the State Department of Water Resources (DWR), the Department of Health Services (DHS), the State Water Resources Control Board (SWRCB), the California Environmental Protection Agency (EPA), and the U.S. Bureau of Reclamation. Water right applications are processed through the SWRCB for properties claiming riparian or appropriative rights. For a large part of California, potable water is managed by the DWR through the State Water Project (SWP), a water storage and delivery system of reservoirs, aqueducts, powerplants, and pumping plants. The City of Sacramento, however, relies on local agencies and water districts for safe potable water.

Water Conservation Projects Act

The State of California's requirements for water conservation are codified in the Water Conservation Projects Act of 1985. The purpose of this act is to encourage local agencies and private enterprise to implement water conservation and reclamation projects.

Water Recycling Act

Enacted in 1991, the Water Recycling Act (WRA) established water recycling as a priority in California. The WRA encourages municipal wastewater treatment districts to implement recycling programs to reduce local water demands. The City of Sacramento's municipal code has measures in place to implement the mandates of the WRA.

Assembly Bill 2572

Assembly Bill 2572, passed in September 2004, requires the installation and use of water meters by 2025 across the State, including in the City of Sacramento. The law supersedes the City charter, which specifically prohibited the use of water meters within the City. The City of Sacramento has until January 1, 2010 to begin charging customers who already have a meter on a metered rate. Water meters will be installed for all residential customers by 2025.¹⁷

Local

Water Forum Agreement

The WFA of 2000 established the guiding principles for water management in the Sacramento area and adjacent foothill region. The collaborative effort took place over six years and 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. Water diversions from the American River would occur upstream of Folsom Reservoir, from Folsom Reservoir proper, from Nimbus Reservoir, and from the Lower American River. The agreement provides a comprehensive package of linked actions that will achieve the two co-equal objectives of providing a reliable and safe water supply for the region's economic health and planned development to the year 2030 and preserving the fishery, wildlife, recreational, and aesthetic values of the Lower American River.

To meet the co-equal goals (listed above) the WFA includes seven elements:

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

17 City of Sacramento, Department of Utilities, *Water Meters*, www.cityofsacramento.org/utilities/watermeters/index.html, Accessed May 25, 2005.

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.

Urban Water Management Plan

The City has developed an Urban Water Management Plan in accordance with the State’s Urban Water Management Act (discussed above). The UWMP describes water demand and supply within the City, evaluates methods related to the conservation of water, presents an urban water shortage contingency plan, and provides information on the availability of reclaimed water and its potential for use as a water source in the City. With the expanded facilities, water supply would be reliably provided to all areas of the City under buildout conditions. Growth of the City’s water supply system is intended primarily to meet the City’s needs within its service area, and also facilitate regional programs to conjunctively manage surface and groundwater supplies as part of the ongoing Water Forum implementation project. As noted above, the UWMP is also a tool used to prepare WSA’s for eligible projects.

City of Sacramento General Plan

The City’s current General Plan policies related to water are provided below. The City is presently undertaking an update to its 1988 General Plan.

Goal A	Provide and improve water supply facilities to meet future growth of the City and assure continued supply of safe potable water.
Policy 1	Develop and adopt a comprehensive water policy for the City of Sacramento that is consistent with a long range adopted plan.
Policy 2	Develop and implement a financing strategy that the City can use to construct needed water facilities.
Policy 3	Work with property owners to develop financing arrangements in order to provide needed water facilities.

Policy 4	Give high priority in the Capital Improvements Program to funding infrastructure in highly depressed and designated infill areas.
Policy 5	Provide water service meeting or exceeding State and federal regulatory agency requirements.

Central City Community Plan

There are no policies related to water supply in the Central City Community Plan.

IMPACTS AND MITIGATION MEASURES

Methods of Analysis

The quantitative evaluation of impacts associated with water supply and demand is based on existing data relative to the SMCS project and demand projections provided by Mazzetti and Associates. Projected water use as a result of implementation of the SMCS project was analyzed and calculated using standard use (or demand) factors that correlate to the type of land use.

- Hospital Services: 0.35 gallons per day (gpd)/square feet (sf)
- Inpatient Hospital: 0.29 gpd/sf
- Medical Office: 0.09 gpd/sf
- Residential: 0.31 gpd/sf
- Retail/Commercial: 0.35 gpd/sf

Although some uses included in the SMCS project would be relocated from Sutter Memorial Hospital (SMH) to the new facilities, it is assumed this facility could be reused or retrofitted in some fashion, which would require continued water supply. Therefore, as a conservative estimate, we assumed some type of continued use and associated water demand would occur at the SMH site.

Because the majority of the buildings to be demolished are unoccupied, this analysis focuses on the demand associated with the proposed new uses. The SMCS project would demolish parking garages and buildings that are primarily vacant (including the (former) RAS medical office building, the St. Luke's medical office building, EAP building, and the House of Furs building) and do not require water service. The existing Energy Center would be demolished and replaced by a new Energy Center in the proposed SMF Building. The Trinity Apartments, with five occupied residential units, would be demolished, which would eliminate a small amount of water demand.

Projected water use for the Children’s Theatre of California project was calculated using the demand factors used for the environmental analysis of the UCLA Geffen Playhouse.¹⁸ The analysis assumed six gallons per seat per day. These generation rates were multiplied by the number of seats that would be constructed in the theatre to determine its approximate water demand.

Standards of Significance

For the purposes of this EIR, impacts to water supply and distribution are considered significant if the SMCS project would:

- Increase the demand for potable water in excess of available supplies;
- Result in inadequate treatment, capacity, and/or infrastructure to supply the project, with no plans or processes in place for obtaining needed infrastructure; or
- Create an increase in water demand of more than 10 million gallons per day.

Impact 6.8-1: Implementation of the SMCS project could increase demand for potable water in excess of available supplies.		
	SMCS Project	Theatre
Significance Before Mitigation	Less than Significant	Less than Significant
Mitigation Measures	None required	None required
Significance After Mitigation	N/A	N/A

SMCS Project

Development of the SMCS project, as shown in Table 6.8-4, would generate an additional water demand of 190,256 gpd; (211 AFY). Surface water from the American and Sacramento Rivers supply the project area. As discussed in the Environmental Setting, the City’s current surface water entitlement totals 192,000 AFY. Overall water consumption for the year 2002/03 totaled 135,536 AF, leaving the City with an excess of 56,464 AFY. With a gross project demand of 230 AFY, the SMCS project demand would represent approximately 0.4 percent of the City’s remaining authorized supply.

Furthermore, construction phasing is timed such that access to available surface water would increase by the time the SMCS project is fully complete. Specifically, construction of the SMF Building, the residential/retail/commercial component, and the Future MOB would be completed in 2006; the WCC is scheduled for completion in 2010. At the time that the SMCS project is fully complete, water entitlements would be between 205,500 and 227,500 AFY. Thus, while the total project demand would be approximately 211 AFY, this would be for the project at

18 University of California (EIP Associates), *UCLA Geffen Playhouse Expansion and Renovation Project, Final Initial Study Mitigated Negative Declaration*, SCH No. 2003061037, August 2003.

Table 6.8-4

Proposed SMCS Estimated Water Demand

Building	Proposed Square Footage (sf)	Water Demand Factor (gpd/sf)	Estimated Daily Water Demand (gpd)	Estimated Annual Water Demand (AFY)
Women's and Children's Center	385,400		113,189	127
Hospital Services	111,244	0.35	38,935	44
Inpatient Hospital (272 beds)	256,932	0.29	74,510 gpd	83
Mechanical/HVAC	17,224	--	--	--
SMF Building	203,683		62,726	69
Parking Garage ¹	47,001	--	--	--
Energy Center ²	24,644	0.31 gpd/sf served ³	32,903	37
Hospital Services/Mixed Use	68,371	0.35	23,930	27
Medical Office	63,366	0.09	5,893	6
Community Parking Structure	63,000		3,150	5
Parking Garage	54,000	--	--	--
Retail/Restaurant	9,000	0.35	3,150	4
Residential Building	38,400		7,936	9
Parking Garage	12,800	--	--	--
Residential	25,600	0.31	7,936	9
Future Medical Office Building	35,000 sf		3,255	3
Parking Garage	35 spaces	--	--	--
Medical Office	35,000 sf	0.09	3,255	4
SMCS Project Total			190,256 gpd	211

Notes:

1. Includes also tunnels/bridges.
2. Water demand for the Energy Center is based on the 1,073,427 square feet of building space it would serve.
3. Daily water demand for the Energy Center is an average over the year of operations. Actual daily demand may fluctuate.

Source: Mazzetti Associates, PAMF-SCC, 2005. City of Sacramento, *Draft Water Supply Assessment for the Proposed SMCS Project*, June 2005.

completion (2010). This demand would be incurred incrementally and would be phased, as SMCS buildings are completed in accordance with the construction schedule.

The project area is served by several 8-inch water lines located in public rights-of-way. The alleys that would be affected by the SMCS project also contain 8-inch mains. As part of the SMCS project, however, new lines would be constructed in adjacent streets to compensate for lost capacity. Specifically, three additional 8-inch pipes are planned on adjacent streets and two additional 12-inch pipes in Capitol and N Streets between 27th and 28th Streets. As a result, distribution capacity would not be negatively affected as a result of project implementation. Therefore, impacts on water supply are considered to be **less than significant**.

Theatre

The proposed Children’s Theatre of California would contain two theatres, providing a total of 565 seats. The Children’s Theatre of California would produce 11 plays per year, each running six weeks. Showtimes would be Tuesdays through Saturday evenings and Wednesdays and Sunday afternoon matinees. Showtimes for the Children’s Theatre of California would be Tuesday through Friday morning matinees with afternoon performances Saturdays and Sundays.

The estimated water demand from operation of the Children’s Theatre of California would be approximately 3,390 gpd or 1.1 mg per year (3.25 AFY), based upon six days of operation per week. This demand would represent approximately 0.006% of the current unused water supply. Actual demand would likely be lower than the above estimate, as the Children’s Theatre would not operate throughout the entire year. In addition, as discussed above, distribution would not be negatively affected, because new mains would be constructed to replace the mains in the alleys that would be abandoned. Therefore, demand from the Theatre project would have a **less-than-significant impact** on water supplies and distribution.

Mitigation Measures

None required.

Impact 6.8-2: The SMCS project could result in inadequate treatment capacity to supply the SMCS project with no plans or processes in place for obtaining needed infrastructure.		
	SMCS Project	Theatre
Significance Before Mitigation	Less than Significant	Less than Significant
Mitigation Measures	None required	None required
Significance After Mitigation	N/A	N/A

SMCS Project

As discussed in the impact above, the water demand of the SMCS project would be 190,256 gpd that would require treatment prior to delivery at the project site. The Sacramento River WTP and E.A. Fairbairn WTP have a combined capacity of 360 mgd (403,398 AFY). Based on Sacramento’s 2002/2003 water demand of 116 mgd (59.2 mgd from the American River, 56.8 mgd from the Sacramento River), the treatment plants have a combined excess capacity of 244 mgd. The SMCS project demand for water treatment would be 0.08 percent of the excess capacity available at the treatment plants. Therefore, no new or expansions of existing water treatment facilities would be required, so this impact would be **less than significant**.

Theatre

The Children’s Theatre of California lies within the boundaries of the SMCS project area. The site is relatively small compared to the SMCS project and is unlikely to significantly impact

capacity or treatment systems. Specifically, as discussed under Impact 6.8-1, it is estimated that 3.25 AFY in additional water demand would result from construction of the Theatre. The capacity discussion above for the SMCS project explains that the existing treatment capacity for the City of Sacramento is approximately 360 mgd.

Construction of the Children’s Theatre of California would not require or result in the construction of new water treatment facilities or the expansion of existing facilities, and impacts would be **less than significant**.

Mitigation Measures

None required.

<p>Impact 6.8-3: The SMCS project could result in inadequate water distribution infrastructure to supply the SMCS project with no plans or processes in place for obtaining needed infrastructure.</p>		
	SMCS Project	Theatre
Significance Before Mitigation	Less than Significant	Less than Significant
Mitigation Measures	None required	None required
Significance After Mitigation	N/A	N/A

SMCS Project

As discussed in the Environmental Setting, existing water conveyance infrastructure in the project area consists of a series of 8 -inch water lines located in public right-of-ways. Water lines that serve the project area are located in: K Street from 30th to 28th Streets; 28th Street from K to N Streets; 29th Street between K and L Streets; L Street between 28th and 27th Streets; 26th Street between Capitol and L Streets; and Capitol Street between 28th and 29th Streets.

Alley and/or utility abandonment would occur in the alley by the existing Buhler Building, the alley behind Pioneer Church, and the alley in the Community Block, each of which contain an 8-inch main. Two abandonments would directly affect the SMCS project and entail both physical and utility abandonments. These planned abandonments would affect primarily the SMF Building and the WCC. However, replacement conveyance lines would also be constructed as part of the project, and, as discussed above in Impact 6.8-1, capacity would increase due to newly constructed pipes. In addition, new public fire hydrants would be constructed at the mid-block of every frontage street.

The SMCS project includes the construction of larger replacement pipes, which would ensure no additional expansion of distribution infrastructure would be required. In addition, the City requires that a water supply test be prepared to determine the capacity of the water lines. If existing infrastructure in the project vicinity is not sufficient to serve the project, the City would condition that the applicant provide their fair share of the funding for required improvements,

which would ensure that adequate system capacity exists to secure the project site. The impact would be **less than significant**.

Theatre

The Children’s Theatre of California would also be affected by the Community Block utility abandonment, and an 8-inch water main serving the block would be removed. However, as discussed above, the replacement mains that would be constructed on adjacent streets would increase conveyance capacity in the project area. In addition, the City’s water system test would ensure the impact would be **less than significant**.

Mitigation Measure

None required.

Impact 6.8-4: The SMCS project could increase water demand by more than 10 million gallons per day.		
	SMCS Project	Theatre
Significance Before Mitigation	No Impact	No Impact
Mitigation Measures	None required	None required
Significance After Mitigation	N/A	N/A

SMCS Project

The various medical office uses, commercial and retail uses, residential units, and hospital facility associated with the SMCS project would increase demand for water supply in the project area.

As noted in Impact 6.8-1 the projected demand would be approximately 190,256 gpd (0.19 mgd) which is far below the 10 mgd threshold. Thus, **no impact** would occur and no mitigation is required.

Theatre

As noted above in Impact 6.8-1, the demand generated by the Children’s Theatre of California would be approximately 3,400 gpd (0.003 mgd). This is far below the 10 mgd threshold and, as a result, **no impact** would occur.

Mitigation Measures

None required.

CUMULATIVE IMPACTS

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.

Impact 6.8-5: The SMCS project, in combination with other development in the City of Sacramento, could increase demand for one or more of the following in excess of available supplies: potable water, water treatment, water capacity, and/or water infrastructure.

	SMCS Project	Theatre
Significance Before Mitigation	Less than Significant	Less than Significant
Mitigation Measures	None required	None required
Significance After Mitigation	N/A	N/A

SMCS Project and Theatre

The SMCS project would increase the demand for water in the City's service area beyond the existing demand of approximately 136,000 AFY. However, as previously stated, the City's authorized supply under the WFA would also increase in the future. As shown in Table 6.8-2, the City's authorized supply in year 2030 would be 325,800 AFY. Therefore, the water demand would be required to more than double 2002/2003 demand in order to exceed the available supply. Although the City is in the process of updating its General Plan, it is highly unlikely that the Plan would include a doubling of the population over buildout of the Plan. In fact, population projections for Sacramento County as a whole, estimate that growth would occur at a rate of less than ten percent every 5 years.¹⁹ At that rate, it would take 40 to 45 years for population increases to generate demand equal to supplies. In addition, it is likely that the City would implement water-saving methods, such as metering water, which would reduce demand. Because that time far exceeds the typical timeline considered in a general plan, this impact would be considered less than significant.

In addition, although much of the Central City area is already developed, it is likely that the land uses within the Central City could intensify in the future as development pressure throughout the area increases. The intensification of uses could result in the need for upgrades in the City's water distribution and/or treatment systems. As stated in Impact 6.8-3, the City would require a water system test for new development to ensure that the system capacity is sufficient to serve development. In addition, as previously stated, the City's treatment plants have a combined treatment capacity of 360 mgd, which is more than three times Sacramento's 2002/2003 water demand of 116 mgd.

¹⁹ State of California, *Interim County Population Projections, Estimated July 1, 2000 and Projections for 2005, 2010, 2015, and 2020*, June 2001.

Therefore, this project's contribution would not be cumulatively considerable resulting in a **less-than-significant** cumulative impact on water supplies and infrastructure.

Mitigation Measure

None required.

WASTEWATER AND STORM DRAINAGE

Environmental Setting

Wastewater and Storm Drainage Facilities

The project area is served by the City of Sacramento's combined sewer system (CSS); the CSS is a wastewater collection system designed to convey domestic sewage, commercial and industrial wastewater, and surface stormwater runoff (referred to as "combined wastewater") 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 and stormwater sewers have been constructed in newer parts of the service area, and portions of the original CSS have been separated.²⁰ The discussion that follows is applicable to both wastewater and storm drainage.

CSS facilities include pumping stations, an off-line storage facility known as Pioneer Reservoir, and the City's Combined Wastewater Treatment Plant (CWTP). The City uses the Sacramento Regional Wastewater Treatment Plant (SRWTP), a Sacramento Regional County Sanitation District facility (SRCSD), for secondary treatment. The collection system is divided into networks and consists of trunks, interceptors, reliefs, force mains, laterals, and other pipelines. Trunk sewers represent seventy percent of the total collection system capacity (5,000,000 cubic feet total capacity).²¹

Two large pumping stations, Pump Station 1/1A and Pump Station 2/2A, located on the east side of the Sacramento River accept and transport flows from the underground piping system to either of the treatment facilities or directly to the Sacramento River. Pump Station 2 is the primary pump station and operates continuously throughout the year as well as during storm events, while Pump Station 1/1A operates only during large storms.²²

Pioneer Reservoir, the off-line storage facility located near Front and U Streets, was constructed in 1978 to provide 23 million gallons of temporary storage to reduce overflows to five to six events per year. It now has a peak hydraulic capacity of 350 mgd and a treatment capacity of 235 mgd.²³

20 City of Sacramento (EIP Associates), *Combined Sewer System Rehabilitation and Improvement Plan, Draft Environmental Report*, November 1996.

21 City of Sacramento (EIP Associates), *Combined Sewer System Rehabilitation and Improvement Plan, Draft Environmental Report*, November 1996, Page 3-2.

22 City of Sacramento (EIP Associates), *Combined Sewer System Rehabilitation and Improvement Plan, Draft Environmental Report*, November 1996.

23 City of Sacramento (EIP Associates), *Combined Sewer System Rehabilitation and Improvement Plan, Draft Environmental Report*, November 1996.

Flows from Pump Station 2 are routed via the Pioneer Interceptor, a 120-inch diameter, 8,800-foot long pipe, to the reservoir. An additional 5 mgd can be stored in the Pioneer Interceptor.

The SRWTP is a secondary treatment facility with an existing wastewater treatment capacity of approximately 390 mgd of wet weather flow during peak wet weather conditions. The SRWTP currently receives 165 mgd of wastewater a day.²⁴ The SRWTP is located approximately 4.9 miles south of the pump stations, in the unincorporated community of Freeport.

The CSS drains west to the pump stations, which transport flows to the SRWTP, the CWTP, Pioneer Reservoir, or directly to the river. The City has an agreement with SRCSD to deliver no more than 60 mgd peak flow from the City's Sump 2 service area to the SRWTP. During dry weather, approximately 25 mgd flows to the SRWTP from Sump 2.²⁵ The SRWTP also processes wastewater for most of the urbanized areas of the County, including Citrus Heights, Rancho Cordova, and Elk Grove.²⁶

During storm events when the CSS flows are greater than 60 mgd (approximately ½ inch of rainfall), CSS flows are diverted to the City's CWTP, located near South Land Park Drive and 35th Avenue, which provides only primary treatment. Wet weather flows have been known to exceed system capacity during heavy storm events. CWTP basins may also be used for storage of flows until capacity is available at the SRWTP.²⁷ Flows during heavy storm events which exceed the 190 mgd combined capacities of SRWTP (60 mgd) and CWTP (130 mgd) result in a combined sewer overflow (CSO). The overflows are diverted to Pioneer Reservoir for storage. When the reservoir reaches its capacity, the excess untreated flows are discharged directly into the Sacramento River. When 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.²⁸

The discharges to the Sacramento River of untreated combined wastewater 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 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.

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-

24 Sacramento Regional County Sanitation District, *Sacramento Regional Wastewater Treatment Plant*, www.srcsd.com/srwtp.html, accessed February 8, 2005.

25 Rick Batha, Supervising Engineer, City of Sacramento Utilities Department, personal communication, January 19, 2005.

26 County of Sacramento, Municipal Services Agency, Department of Water Quality, <http://pwa.co.sacramento.ca.us/waterquality/default.htm>, Accessed January 18, 2005.

27 City of Sacramento (EIP Associates), *Combined Sewer System Rehabilitation and Improvement Plan Draft Environmental Impact Report*, November 1996.

28 City of Sacramento, *Crocker Art Museum Expansion EIR*, August 23, 2004, Page 231.

29 Rick Batha, Supervising Engineer, City of Sacramento Utilities Department, personal communication, January 25, 2005.

going process to improve the CSS system. The Utilities Department continues to upgrade pipes and construct additional storage facilities.

Wastewater and Storm Drainage Infrastructure

The project area is currently served by CSS pipes ranging from 8 to 18 inches. In general, alleys are equipped with 8-inch pipes, as are the alleys in and around the project area. When existing infrastructure is replaced, it is usually done with pipes between 10 and 21 inches, most commonly with 12-inch, 15-inch, or 18-inch lines.³⁰ The following CSS pipes currently serve the project area.³¹

- 10-inch: 26th Street (between N and Capitol); Capitol Avenue (between 28th and 29th); 28th Street (between L and Capitol); and 27th Street (halfway between Capitol and N, to N Street);
- 12-inch: 27th Street (halfway between L and Capitol, to Capitol Avenue); K Street (3/4 way between 28th and 29th, to 29th Street);
- 8-inch: Capitol Street (between 26th and 27th); 28th Street (halfway between L and K, to K Street);
- 15-inch: 29th Street (halfway between K and L, to Capitol Avenue); and
- 18-inch: N Street (between 26th and 28th).

In addition, independent of the SMCS project, the City plans to construct a 78-inch CSS pipe in 29th Street.

Sacramento Regional County Sanitation District

The Sacramento Regional County Sanitation District (SRCSD) was established in 1973 with a mandate to eliminate all wastewater flows to the American River, minimize raw sewage overflows to the Sacramento River, and to replace 17 separate wastewater entities.³² The centralization of treatment facilities into one facility operated by the SRCSD, the SRWTP, was completed in 1986.³³ The proposed project site is located within SRCSD's CSD-1 Service Area, but there are no SRCSD facilities in the project area.

Construction discharges into the CSS, such as dewatering activities, require a wastewater discharge permit from the SRCSD. The City and the County have set this requirement to ensure significant impacts do not occur from dewatering activities. As part of this permit, SRCSD sets standards for discharge limitations, and requires the applicant to complete monitoring activities, submit monitoring reports to the SRCSD, and pay associated discharge fees.

30 Rick Batha, Supervising Engineer, City of Sacramento Utilities Department, personal communication, April 9, 2004.

31 Psomas Utility Plans, 2004.

32 City of Sacramento (EIP Associates), *Combined Sewer System Rehabilitation and Improvement Plan, Draft Environmental Report*, November 1996.

33 City of Sacramento (EIP Associates), *Combined Sewer System Rehabilitation and Improvement Plan, Draft Environmental Report*, November 1996.

An Interagency Agreement establishes the roles, and responsibilities of the SRCSD, including the construction of new facilities and the operation of the City's combined flow facilities, and limitations on the amount of wastewater to be conveyed to SRWTP.³⁴ The agreement also divides agency responsibilities as follows: the SRCSD conveys sewage to treatment plant, operates the interceptors, and pays to pump the waste from Sump 2 to the SRWTP; the City is in charge of pumping from the project area to the sumps.³⁵

REGULATORY SETTING

State and Federal

NPDES Permits

Wastewater and stormwater discharges are subject to the National Pollutant Discharge Elimination System (NPDES) permit requirements (please see Section 6.5, Hydrology and Water Quality for more information).

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act³⁶ is California's statutory authority for the protection of water quality. Under the Porter-Cologne Act, the State must adopt water quality policies, plans, and objectives that will provide protection to the State's waters for the use and enjoyment of the people of California. In California, the State Water Resources Control Board (SWRCB) has authority and responsibility for establishing policy for water quality control issues for the State. Regional authority for planning, permitting, and enforcement is delegated to the nine Regional Water Quality Control Boards. The Porter-Cologne Water Quality Control Act authorizes the SWRCB and RWQCB to issue NPDES permits containing waste discharge requirements, and to enforce these permits. SWRCB and RWQCB regulations implementing the Porter-Cologne Water Quality Control Act are included in Title 27 of the California Code of Regulations.

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 nations 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.

34 City of Sacramento (EIP Associates), *Combined Sewer System Rehabilitation and Improvement Plan, Draft Environmental Report*, November 1996.

35 Rick Batha, Supervising Engineer, City of Sacramento Utilities Department, personal communication, April 9, 2004.

36 California Water Code Section 13000 *et seq.*

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.³⁷ 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 ensures that the City maximizes flow to the public-owned treatment works (POTW), which is one of the nine minimum controls in EPA's National CSO Policy.

State and Federal 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 (CVRWQCB) regulate the disposal of biosolids.

Local

Combined Sewer System Development Fee

The City of Sacramento has adopted an ordinance that requires any significant increase in wastewater flows over the present level to be mitigated. If a proposed development project is determined to have a significant impact on the CSS, an acceptable mitigation plan is required by the City.³⁸

The City of Sacramento has adopted a Sewer Ordinance amendment that replaces the Mitigation Agreement previously required for developers.³⁹ The ordinance would require a development fee for projects within the CSS service boundary. The Ordinance was adopted on March 15, 2005. Key aspects of the CSS development fee include:⁴⁰

- A fee of \$2,633 ESD (Equivalent Single Family Dwelling unit) 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 or cost sharing in the construction or mitigation project.
- The fee approximates the cost to construct local storage to mitigate impacts downstream.

37 City of Sacramento (EIP Associates), *Combined Sewer System Rehabilitation and Improvement Plan, Draft Environmental Report*, November 1996, Page 7.2-10.

38 CalPERS, *Draft EIR for the CalPERS Headquarters Expansion Project*, June 2000, Page 4.5-12.

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

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

- Fees will be collected into a fund for the City to construct larger projects to mitigate multiple developments.

City of Sacramento General Plan

The following goals and policies from the City of Sacramento General Plan are applicable to the SMCS project:

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

Policy 2: Develop plans for extension of sewer lines to existing developed areas where sewer service is lacking.

Policy 3: Work with property owners to develop financing arrangements in order to provide sewer services.

Goal E: Design public facilities in such a manner as to ensure safety and attractiveness.

Utilities and related infrastructure should be designed and constructed in a manner to prevent possible visual blight and ensure safety to Sacramento residents. The City should continue to support and encourage the construction of utility lines underground and provide safe, attractive infrastructure. Existing and newly constructed infrastructure should be maintained.

Goal A: Provide adequate drainage facilities and services to accommodate desired growth level.

Policy 1: Ensure that all drainage facilities are adequately sized and constructed to accommodate the projected increase in stormwater runoff from urbanization.

Central City Community Plan

The Central City Community Plan does not contain any policies applicable to the provision of sewer or drainage facilities.

IMPACTS AND MITIGATION MEASURES

Methods of Analysis

Within the project area, land use designations of multi-family residential, hospital, office zone, and general commercial were used to identify the current service demand level. The

wastewater generation factor for each proposed land use was derived by using the following generation rates, provided by the City of Sacramento Utilities Department:⁴¹

- Hospital: 1.0 ESD/12,000 gallons of water used per month
- Commercial/Retail: 0.2 ESD/1,000 square feet (sf)
- Medical Office: 0.4 ESD/1,000 sf
- Residential (Apartment): 0.75 ESD/unit
- Equivalent Single Family Dwelling Unit (ESD) = 400 gallons/day

A generation factor to estimate the amount of wastewater generated by the new Energy Center is not available.

Although some uses included in the SMCS project would be relocated from SMH to the new facilities, it is assumed this facility could be reused, which would continue to generate wastewater. Therefore, as a conservative estimate, it is assumed that some type of continued use would occur at the SMH site. Because the majority of the buildings to be demolished are unoccupied, this analysis focuses on the demand associated with the proposed uses. The SMCS project would demolish parking garages and buildings that are primarily vacant (including the former RAS medical office building, the MTI office buildings, EAP office building, and the House of Furs building) and do not currently require wastewater treatment. The Trinity Apartments, with five occupied residential units, would be demolished, which would eliminate a small amount of wastewater currently entering the system.

The wastewater generation for the Children's Theatre of California was based on a per seat generation rate of 0.3 ESD/100 seats, provided by the City of Sacramento Utilities Department.⁴²

To determine impacts on drainage, the increase in impervious surface from existing conditions to proposed conditions was estimated by comparing the existing amount of impervious surface with the construction plans for the SMCS project.

Standards of Significance

For the purposes of this EIR, impacts associated with the City's wastewater distribution, treatment and conveyance system and storm drainage facilities are considered significant if the SMCS project would:

- Result in or require the construction of new or expansion of existing wastewater collection or treatment facilities that would create significant environmental effects;
- Result in an increase in wastewater discharge in excess of that allowed by the applicable Regional Water Quality Control Board or the capacity of existing City infrastructure; or

41 City of Sacramento Utilities Department, *Sanitary Sewers Design Standards, Section 9*, September 1, 1990.

42 City of Sacramento Utilities Department, *Sanitary Sewers Design Standards, Section 9*, September 1, 1990.

- Create or contribute runoff water over pre-development conditions that would exceed the capacity of existing or planned stormwater drainage systems, including the City's Combined Sewer System.

Impact 6.8-6: The SMCS project could result in or require the construction of new or expansion of existing wastewater collection or treatment facilities or exceed RWQCB requirements.

	SMCS Project	Theatre
Significance Before Mitigation	Less than Significant	Less than Significant
Mitigation Measures	None required	None required
Significance After Mitigation	N/A	N/A

SMCS Project

Implementation of the SMCS project would increase the amount of building space and population, which would result in the generation and discharge of additional wastewater requiring treatment at the SRWTP.

As shown in Table 6.8-5, the SMCS project would generate approximately 0.15 mgd of wastewater requiring transportation and treatment in the CSS. Currently, the SRWTP treats an average of 165 mgd. The overall capacity of the SRWTP is 380 mgd, of which 60 mgd is dedicated to receiving flows from the City of Sacramento's CSS.⁴³ During wet weather, when wastewater flows exceed maximum levels accepted by the SRWTP (60 mgd), the City diverts flows to the CWTP (130 mgd), resulting in a combined total capacity of 190 mgd. The additional 0.15 mgd generated by the SMCS project could be adequately treated by existing infrastructure during dry weather conditions. However, the CSS presently experiences CSO's under existing conditions during severe storm events. Any increase in flows to the CSS during these conditions could result in a significant impact.

Existing infrastructure that serves the project area is discussed in the Environmental Setting section.

As discussed in Chapter 2, Project Description, three alleys would be affected through physical or utility abandonments. CSS facilities in the 28th/29th/L Street alley would be relocated to 28th Street and Capitol Avenue and would connect to the 78-inch combined sewer proposed by the City in 29th Street. The CSS facilities in the 27th/28th/Capitol Avenue/N Street alley would be removed. The three buildings to remain along Capitol Avenue and 28th Streets (Café Bernardo's, Monkey Bar, and Capitol Physical Therapy) would be connected to the proposed CSS in 29th Street. The 27th/28th/Capitol Avenue/L Street alley would be subject to a utility abandonment. The City's CSS would be removed where in conflict with the new building.

43 Rick Batha, Supervising Engineer, City of Sacramento Utilities Department, personal communication, January 19, 2005.

Table 6.8-5

Projected SMCS Project Wastewater Flows

Building	Proposed Square Footage	Wastewater Generation Factor ¹	Estimated Wastewater Generation (gpd)
Women's and Children's Center	398,362 sf 3,442,832 gallons per month	1.0 ESD/12,000 gallons of water used per month	114,761
SMF Building	203,382 sf		
Commercial	2,600 sf	0.2 ESD/1,000 sf	208
Medical Office	129,137 sf	0.4 ESD per 1,000 sf	20,662
Community Structure Retail/Commercial	9,000 sf	0.2 ESD/1,000 sf	720
Future Medical Office Building	35,000 sf	0.4 ESD/1,000 sf	5,600
Housing	32 units	0.75 ESD/unit	9,600
SMCS Project Total			151,551 gpd

Notes:

1. For those areas where the sanitary sewer is existing, the category Equivalent Single Family dwelling unit (ESD) is used for computing average flow (1 ESD = 400 gallons/day).

Source: SMCS, 2005; EIP Associates, 2005

The CSS line in the alley behind the Buhler Building and the Old Tavern building is currently leaking and presents a potential health and safety issue. SMCS proposes to install a new 12-inch lateral from the alley south along 28th Street to Capitol Avenue, then east to 29th Street. This relocated combined sewer would connect to the proposed 78-inch combined sewer to be constructed by the City in 29th Street. A new 12-inch combined sewer would be constructed in 28th Street from the alley south to N Street. This sewer would serve existing and new buildings.

The installation of replacement CSS lines would cause temporary disruptions within the public right-of-way. The transportation impacts of these construction operations are addressed in

Section 6.7, Transportation and Circulation. The noise and air quality effects of construction are addressed in Section 6.2, Air Quality, and 6.6, Noise. Installing new CSS pipes could require dewatering, if the pipes are installed below the groundwater table. The impacts associated with potential dewatering activities are addressed in Section 6.5, Hydrology and Water Quality.

Localized flooding and CSOs occur during severe storm events, which would be exacerbated by additional flows from the SMCS project. However, the City is currently implementing system-wide improvements to the CSS and the SMCS project would be required to contribute funds toward City improvements to the CSS or, alternatively, complete on- or offsite improvements to store project wastewater during storm events. Absent system improvements, however, flooding and CSOs would continue.

However, compliance with the City's Combined System Development Fee ordinance would reduce the project impact by providing (1) additional capacity in the City's system to reduce the potential for flooding and CSOs system-wide, or (2) requiring storage of project flows to ensure

that the proposed project would not contribute to flooding and CSOs. This would reduce this impact to a **less-than-significant level**.

Theatre

The Children’s Theatre of California lies within the boundaries of the SMCS project area. The building that comprises the Children’s Theatre would include a total of 565 seats. The project would be required to comply with all applicable wastewater discharge requirements and NPDES permits, described above.

Wastewater generation from theatre venues are calculated on a per seat basis (0.3 ESD/100 seats).⁴⁴ With 565 seats, the Children’s Theatre would generate 678 gpd (.0001 mgd). This flow would constitute less than 0.001 percent of the system capacity. Because the CSS system does not have capacity during large storm events, the small increase in wastewater associated with the Theatre could result in a significant impact. As stated above, however, the Theatre project would be required to comply with the Combined System Development Fee Ordinance, which would reduce the impact to a **less-than-significant level**.

Mitigation Measures

None required.

Impact 6.8-7: The SMCS project could create or contribute runoff water over pre-development conditions that would exceed the capacity of existing or planned stormwater drainage systems, including the City’s CSS.		
	SMCS Project	Theatre
Significance Before Mitigation	Less than Significant	Less than Significant
Mitigation Measures	None required	None required
Significance After Mitigation	N/A	N/A

SMCS Project

The SMCS project is proposed for development on land that currently contains urban development with primarily impervious surfaces. Development of the SMCS project would increase the amount of impervious surfaces by approximately 16,000 square feet, or four percent of the site (see Table 6.8-6). The loss of pervious surfaces would not create a significant increase in the amount of stormwater runoff from the site.

However, the site is drained by CSS facilities, which are considered impacted because of the lack of available capacity during large storm events. During dry weather conditions, the CSS has adequate capacity to accommodate flows from the project area, which would be primarily

44 City of Sacramento Utilities Department, *Sanitary Sewers Design Standards*, Section 9, September 1, 1990.

Table 6.8-6

Impervious Surfaces

	EXISTING			PROPOSED SMCS		
	Landscape (sf)	Impervious Surface (sf)	% Impervious Surface	Landscape (sf)	Impervious Surface (sf)	% Impervious Surface
Women's and Children's Center	15,036	52,014	78	7,889	59,161	88
Sutter General Hospital	20,178	113,672	85	18,224	115,626	86
SMF Building	12,195	47,755	80	4,374	55,576	93
Buhler Building	4,386	29,444	87	3,835	29,995	89
St. Luke's MOB	1,914	20,936	92	2,919	19,931	87
St. Luke's Parking	0	32,350	100	250	32,100	99
TOTAL	53,709	296,171	85	37,491	312,389	89
Net Change in Impervious Surface					+ 16,218	+ 4

Source: Monica Kim Bauer, KMD, email communication and Table, dated May 24, 2004.

wastewater. During severe storm events, however, stormwater from the project area could exceed the capacity of the system. The City is currently implementing system-wide improvements to the CSS, including the new 78-inch line in 29th Street, and the SMCS project would be required to comply with the recently adopted ordinance that requires payment of fees. Alternatively, the project could complete on- or off-site improvements to store project wastewater during storm events. Absent system improvements, however, flooding and CSOs would continue.

Compliance with the City's new Combined System Development Fee Ordinance would reduce the project impact by providing (1) additional capacity in the City's system to reduce the potential for flooding, or (2) requiring storage of project flows to ensure the project would not contribute to flooding and CSOs. This would be considered a *less-than-significant impact*.

Theatre

The site of the proposed Children's Theatre of California lies within the SMCS project area and currently contains impervious surfaces associated with the Trinity Apartments, EAP Building, and two existing surface parking lots, along with a vacant area containing pervious surface. Specific development plans for the Children's Theatre have not yet been prepared; therefore, the amount of impervious surface that would remain after project completion is unknown. It is assumed that future development would be required to comply with the City's combined System Development Fee Ordinance that would ensure project flows would not contribute to flooding and CSOs. Therefore, this is considered a *less-than-significant impact*.

Mitigation Measure

None required.

CUMULATIVE IMPACTS

The cumulative context for wastewater and drainage includes all development within the CSS service area, which primarily includes downtown Sacramento.

Impact 6.8-8: The SMCS project, in combination with other development within the CSS service area, could result in or require the construction of new or expansion of existing wastewater and stormwater collection or treatment facilities.		
	SMCS Project	Theatre
Significance Before Mitigation	Less than Significant	Less than Significant
Mitigation Measures	None required	None required
Significance After Mitigation	N/A	N/A

SMCS Project and Theatre

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 155 mgd, less than its permitted capacity of 181 mgd of dry weather flow, 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.⁴⁵

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

45 Robert Seyfried, Senior Civil Engineer, Sacramento County Sanitation District, personal communication, March 14, 2005.

improvements are sufficiently funded. Therefore, with implementation of the existing programs to ensure that capacity is available as growth occurs, the project's contribution would not be cumulatively considerable; therefore, cumulative impact would be ***less-than-significant***.

Mitigation Measure

None required.

SOLID WASTE

Environmental Setting

Solid Waste from SMCS Facilities

Sutter General Hospital (SGH), Sutter Memorial Hospital (SMH) and the Buhler Building all use the City of Sacramento as their waste hauler.⁴⁶ The City sends waste to the Sacramento Recycling and Transfer Station before ultimate delivery to the landfill. While the City generally diverts much of its waste to Lockwood Landfill in Nevada, waste from SGH is sent to Anderson Landfill in Shasta County, California because Lockwood Landfill no longer accepts sharps waste.⁴⁷ Sharps waste consists of syringes, scalpel blades, contaminated broken glass articles, contaminated needles, and IV spikes that have been removed from an IV bag.⁴⁸

Hospital waste includes several types of waste streams that require categorization due to varying levels of contamination disposal procedures. Many of the streams must be separated from one another and some waste streams require incineration to avoid cross contamination.⁴⁹ Because of the sensitive nature of certain hospital waste, specialized haulers are required. Table 6.8-5 illustrates the various wastes disposed by Sutter General and Memorial Hospitals, and the Buhler Building, as well as the different providers required for each type.

Medical waste is a broad category encompassing several types of waste generated at hospitals. Medical waste includes pharmaceutical, pathological, and chemotherapy waste, although bulk amounts of chemotherapy waste are categorized as hazardous materials. Facilities that generate more than 200 pounds per month must additionally sterilize (by autoclave) or incinerate their medical waste. As shown in Table 6.8-7, the Sutter hospitals generate approximately 1,500 lbs/month of medical waste and thus are required to follow certain decontamination procedures. Regulated medical waste receptacles are labeled "Bio-Hazardous Waste" in both English and Spanish, and their removal requires adherence to a series of safety precautions. The waste is collected daily from internal hospital locations and then transferred to the waste processing area for each individual hospital site. This waste is then treated by the Sani-Pak Waste Compactor or sterilized. Once the cycle is completed, the waste is hauled to a waste transfer landfill for disposal by an approved hauler. Sutter completes this process twice weekly.⁵⁰ If the medical waste is autoclaved, it may be landfilled at a regular Class III Landfill

46 Gloria Hurd, Sutter Medical Center, Environmental Services, personal communication, April 28, 2004.

47 Gloria Hurd, Sutter Medical Center, Environmental Services, personal communication, April 28, 2004.

48 Hazardous Materials & Waste Management Policies and Procedures.

49 Sutter Medical Center, Environmental Services, EVS Management Staff, *Policy and Procedure for Waste Segregation*, January 1995.

50 Sutter Medical Center, Environmental Services, EVS Management Staff, *Policy and Procedure for Waste*

such as the Kiefer Landfill. Medical waste which is not autoclaved may be disposed of at either a Class I or Class II landfill. California Medical Disposal hauls and incinerates Sutter's Pharmacy, Pathology, and Chemotherapy waste.

Table 6.8-7

**2003 Waste Volume for Sutter Memorial Hospital and
Sutter General Hospital**

Category (service provider)	Includes	SGH¹ (lbs/yr)	SMH (lbs/yr)
Medical Waste (Steri-Cycle)	Chemotherapy, Pathological, Pharmaceutical	12,125	6,967
Solid Waste (BFI and City)	Regular and Treated Waste	1,787,006	1,809,950
Recyclables (hauled by C & C Recycle)	Paper	236,494	230,195
Universal Waste	Computers, light bulbs, batteries (all recyclable – hauled by AERC)	3,333	1,213
Hazardous Waste (hauled by Clean Harbors)	Bulk chemotherapy, radiology	2,824	965
Total		2,041,782	2,049,290

Notes:

1. Sutter General Hospital's waste volume includes all waste generated at the Buhler Building.

Source: Gloria Hurd. Sutter Medical Center, Environmental Services. Written Communication. April 29, 2004.

Some medical waste is considered hazardous. See Section 6.4, Hazardous Materials and Public Safety, for a discussion of hazardous waste for the SMCS project. The radioactive and bulk chemotherapy waste is considered hazardous and requires disposal by a licensed service provider. Due to the sensitivity of radioactive waste, monitoring devices have been installed at both SGH and SMH to ensure no radioactive material leaves the facilities via the waste stream. All regulated waste is passed through this monitoring process.

Nonhazardous medical waste makes up nearly 75 percent of the waste generated by hospitals. As shown in Table 6.8-7, solid waste accounted for 88 percent of total disposal at Sutter hospitals. Although the waste composition varies, in most hospitals the largest components of the waste stream are paper (especially cardboard, mixed paper, newspapers, and high-grade paper), plastics (especially film plastic), food waste, and disposable linens (a combination of paper and other materials).⁵¹

Recycling at SMCS Facilities

The recycling stream consists of reusable materials collected from various locations in the hospital. C & C Recycle provides hauling and disposal services for these materials. The following items are currently recycled at SGH, SMH, and the Buhler Building.⁵²

- Paper (both non-confidential and confidential),
- Cardboard,
- Batteries,
- Light bulbs,
- Mercury (as part of the hazardous waste stream),
- Computer Equipment,
- Metal Furniture.

Additionally, in coordination with the surgery department, SMCS plans to begin recycling blue wrap. Blue sterile wrap is used in hospitals to protect patient gowns and toiletries, medical devices, and surgical instruments from contamination. Blue wrap is currently part of the solid waste stream. However, recycling it could lower the overall waste stream significantly. Policy and procedures for recycling of food and used medical devices are also being developed.⁵³

Solid Waste Facilities

The City collects all residential solid waste while commercial waste collection is performed by both the 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 via larger vehicles 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 Solid Waste Landfill (Kiefer Landfill), the Yolo County Landfill, Forward Landfill, L and D Landfill, Florin Perkins Landfill, and several privately run transfer stations.⁵⁴ Private haulers can deliver waste to the landfill of their choice; they typically select the most cost-efficient option.

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 generally serve the project area. Sutter General Hospital uses the Sacramento Recycling and Transfer Station.⁵⁵ Currently, the Sacramento Recycling and Transfer Station accepts approximately 2,000 tons of mixed municipal waste per day and is permitted for a maximum daily disposal of 3,000 tons.

52 Sutter Medical Center, Environmental Services, EVS Management Staff, *Policy and Procedure for Recycling*, January 1995.

53 Gloria Hurd, Sutter Medical Center, Environmental Services, personal communication, April, 28, 2004.

54 City of Sacramento, General Plan, 1988, Page 7-10.

55 City of Sacramento, *Crocker Art Museum Expansion EIR*, August 23, 2004, Page 232.

Sharps waste generated by the SMCS project would be disposed at Anderson Landfill. The Anderson Landfill, a Class III landfill located in Shasta County, California, has a permitted capacity of 2,081 tons/day, a permitted throughput in 1,018 tons/day, and has a remaining capacity of 8,000,000 tons. The Anderson Landfill is located on 270 acres of land with 132 acres dedicated to disposal. Sacramento County currently exports 1 percent of its waste outflow to Shasta County.⁵⁶

Non-hazardous waste generated by the SMCS project could be disposed at either the Kiefer Landfill or Lockwood Landfill. Kiefer Landfill is the primary municipal solid waste disposal facility in Sacramento County and is run by the County Department of Public Works. 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 Grant Line 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).⁵⁷ The landfill has an estimated closure date of 2064.⁵⁸

The Lockwood Regional Landfill, located in Sparks, Nevada, is a Class I landfill that currently accepts an average of 7,700 tons/day, 800 tons of which come from the City of Sacramento. Lockwood Landfill does not have maximum daily disposal limits, and it has a remaining capacity of 32.5 million tons. The landfill currently operates on a 550-acre site; however, the process for expansion to 1,100 acres is underway.⁵⁹

The City of Sacramento provides weekly curbside pickup of trash and biweekly curbside pickup of recyclable materials at residences within City limits. The City also requires all five-unit or more multiple family residential developments to prepare a recycling program prior to the issuance of building permits (Sacramento Regional County Solid Waste Authority, Ordinance Five).

In 2000, the City of Sacramento disposed of 500,291 total tons (34 percent household waste and 66 percent business waste). Of this total, the City exported 210,862 tons (42 percent) out of state, to Nevada, for disposal. The City of Sacramento achieved a diversion rate of 45 percent in 2000.⁶⁰

56 California Integrated Waste Management Board, *Sacramento County: Waste Outflow to Landfills in 2000*, <http://www.ciwmb.ca.gov/SWIS>, Accessed March 30, 2004.

57 California Integrated Waste Management Board, *Active Landfills Profile*, www.ciwmb.ca.gov, Accessed January 18, 2005.

58 California Integrated Waste Management Board, *Active Landfills Profile*, www.ciwmb.ca.gov, Accessed January 18, 2005.

59 Mark Frankey, Nevada Bureau of Waste Management, personal communication, January 18, 2005.

60 California Integrated Waste Management Board, *Jurisdiction Profile*, <http://www.ciwmb.ca.gov>, Accessed January 18, 2005.

REGULATORY SETTING

Federal

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA, Public Law 94-580 codified at 42 U.S.C. 6962) 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.

EPA's Hospitals for a Healthy Environment Program

The Hospitals for a Healthy Environment Program (H2E), created by the American Hospital Association and the US Environmental Protection Agency, was put forth as an effort to advance pollution prevention efforts in our nation's health care facilities. Through the activities listed under H2E, such as the development of best practices, model plans for total waste management, resource directories, and case studies, the project is intended to provide hospitals and health care systems with enhanced tools for minimizing the volumes of waste generated and the use of persistent, bioaccumulative, and toxic chemicals. Goals of the program include: elimination of mercury containing waste from health care facilities' waste streams by 2005; reducing the overall volume of waste (both regulated and non-regulated waste) by 33 percent by 2005 and by 50 percent by 2010; and identifying hazardous substances for pollution prevention and waste reduction opportunities, including hazardous chemicals and persistent, bioaccumulative, and toxic pollutants.

State

Assembly Bill 939

In 1989, the California Legislature passed California State Assembly Bill 939 (AB 939) requiring California cities to implement plans designed to reduce waste deposited in landfills by 50 percent per person by December 31, 2000. AB 939 requires counties to prepare Solid Waste Master Plans to implement the goals of the bill. As part of AB 939, cities and counties were required to develop a Source Reduction and Recycling Element (SRRE) of their General Plan. This element is designed to develop programs to achieve the landfill diversion goals, to stimulate local recycling in manufacturing and the purchase of recycled products. Due to the solid waste diversion and recycling requirements of AB 939, future solid waste levels are not anticipated to increase dramatically in the future.

California Medical Waste Management Program

In California, medical waste is regulated by the Department of Health Services' Medical Waste Management Program and the Radiologic Health Branch. Hazardous waste and solid waste generated by health care facilities are regulated by the Department of Toxic Substances Control and the California Integrated Waste Management Board, respectively. The California Medical Waste Management Act (Division 104, Part 14 California Health and Safety Code) regulates the disposal, handling and storage of untreated medical waste. Regulations govern the handling,

tracking, hauling and disposal by all generators and other handlers of such waste. The law applies to generators of medical waste including hospitals, nursing homes, physicians, dentists, veterinarians, clinics, laboratories, pet shops, and other health facilities. Current regulations have reduced the management and concern of medical waste for the City of Sacramento. Current landfill practices and regulation by the Sacramento County local enforcement agency provide adequate safeguards for worker safety and the general public in the handling and disposal of medical waste.

Local

City of Sacramento General Plan

Goals and Policies for Solid Waste

The following goals and policies from the City of Sacramento General Plan are applicable to the SMCS project:

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

Policy 2. Explore programs and new techniques of solid waste disposal to reduce the need for landfill sites.

Policy 4. Expand recycling and composting efforts to the maximum extent feasible in order to reduce the volume and toxicity of solid wastes that must be sent to landfill facilities.

Policy 8. Promote and support Sacramento Recycling Market Development Zone to strengthen the local recycling and diverted waste material market.

Central City Community Plan

The Central City Community Plan does not contain goals or policies applicable to the provision of solid waste services.

Local Solid Waste Authority Ordinance 14

Ordinance 14, effective January 10, 2005, replaces previous Ordinances 8, 11, 12, Sections 1 and 2, and 13, and was established to regulate the transport, transfer, disposal, and recycling of commercial solid waste kept

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 the landfill, 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.⁶¹

Source Reduction Recycling Element (SRRE)

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 requires 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.

IMPACTS AND MITIGATION MEASURES

Methods of Analysis

This analysis uses the following solid waste generation rates to estimate the SMCS project's solid waste, provided by the City of Sacramento Utilities Department.⁶²

- Commercial = 1 lb/100 sf/day
- Residential Apartment = 8 lbs/unit/day
- Hospital = 16 lbs/bed
- Medical Office = 1 lb/100 sf/day

The generation rates include recyclables and are used to estimate total waste generated by the SMCS project.

Although some uses included in the SMCS project would be relocated from SMH to the new facilities, it is assumed this facility, which would continue to generate solid waste. The SMCS project's solid waste generation, however, would be lessened by the demolition of existing buildings on the SMCS project site. Because most of the buildings to be demolished are vacant, this analysis focuses on additional demand associated with the SMCS project.

61 City of Sacramento, *Recycling and Solid Waste Regulations*, Municipal Code Chapter 17.72, <http://ordlink.com/codes/sacramento/index.htm>, Accessed January 18, 2005.

62 Michael Root, Program Analyst, City of Sacramento Utilities Department, written communication, April 12, 2004.

To estimate the amount of solid waste generated by the proposed Children's Theatre of California, the California Integrated Waste Management Board's generation rate for theatres (3.12 lbs/100 sf/day) was applied to the approximately 50,000 sf project.

Standards of Significance

For the purposes of this EIR, impacts associated with solid waste are considered significant if the SMCS project would:

- Substantially increase the production of solid waste in excess of available distribution or landfill capacity;
- Substantially increase the production of recyclable solid waste in excess of available distribution or materials recovery facilities' (MRF) capacity without also including provisions to adequately accommodate the increased production; or
- Generate more than 500 tons of solid waste per year.

Impact 6.8-9: The SMCS project could increase the production of solid waste in excess of available distribution or landfill capacity.		
	SMCS Project	Theatre
Significance Before Mitigation	Less than Significant	Less than Significant
Mitigation Measures	None required	None required
Significance After Mitigation	N/A	N/A

SMCS Project

The SMCS project would construct new hospital, commercial/retail, medical office, and residential uses, while eliminating some existing medical and general office/commercial, residential and retail uses. The project would result in a net increase in solid waste generation above the current level within the project area.

As shown in Table 6.8-8, the SMCS project would generate 6,365 lbs/day (3.2 tons/day). It is uncertain at this time how solid waste services would be divided up among existing providers. However, if SMCS contracts with the City of Sacramento to provide all solid waste hauling, the SMCS project's waste would be delivered to Anderson Landfill, the current destination for SMCS's solid waste. The 3.2 tons/day generated by the SMCS project would constitute less than 0.2 percent of Anderson Landfill's maximum daily capacity. As described above, the Anderson Landfill has a remaining capacity of approximately 8 million tons.

Implementation of the SMCS project would include demolition of existing buildings and the construction of new facilities, which would result in construction debris requiring disposal. Construction and Demolition (C&D) activities generate significant amounts of waste. The CIWMB has estimated that C&D waste represents approximately 28 percent of the total solid

Table 6.8-8

Estimated Solid Waste Generation

Building	Waste Generation Rate (per day)	SMCS Project (sf)	Solid Waste Generated (lbs/day)	Solid Waste Generated (tons/yr)
Women's and Children's Center	16 lbs/bed ¹	398,362 (272 beds ²)	4,352	794.2
SMF Building		203,382		
Commercial	1 lb/100sf	2,600	26	4.7
Medical Office	1 lb/100 sf	129,137	1,291	235.68
Housing	8 lbs/unit	32 units	256	46.72
Community Parking Structure	1 lb/100 sf	9,000	90	16.43
Retail/Commercial				
Future Medical Office Building	1 lb/100 sf	35,000	350	63.88
SMCS Project Total:			6,365 lbs/day (3.2 tons/day)	1,162 tons/yr

Notes:

1. Generation rate is from CIWMB, *Estimated Solid Waste Generation Rates for Institutions*, www.ciwmb.ca.gov, Accessed May 5, 2004.

2. The Women's and Center would have 197 beds; however, the building space can accommodate an additional 75 beds.

Source: Michael Root, Program Analyst. Department of Utilities. City of Sacramento. Written Communication, April 12, 2004.

waste stream.⁶³ The CIWMB does not have a specific generation rate for construction waste generated per square foot of new office/commercial or medical construction, however, construction of the SMCS project would generate significant C&D waste. The C&D waste could be disposed of at a variety of landfills including Lockwood Landfill, Keifer Landfill, or Yolo County Landfill; however, as discussed above, the landfills that would potentially be used for the SMCS project have adequate capacity and accept C&D waste that would result from the project.⁶⁴

As discussed in Regulatory Setting, the SMCS project is required to submit a statement of recycling information to the City's solid waste manager. This statement includes 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. The construction plan includes measures to recycle the following demolition and scrap materials:⁶⁵

- Concrete Pre-Cast Panels (building exterior)
- Roofing Ballast (Re-use)
- Metal Studs & Drywall

63 California Integrated Waste Management Board, *Lumber Waste Fact Sheet*, <http://www.ciwmb.ca.gov/ConDemo/FactSheets/Lumber.htm>.

64 California Integrated Waste Management Board, <http://www.ciwmb.ca.gov/SWIS>, Accessed March 30, 2004.

65 Tom Fraser, Sutter Health, written communication, April 8, 2004.

- Lead Shielding
- Copper & Steel Piping
- Acoustical Ceiling & Grid
- Carpeting (options based on manufacturer)
- Light Fixture & Wiring
- Hollow Metal Frames (steel)
- Ductwork & Misc. Sheet Metal (Steel)
- Packing Materials
- Aluminum Window Frames

A recycling plan for normal operations would also be submitted. This plan would outline how the hospital would continue to divert cardboard, mixed paper, and beverage containers from the waste stream. The operations recycling plan would also include specific information on internal policy including information on: materials to be recycled, locations of enclosures and size of containers for recycling and trash, an education plan that states how employees will be trained including signage for enclosures, identification of medical waste, hazardous waste, bio-hazardous waste, and universal waste items. The municipal code sets guidelines for the recycling capacity facilities must provide. According to the parameters set by the City, the SMCS project would be required to provide approximately 8.7 cubic yards of recycling volume, according to their proposed land uses.

For general hospital/medical clinic land uses, no recycling volume requirement is set. Nonetheless, office and commercial land uses comprise a significant percentage of the overall SMCS project and, thus, the recycling volume guidelines would significantly reduce demand placed on solid waste haulers. As shown in Table 6.8-7, in 2003, Sutter recycled 236,494 lbs, which totaled approximately 12 percent of all waste generated. Assuming a 10 percent diversion rate at the new WCC, solid waste generated at the hospital drops to approximately 3,900 lbs/day.

With no recycling included, the SMCS project would generate approximately 1,162 tons of solid waste per year. This would increase Sacramento's total solid waste disposal by less than 0.3 percent. With implementation of required recycling programs, the increase in the solid waste stream would be even less. Recycling programs can reduce the amount of solid waste by 50 to 80 percent, depending on how aggressive the program is.⁶⁶ With conservative diversion rate estimates (10 percent for hospital use, 30 percent for all other uses), solid waste generated by the SMCS project would be reduced to approximately 5,300 lbs/day (2.7 tons/day).

Disposal of solid waste from the jurisdiction of the City of Sacramento generally does not impact capacity at receiving landfills because the waste is widely distributed among a variety of

66 Michael Root, Program Analyst, City of Sacramento, Utilities Department, personal communication, January 21, 2005.

landfills,⁶⁷ as described in the setting section. Compliance with the City recycling code would ensure implementation of the SMCS project would not require the expansion or construction of landfills; therefore, this impact would be considered **less than significant**.

Theatre

The proposed Children’s Theatre of California lies within the boundaries of the SMCS project area. According to estimated generation rates provided by the CIWMB, service establishments such as theatres can generate up to 3.12 lbs of solid waste per 100 sf per day (lbs/sf/day). According to this rate, the proposed 50,000 square foot Children’s Theatre could generate up to about 1,560 lbs/day (or 285 tons per year) of additional solid waste.

It is uncertain at this time which service provider, and thus, which landfill would be used by the theatre. However, as discussed above, the project would be required to implement recycling programs in compliance with City code. Again, assuming a diversion rate of 30 percent, the waste generated would drop to about 1,092 lbs/day. It is anticipated that the solid waste would be delivered to a landfill with adequate space to accommodate the waste. Impacts would, therefore, be considered **less than significant**.

Mitigation Measure

None required.

Impact 6.8-10: The SMCS project could substantially increase the production of recyclable solid waste in excess of available materials recovery facility (MRF) capacity.		
	SMCS Project	Theatre
Significance Before Mitigation	Less than Significant	Less than Significant
Mitigation Measures	None required	None required
Significance After Mitigation	N/A	N/A

SMCS Project

It was determined in Impact 6.8-8 that solid waste facilities serving the project area have adequate capacity to meet the project demands. The Sacramento Recycling and Transfer Station currently accepts an average of 2,000 tons per day, and is permitted to process up to 3,000 tons/day. As discussed above, the project would generate approximately 3.2 tons/day of solid waste. The SMCS project would constitute less than 0.2 percent of the materials received daily at the MRF. The current operating capacity of the Sacramento Recycling and Transfer Station would accommodate the demand associated with the SMCS project; therefore, impacts are considered **less than significant**.

⁶⁷ Michael Root, Program Analyst, City of Sacramento, Utilities Department, personal communication, January 21, 2005.

Theatre

The Children's Theatre of California would generate less than one ton of solid waste each day. This would represent approximately 0.04 percent of the daily throughput at the Sacramento Recycling and Transfer Station. The MRF would have adequate capacity to accommodate solid waste generated by the theatre; therefore, impacts are, considered ***less than significant***.

Mitigation Measure

None required.

Impact 6.8-11: The SMCS project could generate more than 500 tons of solid waste per year.		
	SMCS Project	Theatre
Significance Before Mitigation	Significant	Less than Significant
Mitigation Measures	None available	None required
Significance After Mitigation	Significant and Unavoidable	N/A

SMCS Project

The SMCS project would generate more than 500 tons of solid waste per year. Assuming a 30 percent recycling rate for the office, residential, and commercial uses and a 10 percent recycling rate for the hospital, the SMCS project could generate over 1,000 tons/year. This would be considered a ***significant impact***.

Theatre

Construction of the Children's Theatre of California, assuming a 30 percent rate of recycling, would produce approximately 200 tons of solid waste per year. This is less than the threshold 500 tons, resulting in a ***less-than-significant impact***.

Mitigation Measure

No additional mitigation measures would reduce the solid waste generated by the SMCS project to less than 500 tons/year; therefore, this impact would remain ***significant and unavoidable***.

CUMULATIVE IMPACTS

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 on 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.

Impact 6.8-12: The SMCS project, in combination with other development, could substantially increase the production of solid waste in excess of available distribution or landfill and MRF capacity without also including provisions to adequately accommodate the increased production.

	SMCS Project	Theatre
Significance Before Mitigation	Less than Significant	Less than Significant
Mitigation Measures	None required	None required
Significance After Mitigation	N/A	N/A

SMCS Project and Theatre

As addressed in the setting section, 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 for waste collected by the City of Sacramento, has no expected closure date and 32.5 million cubic yards of capacity. Anderson Landfill, which would receive medical waste generated in the Sacramento region, is not expected to reach capacity for another 20 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 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 indicate that the project's contribution on a cumulative level would not be considered significant. Therefore, the SMCS project would result in a ***less-than-significant cumulative impact***.

Mitigation Measure

None required.

Chapter 7 Trinity Cathedral Project

7.1 Aesthetics

7.1 Aesthetics

INTRODUCTION

This section provides a description of existing visual conditions in the Trinity Cathedral project area and describes changes to those conditions that would result from implementation of the Trinity Cathedral project. Cumulative effects of the Trinity Cathedral project are evaluated in conjunction with other potential development in the south Midtown area.

As discussed in the Initial Study (see Appendix E), the project site is not located in a scenic vista area or within a State scenic highway; therefore, the 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 issues are not addressed in this section of the EIR.

Comments received in response to the January 2004 NOP included general concerns about the project's design elements and a desire that the project be sensitive to the neighboring historic districts and those who live in the neighborhoods. Specific concerns were also raised regarding the mass of the Trinity project, its compatibility with the character of the neighborhood, and glare. These issues are addressed in this section of the EIR.

Information to prepare this section was obtained from a visual inspection and site visit, review of the City of Sacramento General Plan, Central City Community Plan, Central City Neighborhood Design Guidelines, Alhambra Corridor Design Guidelines, and City Code, as well as a review of project-specific material provided by the project applicant.

ENVIRONMENTAL SETTING

Regional Setting

The Trinity Cathedral project site is located within the Central City Community Plan (CCCP) area in the south Midtown area of the City of Sacramento. The CCCP boundary encompasses the area lying between the Sacramento River on the west, the American River on the north, Capital City Freeway and 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. Please see Figure 4-3 in Chapter 4.0, Land Use.

Site Characteristics

South Midtown is characterized by single- and multi-family residential uses, small-scale office buildings, schools, parks and churches. The Midtown portion of Sacramento is an established neighborhood with mature trees and older buildings, including many residences constructed in the late 1800s and early 1900s.

The Trinity Cathedral project site is located at the southwest corner of Capitol Avenue and 27th Street north of the alley (Trinity Cathedral Alley). This portion of South Midtown is primarily distinguished by one- to three-story residential buildings, including some buildings that are currently used for office space. As discussed in Section 6.1, this area also includes Sutter General Hospital and the Buhler Building, as well as other medical offices.

Views from the Project Site

Figure 7.1-1 identifies the locations from which photographs for this section were taken. Views from the Trinity Cathedral project site consist of the surrounding developed City blocks. Capitol Avenue and N Street between 26th and 27th Streets, as well as 26th Street between Capitol and N Street, are distinguished by residential and office uses (see View 1 (Capitol Avenue) and View 2 (N Street) on Figure 7.1-2). The east side of 27th Street, north of Capitol Avenue consists of a six-story senior housing project (see Views 3 and 4 on Figure 7.1-3). The east side of 27th Street south of Capitol Avenue consists of residential units and a surface parking lot (see Views 5 and 6, respectively, on Figure 7.1-4).

Views to the south of the Trinity Cathedral project site include the St. Luke's parking structure, south of the alleyway between 26th and 27th Streets (see View 7 on Figure 7.1-5). The parking garage is a three-story concrete structure spanning most of the half-block on N Street. Existing two-story residential units border the east and west sides of the parking structure. Views to the southeast across 27th Street include an existing surface parking lot and landscaping.

Views to the west of the Trinity Cathedral project site include the existing St. Luke's Medical Office Building, a four-story 70,000-square-foot office building (see View 8 on Figure 7.1-5). Views farther to the west, across 26th Street views consist of residential uses, sidewalks and mature street trees along Capitol Avenue.

Views onto the Project Site

Views onto the proposed Trinity Cathedral project site consist of the existing Trinity Cathedral building and associated multi-purpose building (see Views 9 and 10 on Figure 7.1-6). The existing Cathedral height is approximately 28 feet. Trinity Cathedral is a brick building with a steeple roof and a spire located in the center of the building. Stained-glass windows are visible along the east side of the building.

The view from the north onto the project site includes the main entrance of the Cathedral that fronts Capitol Avenue and the adjacent multi-purpose building. The Cathedral entrance area includes a paved sidewalk in front of brick steps leading to the Cathedral's entrance. The view from the northern corner of Capitol Avenue and 27th Street also includes the existing two-story residential units south of the alleyway, which are adjacent to the property line on 27th and N Streets.

The view from the east onto the project site consists of just the Cathedral itself. The Cathedral has an entrance on the east side fronting 27th Street, and this side of the building includes mature landscaping, including grass, mature street trees, a City sidewalk and City street trees. The view from the immediate south includes the backsides of the Cathedral and the multi-purpose building from the alleyway. Views from farther south are obstructed by the three-story St. Luke's parking structure.

Existing Adjacent Uses

- 01. Sutter's Fort
- 02. Old Tavern
- 03. Pioneer Church
- 04. Senior Housing
- 05. Cafe Bernardo
- 06. Monkey Bar
- 07. Capitol Physical Therapy
- 08. Regional Transit Bus Service Center
- 09. Trinity Cathedral
- 10. Trinity Cathedral Administrative Annex Building

LEGEND

Building Names

View Points

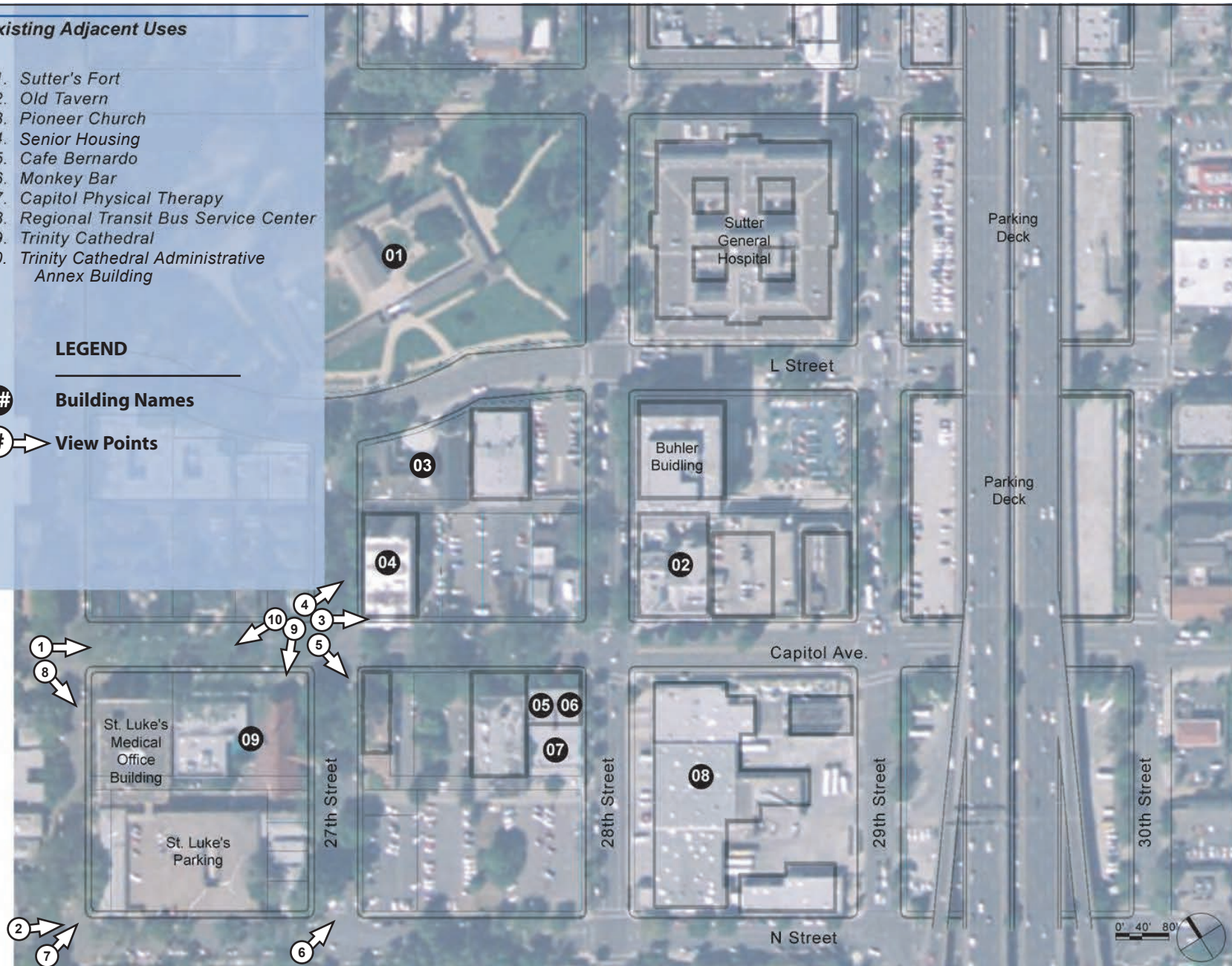


FIGURE 7.1-1
Viewpoint Map



View 1: Capitol Avenue, Looking East from 26th Street



View 2: N Street, Looking East from 26th Street

FIGURE 7.1-2
Photo Views 1 and 2



View 3: Capitol Avenue, Looking East from 27th Street



View 4: Senior Housing at Capitol Avenue & 27th Street



10828-02

FIGURE 7.1-3
Photo Views 3 and 4

Source: EIP Associates 2004

Sutter Medical Center, Sacramento





View 5: 27th Street, Looking South from Capitol Avenue



View 6: Surface Parking Lot, Looking Northeast at N and 27th Streets

FIGURE 7.1-4
Photo Views 5 and 6



View 7: Existing Residential and St. Luke's Parking from N and 26th Streets



View 8: West side of St. Luke's Medical Office Building from 26th Street

FIGURE 7.1-5
Photo Views 7 and 8



View 9: Trinity Cathedral, Looking south from Capitol Avenue and 27th Street



View 10: Trinity Cathedral Administrative Annex Building and St. Luke's Medical Office Building looking west on Capitol Avenue

FIGURE 7.1-6
Photo Views 9 and 10

The view onto the project site from the west includes the two-story administrative office building adjacent to St. Luke's Medical Office Building. The multi-purpose building is a two-story brick structure fronting Capitol Avenue, with the second story slightly stepped back. The building site includes a small landscaped strip, the city sidewalk, and mature street trees along Capitol Avenue. St. Luke's Medical Office Building is a four-story building on the corner of 26th Street and Capitol Avenue. Only a small portion of Trinity Cathedral is visible from the west.

REGULATORY SETTING

Federal and State

There are no federal or State regulations regarding aesthetics that are applicable to the Trinity Cathedral project.

Local

City of Sacramento General Plan

The City of Sacramento General Plan is the City's long-range planning document and serves as a 20-year policy guide for physical and economic growth and renewal of the City. The City is currently in the process of updating its General Plan. The last comprehensive update was completed in 1988 and covered a planning period through 2006. The existing General Plan goals and policies related to aesthetics in residential areas are listed below. The General Plan does not include policies specific to places of worship.

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.

Central City Community Plan

The CCCP was adopted by the City of Sacramento in 1980 and is a guide for the public and private development and revitalization of the Central City area. 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. The following goals of the CCCP are applicable to this Aesthetics section of this EIR.

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.

City of Sacramento City Code

Title 17 of the City of Sacramento City Code is the City's zoning code. The purpose of the zoning code is to regulate the use of land, buildings, or other structures for residences, commerce, industry and other uses required by the community. The zoning code designates several Special Planning Districts (SPD) within City of Sacramento. The SPD designation means that the property is subject to the requirements set forth in the City Code and a SPD ordinance adopted specifically for the property. The following City Code chapters are applicable to this section of the EIR.

Title 15: Buildings and Construction

Chapter 15.148 Signs

15.148.110 Residential zones.

Within any R residential zone, signs or nameplates are permitted as follows:

- C. For churches, one identification sign, which may be attached or detached, not exceeding twenty-four (24) square feet in area for each street frontage. In addition, churches may have one bulletin board, not exceeding eight square feet in area. The square footage totals shall not be combined into one sign. A detached church identification sign shall be a monument type sign. The height of the monument sign shall not exceed six feet. The church identification sign may be placed in the landscaped setback area, however, it must be located farther than ten (10) feet from the public right-of-way.

Title 17: Zoning

Chapter 17.104 Alhambra Corridor Special Planning District

The goals of the Alhambra Corridor SPD are as follows:

- Maintain and improve the character, quality and vitality of individual neighborhoods.
- Maintain the diverse character and housing opportunities provided in these urban neighborhoods.
- Maintain the neighborhood character of existing commercial neighborhoods while allowing for limited office to serve the medical complex in this area.

Section 17.104.020 Alhambra Corridor special regulations and restrictions

F. Residential Preservation Transition Buffer Area Zone

1. General Rule. Except as provided below, any development in any zone that is located within three hundred (300) feet of a residential zone (measured from the street centerline) shall not exceed thirty-five (35) feet in height. The intent of this restriction is to establish a buffer zone to protect residential neighborhoods from visual intrusion by new development that is out of scale with the adjacent residential neighborhood.
2. Exception. The planning commission may approve a special permit for a development between J Street and S Street for additional height provided that the height may not exceed the limits established by Chapter 17.60 of this title. To approve this special permit, the planning commission must find that, in addition to meeting the requirements of Chapter 17.212 of this title, the development will not be out of scale with the adjacent residential neighborhood. Examples of instances where the intent of the buffer zone may be maintained while allowing additional height would include, but are not limited to the following:
 - a. Less than fifty (50) percent of the parcel upon which the building is located within the three hundred (300) foot transition buffer area, and the entire portion of the building for which the additional height is requested is located at least two hundred (200) feet from residentially zoned property;
 - b. Design features that reduce the walled effect on adjacent smaller scaled residential development are included; and
 - c. Development is compatible in height and scale with adjacent residential neighborhoods.

Central City Neighborhood Design Guidelines

The Central City Neighborhood Design Guidelines (Design Guidelines) are part of the City's Design Review Program and are intended to provide design guidance for projects in a way that respects and enhances existing neighborhoods and ensure that building design is compatible with its surroundings in terms of scale, mass, building patterns and details. The Design Guidelines articulate an urban design vision for Central City neighborhoods and corridors to be used by neighborhood residents, City staff, the Design Review and Preservation Board, and City Planning Commission in the review of proposals for new development, building additions,

alterations and public improvements within the Central City Design Review District (bounded by the Sacramento River, the UP mainline, Alhambra Boulevard, and Broadway). The project site is located within the Fremont School subdistrict of the Central City Neighborhood Design Guidelines. The Fremont School subdistrict is roughly bounded by J Street on the north, the Capital City Freeway on the east, Q Street on the south, and 21st Street on the west.

Alhambra Corridor Design Guidelines

The Alhambra Corridor Design Guidelines (Alhambra Design Guidelines) were developed by the City to address the form and function of the Corridor as a whole, as well as each neighborhood in the corridor. The guidelines were intended to ensure the proper relationship and connection with surrounding development between neighborhoods in the Corridor, East Sacramento and Midtown. The Trinity Cathedral project site is located within the Corridor and would include the demolition of existing buildings and construction of new buildings on Capitol Avenue. Within the Corridor, the Midtown portion contains a variety of styles. According to the Alhambra Design Guidelines, landscaping is an important design element of any building, and can be used to soften the building edge and, to a degree, offset the scale of a building. Appropriate landscaping can also help define new and existing pedestrian paths as well as provide a canopy for the pedestrian.

The following provisions and tree species from the landscape element of the Alhambra Design Guidelines have been identified for use in the Corridor to ensure a healthy environment for landscape features and corridors.

1. Tree Planting Standards

Where there are existing trees present, three planting areas should provide a minimum of 10 feet of unexcavated or minimally excavated soils area radiating from the curbside of sidewalk directly behind the tree. Soil depth shall be a minimum of 4 feet from the surface unless otherwise stated. This area shall not be subject to excavation greater than 12". Where there are no existing trees, tree planting areas should provide a minimum of 10 feet of soil area radiating from the curbside of sidewalk directly behind the tree planting location with a minimum depth of 4 feet from the surface unless otherwise stated. Street trees will be required.

Ten-foot setback for the third story and above (10' measured from back edge of sidewalk) in addition to an 8' planting strip and sidewalk width.

Encourage park strips in back of curb between the sidewalk and street, and encourage large shade trees.

IMPACTS AND MITIGATION MEASURES

Methods of Analysis

A description of the Trinity Cathedral project site was constructed from visits to the project site in March 2004. The proposed site plan for the project was 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 project site.

Potential impacts of the proposed Trinity Cathedral project are analyzed in relation to existing conditions, which are primarily urban conditions consisting of a mixture of residential, business, and public uses. The positive or negative value attached to changes in visual character is largely subjective. This EIR does not seek to assign a judgment of “good” or “bad” change; rather, it identifies any substantive changes as significant.

The visual effects of construction activities are not evaluated in this section because they would be intermittent and temporary. The entire site is not anticipated to be developed in a single construction season, and views of construction activities would vary depending on where such activities would be focused.

Standards of Significance

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

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

Impact 7.1-1: Implementation of the Trinity Cathedral project could be visually incompatible with the mass, scale, or character of existing development in the vicinity of the project area.	
Significance before Mitigation	Less than Significant
Mitigation Measures	None required
Significance after Mitigation	N/A

In determining the final project design, Trinity Cathedral evaluated a number of different design options. The various design options considered, but dismissed from further consideration are included in Chapter 8, Alternatives. Ultimately, the Cathedral vestry selected the final design based on input from the City and neighbors.

Construction of the Trinity Cathedral project would replace views of the existing Cathedral building and adjacent multi-purpose building with a new larger Cathedral and new multi-purpose space. The project would be constructed in two phases, Phase 1 would include demolition of the existing 8,057 square foot (sf) cathedral building to provide for a new three-story, 37,100 sf, 1,000-seat Cathedral worship facility. Similar to the existing cathedral, the Trinity Cathedral project would include entrances from 27th Street and Capitol Avenue. A smaller third entrance would provide access to the main circulation corridor from Trinity Cathedral Lane (alley). The second and third stories of the Cathedral would provide worship space seating and other facilities. Administrative offices would be provided on the ground floor along with a Chapel for small services and prayer seating up to 100, a nursery room, restrooms and ancillary facilities.

The scale of the Cathedral building and the exterior building architecture designed to be complementary to the mid-sized office and apartment buildings in the neighborhood and the larger scale of the seven-story senior housing project located at the northeast corner of Capitol Avenue and 27th Street, as well as the new buildings to the east proposed by the Children's Theatre of California and the SMCS project (see Section 6.1 of this EIR for an analysis of the aesthetics associated with the SMCS project). The exterior envelope at the street level would be in context with the existing and mid-sized buildings at a 45 to 55-foot height to the building cornice line. The exterior building walls would be between 60 feet and 85 feet in height. A cross tower element may have a roof peak up to 120-feet in height and cross symbol up to 155-feet, as shown in Figures 7.1-7 and 7.1-8, which show the conceptual massing of the building. Exterior materials would establish a uniform and coordinated palette and may include stone or masonry veneers, plaster panels, stone sculptural panels, and glass with stained glass elements.

One monument sign would be located at the corner of 27th Street and Capitol Avenue. It is proposed to be incorporated into a water fountain feature. The sign would be a gray limestone to match the building base, approximately 8 feet long and 3 feet high, with the name of the Cathedral in bronze letters. It would be illuminated by landscape up-lights. In addition, smaller 2.5-foot by 5-foot wall-mounted signs would be proposed at the two main entrances into the Cathedral building. Several banner poles are also proposed which would allow 3-foot wide by 24-foot long banners to be mounted on the building.

Pedestrian improvements include new sidewalks around the Cathedral along with enhanced areas of specialty paving at the main entrances into the Cathedral and raised planters designed to compliment the contours of the new Cathedral design. The Trinity Cathedral project also proposes the narrowing of 27th Street between Capitol Avenue and Trinity Cathedral to create a pedestrian-friendly environment (see Figure 7.1-9). The narrowing of 27th Street may include wider sidewalks, decorative paving, and landscaping.

The second phase of the Trinity Cathedral project includes demolition of the existing two-story multi-purpose space and construction of a four-story, 30,750 sf multi-purpose hall, meeting rooms, and administrative offices. The main entrances would be off of Capitol Avenue, 27th Street, and Trinity Cathedral Lane (alley). The new hall and offices would replace views of a two-story brick building with a four-story building adjacent to the new Cathedral and the existing four-story St. Luke's Medical Office Building. Although the new building would be taller than the existing structure, the size and mass would be consistent with many of the adjacent uses. The new multi-purpose building would be 60-feet tall, as shown in Figure 2-25. Because of the existing St. Luke's office building and parking structure, views onto the Trinity Cathedral site from the north, west and south would consist primarily of the new buildings, which would be different from existing views. As part of the SMCS project, the existing St. Luke's Medical Office Building would be demolished, and a new three-story medical office building would be built on the same site. The Future Medical Office Building would be rebuilt on a smaller scale than the existing building, approximately 35,000 sf versus the existing 70,000 sf, and would be no taller than four stories. The proposed Trinity Cathedral project would not obstruct long-distance views because of the size and mass of St. Luke's medical office building and garage as well as the proposed Future Medical Office Building and housing components. Therefore, this would be considered a *less-than-significant impact*.

Mitigation Measures

None required.

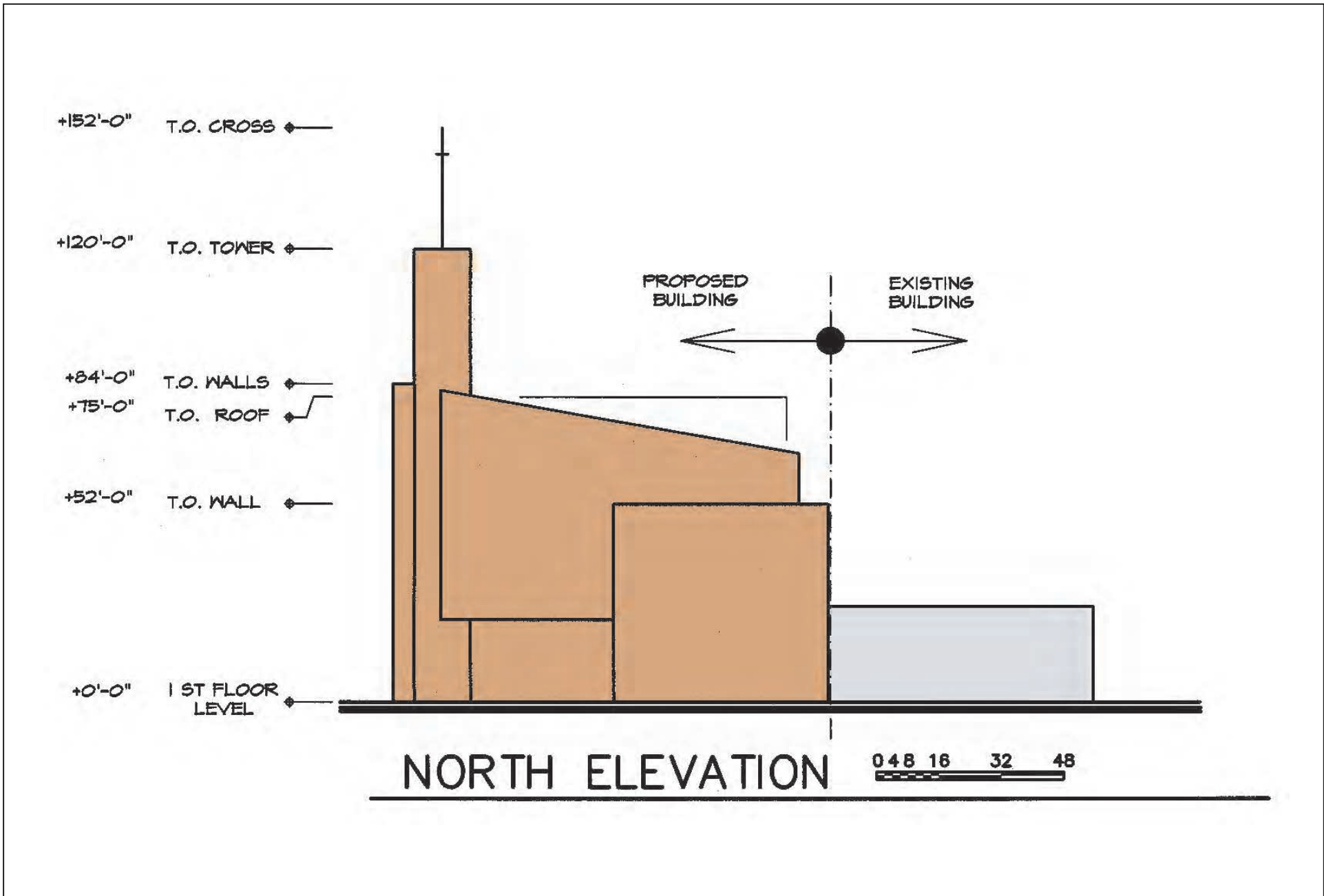


FIGURE 7.1-7
 Trinity Cathedral, North Elevation

Not to Scale



+152'-0" T.O. CROSS

+120'-0" T.O. TOWER

+84'-0" T.O. WALLS

+75'-0" T.O. ROOF

+52'-0" T.O. WALL

+0'-0" 1 ST FLOOR LEVEL

PROPOSED BUILDING PHASE I

PROPOSED BUILDING PHASE II

T.O. WALL +60'-0"

NORTH ELEVATION PHASE II

0 4 8 16 32 48

FIGURE 7.1-8
Trinity Cathedral, North Elevation Showing New Administrative Space

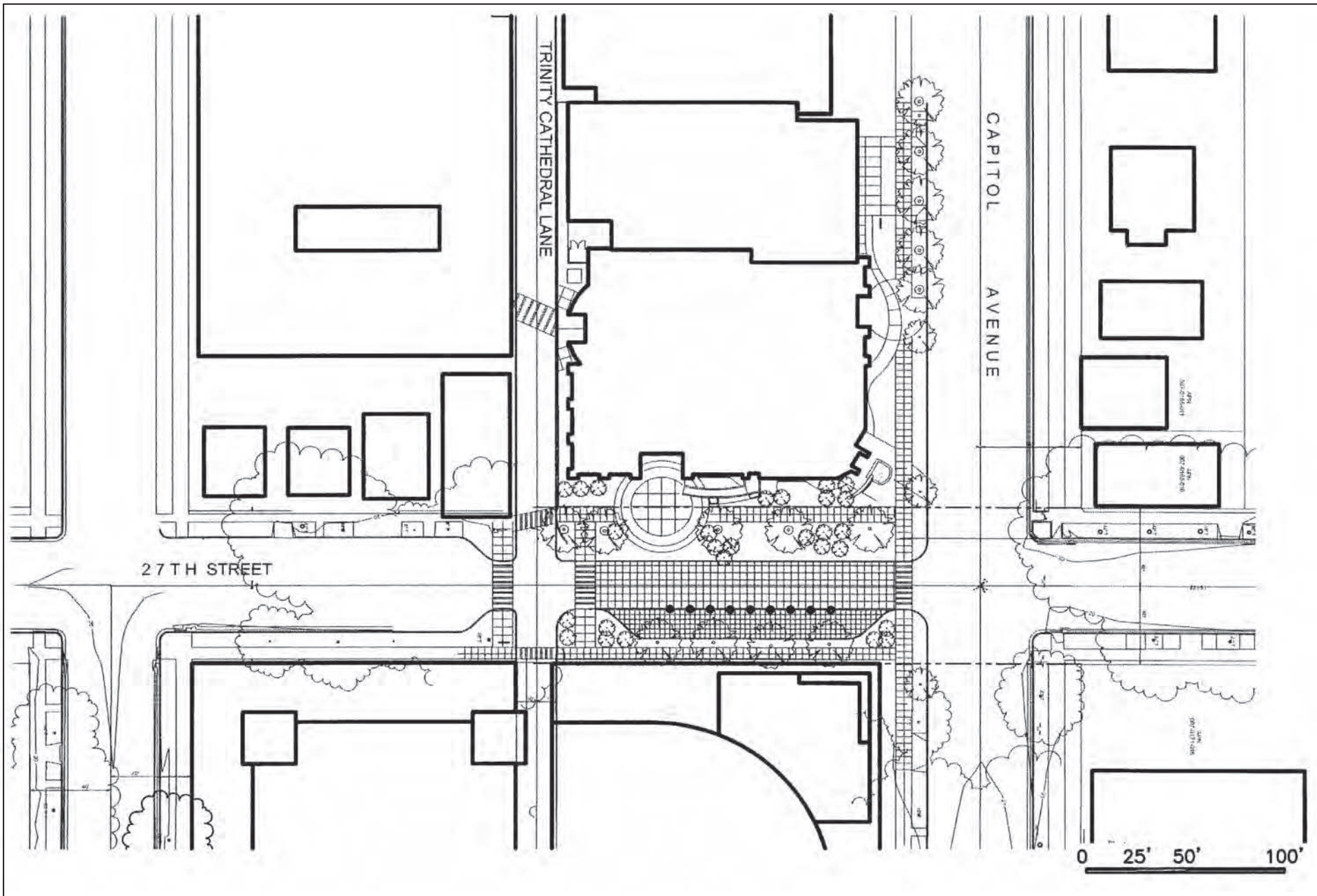


FIGURE 7.1-9
Conceptual Site Plan for 27th Street



10828-02

Source: WMG Architects 2005

Sutter Medical Center, Sacramento



Impact 7.1-2: Implementation of the Trinity Cathedral project could create light or glare that could affect adjacent properties.	
Significance before Mitigation	Less than Significant
Mitigation Measures	Recommended Mitigation Measure 7.1-1
Significance after Mitigation	N/A

Lighting for the proposed Trinity Cathedral project would be a combination of accent and security downlights at the entrance and structure bays, streetlights, and uplighting in the landscape areas to illuminate the Cathedral walls at 27th Street and Capitol Avenue.

Sidewalk lighting would include pedestrian scale acorn style lights similar to what is present throughout the Central City. The existing stained glass windows in the Cathedral, along with the existing tile mosaic over the Capitol Avenue entrance would be preserved and incorporated into the new Cathedral Building. Many of the existing stained glass windows would be reused and remain at street level in the new Cathedral.

The exterior of the proposed project buildings would be varied in scale and mass, as shown in Figures 2-23 and 2-25, and would not create large surfaces that would result in substantial glare to pedestrian and drivers on adjacent roads. The east and west sides of the new cathedral front 27th Street and Capitol Avenue. These facades would include entrances to the cathedral and would be broken up with a variety of architectural features and contours. The exterior building materials would not include large areas of glass or metallic surfaces that could result in the creation of glare.

The project area currently includes building lights for the existing cathedral and multi-purpose building, as well as lighting for the adjacent St. Luke’s Medical Office building. Building lights consist mainly of mounted, shielded lighting on the buildings’ exterior walls along with accent lights, street lights, and low-level building uplighting. Based on the type of lighting proposed, the Trinity Cathedral project would not introduce substantial new sources of light or glare to the project area and this would be a ***less-than-significant impact***.

Mitigation Measures

The proposed Trinity Cathedral project would result in a *less-than-significant* light and glare impact. However, the following mitigation measure is recommended to ensure the project’s lighting and exterior materials do not contribute to new impacts.

- 7.1-1 (a) *The configuration of exterior light fixtures shall emphasize close spacing and lower intensity light that is directed downward in order to minimize glare on adjacent uses.*
- (b) *Highly reflective mirrored glass or metal walls shall be avoided as a primary building material for facades.*

Impact 7.1-3: Implementation of the Trinity Cathedral project could conflict with applicable City policies or design guidelines.	
Significance before Mitigation	Less than Significant
Mitigation Measures	None required
Significance after Mitigation	N/A

This impact discussion examines the proposed Trinity Cathedral project’s consistency with City policies and design guidelines. This consistency analysis is intended to provide the reader with a general overview of the guidelines set forth in the City’s City Code and General Plan, the Central City Community Plan, the Central City Neighborhood Design Guidelines and the Alhambra Corridor Design Guidelines and to explain whether the project is essentially in harmony with the overall intent of these guidelines. It is within the purview of the City to interpret its own documents and to ultimately decide if the project is consistent or inconsistent with any adopted design guidelines.

The proposed Trinity Cathedral project is subject to the Central City Neighborhood and Alhambra Corridor Design Guidelines. As discussed in the Regulatory Setting, the Central City Neighborhood Design Guidelines are intended to articulate an urban design vision for Central City neighborhoods and corridors. The Alhambra Corridor Design Guidelines were intended to ensure the proper relationship and connection with surrounding development between neighborhoods in the Alhambra Corridor, East Sacramento and Midtown.

The Alhambra Corridor Design Guidelines include generalized goals and policies for residential, mixed-use, commercial, and industrial neighborhoods. The Guidelines also include a landscape element and address the Neighborhood Preservation Transition Buffer Areas. In general, the Buffer Area applies to any development in any zone that is located within 300 feet of a residential zone (measured from the street centerline). The Buffer Areas require a 35-foot height limit to protect residential neighborhoods from visual intrusion by new development. The proposed Trinity Cathedral project is located in one of the Buffer Areas and is zoned Residential Office and designated High Density Residential in the City of Sacramento General Plan. The proposed Trinity Cathedral would be built at a height up to 120 feet for the proposed building peak, and up to 155 feet to the top of the cross on the building. The project would require a special permit for height.

The mixed-use neighborhood policies in the Alhambra Corridor Design Guidelines address commercial buildings and recommend that building elevations and exterior building material compliment the existing streetscape and existing neighborhood. The Landscape Element of the Alhambra Corridor Guidelines include tree planting standards and recommend a ten-foot setback for the third story and above (10 feet measured from back edge of sidewalk) in addition to an eight-foot planting strip and sidewalk width. The existing building elevations in the project area range from one-story residential and office uses to the four-story St. Luke’s Medical Office building and the seven-story senior housing project on Capitol Avenue. The Trinity Cathedral project would be consistent with existing building elevations in the neighborhood. The project would not remove existing street trees on 27th Street and Capitol Avenue unless the City Arborist determines that any trees are unhealthy and need to be removed. The project would include landscaping elements consistent with the surrounding area. The City’s Design Review and Preservation Board would review the final design plans for consistency with the Alhambra Corridor Design Guidelines.

The Central City Neighborhood Design Guidelines include design principles that represent the prescriptive or mandatory elements of project design that are used by the City's Design Review and Preservation Board and City staff to determine project compliance with the Design Guidelines. Design guidelines are suggested approaches to accomplish the design principles. The Central City Guidelines project-design guidelines address the following design subjects that are relevant to the Trinity Cathedral project: site planning; site design; building character and quality; lighting; signage; equipment, utilities and service access; energy efficiency; modifications to existing structures; special use structures; alley development; accessory structures; and flood-resistant design. As described above, the Trinity Cathedral project would include one 8-foot by 3-foot monument sign that would be consistent with the City Code policy for signs in residential zones.

The special use criteria in the Central City Neighborhood Design Guidelines include a principle that states: "Design special uses to respect the design context of the neighborhood and enhance the streetscape" (page 3-55). Guideline 3.J.1.4 addresses places of worship and states the following:

Public buildings should have entrances that are inviting and clearly defined. They should be located along commercial streets, integrated into the streetscape, and maintain the continuity of store frontages. These facilities should be designed to create a sense of permanence and civic presence. Use of durable and noble materials is encouraged.

The proposed Trinity Cathedral project would include entrances from 27th Street and Capitol Avenue and would include landscaping that is consistent with the existing streetscape. The City Design Review and Preservation Board would review the final Trinity Cathedral design plans for consistency with the Central City Neighborhood Design Guidelines. The City would also determine whether or not to allow construction of building elements that exceed the height limitations of the Neighborhood Preservation Transition Buffer Areas. The design review process would ensure that the proposed new Cathedral and adjacent space would be of high quality and would not substantially alter or degrade the existing character of the project area. Because the Trinity Cathedral design and scale are anticipated to be in context with existing surrounding uses, and the project design would be subject to approval by the City's Design Review and Preservation Board, this would be considered a *less-than-significant impact*.

Mitigation Measure

None required.

CUMULATIVE IMPACTS

The cumulative context for the evaluation of cumulative impacts on aesthetics is the surrounding area within the viewshed of the project site. 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 generated by the Trinity Cathedral project.

Impact 7.1-4: Implementation of the Trinity Cathedral project, in combination with cumulative development within the viewshed of the project site, could alter the visual character of the Central City.	
Significance before Mitigation	Less than Significant
Mitigation Measures	None required
Significance after Mitigation	N/A

The Central City Neighborhood and the Alhambra Corridor area currently consist of built-out urban and residential neighborhoods. Future construction in the area most likely would consist of on-going City of Sacramento redevelopment and roadway projects. Future projects completed by the City, as well as private projects in the area, may change the visual character of the Central City area. The cumulative change to the visual character of the area would be a potentially significant impact.

As discussed above, development of the proposed Trinity Cathedral project would result in the demolition of the existing cathedral and adjacent multi-purpose space buildings and the construction of a new cathedral and multi-purpose hall on the same site. The new cathedral, hall and administrative offices would be on a larger scale to accommodate the needs of the growing congregation. The project site is surrounded by predominately office and residential uses, with the four-story St. Luke's Medical Office Building to the immediate west. As part of the SMCS Project, the adjacent building would be demolished and a new three-story medical office building would be constructed, on a smaller scale than the existing building. Because the Trinity Cathedral project would replace an existing church with a similar facility, and because the project area is currently developed with a mixture of uses, the project's contribution to a potentially significant cumulative aesthetic impact would be considered *less than significant*.

Mitigation Measures

None required.

Impact 7.1-5: Implementation of the Trinity Cathedral project, in combination with cumulative development within the viewshed of the project site, could create light or glare that could affect adjacent properties.	
Significance before Mitigation	Less than Significant
Mitigation Measures	None required
Significance after Mitigation	N/A

As stated above, because the Central City and Alhambra Corridor areas currently consist of built-out urban and residential neighborhoods, future construction in the areas would most likely be on-going City of Sacramento redevelopment and roadway projects. The areas within the viewshed of the Trinity Cathedral project currently contain small to mid-sized office and residential buildings and associated lighting. The project area also contains existing city street lights, and lighting for commercial and public uses. Future redevelopment construction in the area would either replace existing buildings with new ones, such as the proposed new Future Medical Office Building on the site of the St. Luke's Medical Office Building as part of the SMCS project. It is not anticipated that future projects in combination with the Trinity Cathedral project

would contribute significant new sources of light or glare. In addition, future projects would be reviewed by the City's Design Review and Preservation Board for consistency with the City's design guidelines, including site lighting guidelines. Therefore, the project's contribution to a cumulative impact from light and glare would be ***less than significant***.

Mitigation Measures

None required.

7.2 Air Quality

7.2 Air Quality

INTRODUCTION

This section addresses project impacts associated with implementation of the Trinity Cathedral project on ambient air quality and the potential for exposure of people (especially sensitive individuals who consist of children, elderly, acutely ill, and chronically ill) to unhealthy pollutant concentrations. Air pollutants of concern for Sacramento County include ozone (O₃), carbon monoxide (CO), and particulate matter 10 microns or less in size (PM₁₀). This section analyzes the type and quantity of emissions that would be generated by construction and operation of the Trinity Cathedral project.

A Notice of Preparation (NOP) was circulated for the project in January 2004. Comments received included concerns about dust and particulates; construction-related air quality issues; and a request to include mitigation provided by the Sacramento Metropolitan Air Quality Management District; and a request that a 15 percent reduction in emissions should be incorporated into the project. All of the comments identified will be addressed in this section of the EIR.

Sources reviewed for this section include the Sacramento Air Quality Management District Guide to Air Quality Assessment in Sacramento County and the California Air Resources Board website.

ENVIRONMENTAL SETTING

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

The Trinity Cathedral project site is located within the SMCS project area; therefore, the climate and topography will be identical to that discussed as part of the SMCS project in Section 6.2 of this document. In addition, the presence of criteria air pollutants, existing attainment status of pollutants of concern, and presence of toxic air contaminants are all the same as what was discussed in the environmental setting included in Section 6.2. Please see Section 6.2 for a detailed discussion of the environmental setting.

Only those issues that are unique to the Trinity Cathedral project or the Trinity Cathedral project site will be discussed in this section.

Sensitive Receptors

Trinity Cathedral is located in close proximity to the existing SMCS facilities, Sutter General Hospital and the Buhler Building. In addition, the Trinity Cathedral project is located in close proximity to the Montessori school located in Pioneer Church, and senior housing on Capitol Avenue (see Figure 2-1 in Chapter 2, Project Description). Consequently, the discussion of sensitive receptors in Section 6.2 is also applicable for the Trinity Cathedral project.

REGULATORY SETTING

The Trinity Cathedral project and the SMCS project are both located in the City of Sacramento and share the same air basin. The two projects would be regulated by the same agencies, so the regulatory setting provided in Section 6.2 for the SMCS project would also apply for the Trinity Cathedral project. Air quality in the SCMS project area is regulated at the federal level by the Environmental Protection Agency (EPA), at the State level by the California Air Resources Board (CARB), and at the local level by the Sacramento Metropolitan Air Quality Management District (SMAQMD). More detailed explanations of the functions and jurisdictions of each agency can be found in the regulatory setting discussion in Section 6.2 of this document. Applicable major rules that would apply to the project can also be found in Section 6.2.

IMPACTS AND MITIGATION MEASURES

Methods of Analysis

The analysis for the Trinity Cathedral project is very similar to the analysis conducted for the SMCS project, described in Section 6.2. Air pollution generated by project construction and operational activities associated with the project were evaluated and compared to SMAQMD thresholds of significance. Peak daily construction emissions were estimated using the URBEMIS 2002 emissions model. Operational emissions were also evaluated using URBEMIS 2002 and trip generation rates used in the traffic study. Increases in CO concentrations were evaluated using the Bay Area Air Quality Management District's simplified CALINE4 screening procedure. See Section 6.2 for more details on construction and operational analysis methods.

Standards of Significance

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

- Cause a predicted violation of the CO ambient air quality standards (1-hour and 8-hour State standards) due to project traffic on the local street network on both a project and a cumulative level;
- Create emissions of an ozone precursor or PM₁₀ exceeding the SMAQMD recommended thresholds of significance. The SMAQMD considers the following generation of emissions to represent a significant adverse impact:

Pollutant	Construction	Operation
ROG	None	65 lbs/day
NO _x	85 lbs/day	65 lbs/day
PM ₁₀	50 µg/m ^{3*}	50 µg/m ^{3*}

Notes:

* µg/m³ is the measurement of the concentration of particulate matter in a cube that is one meter on all sides.
Source: SMAQMD, 2002.

- Result in a net increase of any criteria pollutants, on a project specific and cumulative level, for which the project region is non-attainment under an applicable federal or state ambient air quality standard; or
- Create a risk of 10 in 1 million or more for TACs.

Impact 7.2-1: Increase in fugitive dust from demolition of existing buildings.	
Significance Before Mitigation	Significant Short-Term
Mitigation Measures	Mitigation Measure 7.2-1
Significance After Mitigation	Less than Significant

As discussed in Impact 6.2-1 in Section 6.2, the Trinity Cathedral project would require demolishing the existing Cathedral and adjacent multi-purpose space in order to construct the new Cathedral building. For this analysis, it is assumed that these buildings would be demolished in approximately one week. According to the URBEMIS 2002 model, demolition of buildings this size over a period of one week would generate 288.22 pounds per day of fugitive dust. Fugitive dust associated with building demolition would cause the SMAQMD PM₁₀ concentration standard for construction of 50 µg/m³ to be exceeded. This would be considered a **short-term significant impact**.

Mitigation Measures

Compliance with Mitigation Measure 7.2-1 would substantially reduce the amount of PM₁₀ generated by building demolition of the existing Trinity Cathedral and multi-purpose building. Keeping buildings wetted-down is a technique employed on a regular basis by demolition contractors. This would mitigate the short-term fugitive dust impacts to a level that is considered *less than significant*. Keeping buildings wetted during demolition and subsequent disturbance is the only truly effective mitigation measure available to reduce dust from actual building demolition. Requiring two feet of freeboard space during transport of the demolished material will further reduce PM₁₀ from the material as it is trucked off-site.

Fugitive dust would also be produced by the heavy-duty construction equipment as it moves about the construction site, and over nearby roadways. Consequently, additional mitigation measures can be added to reduce fugitive dust from this source, such as installing wheel washers for trucks leaving the construction site and cleaning surface streets at the end of the day.

7.2-1 *The demolition contractor shall ensure that the following measures are implemented during construction activities.*

7.2 Air Quality

- (a) *The demolition contractor shall ensure that all exterior surfaces of buildings are wetted during demolition. The material from the building demolition shall be completely wetted during any period when the material is being disturbed, such as during the removal from the construction site.*
- (b) *All piles of demolished material shall be wetted and covered until removed from the site.*
- (c) *Maintain two feet of freeboard space on haul trucks.*
- (d) *All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at the end of each workday. (The use of dry brushes is expressly prohibited except where preceded or accompanied by sufficient water or chemical stabilizer/suppressant.)*
- (e) *Wheel washers for all exiting trucks shall be installed, or all trucks and equipment leaving the site shall be washed off.*

Impact 7.2-2: Increase in fugitive dust during grading of construction site.	
Significance Before Mitigation	Less than Significant
Mitigation Measures	Recommended Mitigation Measure 7.2-2
Significance After Mitigation	N/A

After building demolition and prior to actual building construction, the building site would be graded. Grading activity involves clearing and leveling the land using heavy equipment such as scrapers, bulldozers, and backhoes. Fugitive dust is generated during this process as the ground is disturbed. The total amount of PM₁₀ generated is normally determined by the size of the graded area. In the case of the Trinity Cathedral project, the area to be graded is relatively small; therefore, the amount of PM₁₀ emissions would likely be small. It was assumed in the URBEMIS 2002 modeling that an area this size would not take more than one week to grade. Under these conditions, the modeling showed that only 6.46 pounds per day of PM₁₀ would be generated.

The SMAQMD recommends a PM₁₀ threshold of significance that is equal to the California Ambient Air Quality Standards (CAAQS) for PM₁₀ of 50 µg/m³. The SMAQMD's Guide to Air Quality Assessment in Sacramento County (Guide) specifies a methodology for evaluating whether a project would exceed this PM₁₀ standard during construction. Appendix B of the Guide contains Table B.1 – *Particulate Matter Screening Level for Construction Projects*. This table lists various acreages and mitigation measures associated with the various acreage ranges which would reduce PM₁₀ impacts to less-than-significant levels. As long as a project's maximum acreage graded per day falls into one of the acreage ranges, and the appropriate mitigation measures are applied, the project would be considered to have a less than significant PM₁₀ impact during construction, and no concentration modeling is required.

The project site is less than five acres; therefore, any grading that would occur during construction would take place on less than five acres. According to Table B.1 of the SMAQMD Guide, projects under five acres in size do not have to implement any mitigation to ensure that

PM₁₀ levels do not exceed the SMAQMD threshold. Therefore, impacts associated with PM₁₀ during grading activities would be **less than significant**.

Mitigation Measures

Even though the SMAQMD does not require any specific mitigation measures due to the size of the project, there are measures that can be implemented to reduce any residual PM₁₀ impact. Due to the location of the project site and the proximity to sensitive receptors, the following mitigation measures are recommended:

7.2-2 *The construction contractor shall ensure that the following measures are implemented during construction activities:*

- (a) *Water exposed soil twice daily.*
- (b) *Maintain two feet of freeboard space on haul trucks.*
- (c) *All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at the end of each workday. (The use of dry brushes is expressly prohibited except where preceded or accompanied by sufficient water or chemical stabilizer/suppressant).*
- (d) *Wheel washers for all exiting trucks shall be installed, or all trucks and equipment leaving the site shall be washed off.*
- (e) *Excavation and grading activity shall be suspended when winds exceed 20 mph.*

Impact 7.2-3: Increase in NO_x generated by construction equipment.	
Significance Before Mitigation	Less than Significant
Mitigation Measures	Recommended Mitigation Measure 7.2-3
Significance After Mitigation	N/A

Various pieces of construction equipment would be used during the demolition, grading and building phases of the Trinity Cathedral project. Much of this equipment is diesel-fueled and emits NO_x as part of the fuel-combustion process. The number and type of equipment used for construction on any one day would determine whether daily emissions would exceed SMAQMD thresholds for NO_x. The SMAQMD recommends that construction impacts be analyzed using Table 3.1 of the SMAQMD Guide. This table specifies types and numbers of construction equipment that would typically be used for projects of different sizes. Equipment as specified in Table 3.1 was used in the URBEMIS 2002 model to determine maximum daily construction NO_x impacts from the project. Out of all construction phases, the URBEMIS 2002 model showed that the highest daily NO_x levels would be generated during the grading phase. Maximum daily levels of NO_x during the grading activities were modeled to total 60.87 pounds-per-day of NO_x. This would not exceed the SMAQMD standard of significance for construction NO_x and would be a **less-than-significant impact**.

Mitigation Measures

The SMAQMD requires standard mitigation for all construction projects. Therefore, even though the Trinity Cathedral project's construction impact would be *less than significant*, the following mitigation measures would be implemented to reduce NO_x emissions during project construction. These mitigation measures would reduce construction NO_x by approximately 20 percent.

7.2-3 *The following two measures shall be incorporated into construction practices 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, will 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; and*

The project applicant or contractor shall submit to SMAQMD a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that will 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 representative shall provide SMAQMD with the anticipated construction timeline including start date, and name and phone number of the project manager and on-site foreman.

- (b) *The project 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 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.*

Impact 7.2-4: Increase in criteria pollutants associated with project operation.	
Significance Before Mitigation	Less than Significant
Mitigation Measures	None required
Significance After Mitigation	N/A

Operation of the Trinity Cathedral project could generate an increase in criteria pollutants. ROG and NO_x are the primary criteria pollutants of concern in Sacramento County because they react together in the upper atmosphere to form ozone in the presence of sunlight. The County is currently in nonattainment of the federal and State ozone standards. As discussed in the Standards of Significance section, the SMAQMD has developed thresholds of significance for these pollutants. PM₁₀, while an issue in Sacramento County, is not typically produced in high amounts by project operation. The SMAQMD sets no standards for PM₁₀ for the long-term operational phase of a project.

Emissions would be created by the Trinity Cathedral project in two ways: 1) Stationary equipment used to operate the facilities (industrial boilers, water heaters), would create ozone precursors of ROG and NO_x and, 2) increase in traffic generated by the project would also contribute ROG and NO_x. The amount of criteria pollutants that would be generated by the project was calculated using the URBEMIS 2002 modeling program.

The existing Trinity Cathedral currently generates a certain amount of emissions from its operations. Once the Cathedral is expanded, its emissions would increase. Only the emissions that are added as a result of the expansion would be considered “new” emissions. Table 7.2-1 shows the new emission impact from the operations of the expanded cathedral. As the table shows, new emissions from the Cathedral would be far below SMAQMD operational thresholds of significance, and so would be considered a *less-than-significant impact*.

Table 7.2-1

Operational Emissions of the Trinity Cathedral Project

Building	ROG Emissions (lbs/day)	NOx Emissions (lbs/day)
Area Sources	0.11	0.43
Mobile Source Emissions	4.29	5.10
Total Emissions	4.40	5.53

Source: EIP Associates, 2005.

Mitigation Measures

None required.

Impact 7.2-5: Increase in CO concentrations from project-related traffic	
Significance Before Mitigation	Less than Significant
Mitigation Measures	None required
Significance After Mitigation	N/A

As discussed in Impact 6.2-5 in Section 6.2, CO concentrations can build up at intersections when traffic conditions are no longer free-flow. A traffic study was prepared that evaluated traffic impacts of the Trinity Cathedral project (see Section 6.7, Transportation and Circulation). The traffic study showed that when project traffic is added to existing conditions, none of the existing levels of service (LOS) at intersections in the vicinity of the Cathedral would decrease

to unacceptable levels of D or lower. Because free flow traffic conditions would continue once the project is operational, the Trinity Cathedral project would not create congested intersections that could result in high CO concentrations. This would be considered a **less-than-significant impact**.

Mitigation Measures

None required.

Impact 7.2-6: Increase in exposure of sensitive receptors to toxic air contaminants.	
Significance Before Mitigation	Less than Significant
Mitigation Measures	None required
Significance After Mitigation	N/A

TAC's can be generated when processes occur that either use toxic compounds as part of the process, or generate TACs as a by-product of the process. These types of activities are generally limited to commercial service and manufacturing land uses, or where diesel fuel is being burned in significant amounts. The Trinity Cathedral project would be a facility used for church services and other related activities. Activities at the Cathedral would not use toxic compounds, and no processes are expected to occur that would contribute TAC by-products. Consequently, no sources of air toxics would be generated in any significant amount. This would be a **less-than-significant impact**.

Mitigation Measures

None required.

CUMULATIVE IMPACTS

In addition to impacts that are created by the project alone, the project's impact must be evaluated when combined with other unrelated projects that would occur in the same area. This analysis is known as a cumulative impact analysis. Below are cumulative analyses for the project-alone impacts discussed in Impact 7.2-1 through Impact 7.2-6 of this section.

The cumulative air quality context is the Sacramento Valley Air Basin, which is currently designated as non-attainment for State PM₁₀ standards and nonattainment for State and federal ozone standards. The emission inventory and the State Implementation Plan (SIP) for the Sacramento Valley Air Basin is currently being updated. Due to the substantial amount of growth and an unplanned increase in vehicle emissions from sport utility vehicles, the current SIP is outdated and underestimates emissions that are generated within the air basin.

The cumulative context for CO impacts is other traffic passing through the study intersection(s) where a project-specific violation has occurred. The cumulative context for TACs is other generators in the vicinity of the project site that could contribute to the specific TAC risk.

Impact 7.2-7: The Trinity Cathedral project, in combination with other projects proposed within the SVAB, could result in a significant temporary cumulative impact from construction activities.

Significance Before Mitigation	Short-term Significant
Mitigation Measures	Mitigation Measure 7.2-4
Significance After Mitigation	Less than Significant

The discussion of cumulative impacts for construction of the Trinity Cathedral project is similar to that of the SMCS project discussed in Section 6.2. Cumulative construction impacts would be similar, though they would occur on a smaller scale for the Trinity project. The primary pollutants of concern during project construction would be PM₁₀ and NO_x.

While PM₁₀ is a criteria pollutant that has impacts in the area where it is generated, NO_x is an ozone precursor that could help create ozone impacts regionally. Since ozone is a regional problem in the Sacramento area and the SVAB is an ozone nonattainment area, any NO_x that is generated by project-related construction activity could conceivably contribute to one or more violations of the ozone standard. While the project's construction NO_x impact may appear to be small when viewed in context with all other NO_x sources in the region, its impact is cumulatively considerable. Most large stationary sources of NO_x in the County have been regulated and have limited their emissions, and mobile sources make up an increasing percentage of the NO_x inventory. With this in mind, the NO_x problem is not caused primarily by large sources, but a combination of many smaller sources. Consequently, for the duration of the Trinity Cathedral construction period, heavy-duty NO_x emissions would be generated in amounts that would be cumulatively considerable. Therefore, the project would be considered to be contributing to a significant cumulative impact.

Because of the project's cumulatively considerable construction NO_x impact, the project's construction would contribute to a ***short-term, cumulatively significant impact***.

Mitigation Measures

The following mitigation measure would reduce the cumulative effect of NO_x generated during construction of the new Cathedral. This would reduce the impact to a *less-than-significant* level, because it would prohibit the project from producing ozone precursors on days when the precursors would be most likely to contribute to an exceedance of the ozone standard.

7.2-4 *Construction contracts shall require that all construction activity shall halt when the Air Quality Index (AQI) is forecast to be in excess of 150 (Unhealthy). Construction activity shall halt two days in advance of, and extend through, the day that is forecast to be 150 or greater on the AQI chart. AQI forecasts can be found at www.sparetheair.org.*

Impact 7.2-8:	The Trinity Cathedral project, in combination with other projects in the SVAB, could result in a cumulative impact on criteria pollutants associated with project operation.
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Significance Before Mitigation	Less than Significant
Mitigation Measures	None required
Significance After Mitigation	N/A

As discussed in Impact 6.2-8 in Section 6.2, the SMAQMD has published criteria for evaluating cumulative impacts to ozone in their *Guide to Air Quality Assessment in Sacramento County*. The Guide specified that for ozone precursors, a project would not contribute to significant increases in criteria pollutants if it does not require a change in zoning to a more intensive use. The Trinity Cathedral project would not change the existing land use or zoning. Also, the project's emissions would not all be new, since it is replacing an existing facility. Consequently, the Trinity Cathedral project would not have a cumulative long-term impact, resulting in a ***less-than-significant cumulative impact***.

Mitigation Measures

None required.

Impact 7.2-9:	Cumulative impact of CO concentrations from project-related traffic.
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Significance Before Mitigation	Less than Significant
Mitigation Measures	None required
Significance After Mitigation	N/A

As discussed in Impact 6.2-9 in Section 6.2, it is possible that other sources would develop in the future that would add traffic, and thereby increase CO levels. However, in the future, CO background levels decrease as vehicles become cleaner. The traffic study prepared for this project evaluated probable traffic conditions in year 2025 that would occur as a result of buildout in the downtown/midtown area of Sacramento, including the Trinity Cathedral project. As discussed in Impact 6.2-9, the City of Sacramento may also implement a traffic calming "smart plan" that would change traffic patterns in the project vicinity. Consequently, CO concentrations in 2025 under "smart plan" conditions were also modeled. Predicted CO levels are shown in Tables 6.2-9, 6.2-11 in Section 6.2 for both future and future "smart plan" scenarios. As shown, predicted CO concentrations would not exceed the CAAQS; therefore, this would be a ***less-than-significant cumulative impact***.

Mitigation Measures

None required.

Impact 7.2-10: Cumulative impact of project-generated TACs.	
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Significance Before Mitigation	Less than Significant
Mitigation Measures	None required
Significance After Mitigation	N/A

As discussed in Impact 7.2-6, Trinity Cathedral would be a facility used for church services and other related activities. Activities at the Cathedral would not utilize toxic compounds, and no processes are expected to occur that would contribute TAC by-products. Consequently, no TACs would be generated by the Cathedral that could add to existing background TAC levels contributing to the cumulative environment. This would be considered a ***less-than-significant cumulative impact***.

Mitigation Measures

None required.

7.3 Cultural Resources

7.3 Cultural Resources

INTRODUCTION

This section describes known prehistoric and historic resources in the project area. Historic resources in the project area include properties that are listed or appear eligible for individual listing on the National Register of Historic Places (NRHP) or the California Register of Historic Resources (CRHR), and historic districts that are listed or have been determined or appear to be eligible for listing on the NRHP or CRHR. Development of the Trinity Cathedral project could affect existing historic resources either by modification or demolition of eligible buildings or by altering the context in which historic resources occur. Development of the Trinity Cathedral project could also affect archeological resources through earthmoving activities, which could destroy resources and/or disturb the context of these resources.

Comments received during the NOP comment period (See Appendix D) raised concerns associated with the potential loss and/or damage of any known or unknown prehistoric resources, impacts on the Historic Neighborhood as well as individual NRHP and CRHR eligible structures, the potential impact on the historic context of the area, and the physical impact of construction activities on surrounding structures with un-reinforced brick or early cement construction.

Information in this section was obtained from the *Cultural Resources Report: Sutter Medical Center, Sacramento, Master Plan Projects and the Trinity Cathedral Project* prepared by Roland-Nawi Associates in June 2004 which includes previously published studies, a records search of previous cultural resource surveys and recorded resources in the project vicinity, correspondence with the Native American Heritage Commission, and a field survey of the project site. A copy of the Cultural Resources Report is included in Appendix G.

ENVIRONMENTAL SETTING

The Trinity Cathedral project is located within the same area as the SMCS project; please refer to Section 6.3 for the Archaeological and Historical Context discussions.

Project Area Context

The Trinity Cathedral project site lies within the original Sutter grid. In the 1860s, there were only two buildings within the project vicinity – Sutter’s Fort and the Sacramento Brewery (Old Tavern building). Even by 1895, the area remained sparsely populated dominated primarily by agriculture. With the extension of the streetcar line, the neighborhood became quite fashionable and a number of palatial houses were constructed along Capitol Avenue between 1895 and 1915. Many of these houses are within the boundaries of the City’s Capitol Mansions Historic District.¹ By 1915, the character of the neighborhood had shifted from rural to urban.

¹ The Capitol Mansions Historic District has meandering boundaries that extend from 27th Street in the north to

A number of associational and religious buildings were constructed between 1900 and 1930 within the Midtown area. In 1901, at the project site, the Episcopal Diocese constructed a simple, clapboard church and, shortly thereafter, they also built a masonry neo-gothic building known as "Greystone." Adjacent to each other on a multi-parcel lot on Capitol Avenue between 26th and 27th Streets, they presented a somewhat incongruous picture with the masonry building overwhelming the simple colonial style church. The church property was flanked at both ends of the block by dwellings. This original church and administration complex was replaced in the mid-1950s by the current cathedral and the west end of the block was sold for the construction of a medical building (St. Lukes). In 1915, the prestigious Tuesday Club, a women's social organization, constructed a building to house their activities in the 2700 block of L Street across from Sutter's Fort (Sanborn Fire Insurance Map 1915).² In 1926, the Pioneer Congregational Church constructed a Gothic Revival church and administrative center next door. A year earlier, the Eastern Star built a hall on the opposite side of Sutter's Fort near the corner of K and 28th Streets (City of Sacramento Survey forms 1996). Sometime later, the Masons built a Scottish Rite temple adjacent to the Tuesday Club (Sanborn Fire Insurance Map 1915-52). The Scottish Rite temple was demolished a number of years ago.

The Trinity Episcopal Church currently consists of three interconnected buildings: the Cathedral building constructed in 1955, the office/bookshop constructed in 1960, and the auditorium constructed in 1989-91. This Romanesque Revival style Cathedral is frame construction with a varied hue brick veneer. The office/bookshop and auditorium are also both clad with a varied hue brick veneer to match the Cathedral.

REGULATORY CONTEXT

The treatment of cultural resources is governed by federal, State, and local laws and regulations. There are specific criteria for determining whether prehistoric or historic sites or objects are significant and/or protected by law. Please see Section 6.3 for a complete discussion of the applicable regulatory context.

IMPACTS AND MITIGATION MEASURES

Methods of Analysis

The cultural resources assessment involves several steps. The first step is to conduct pre-field research, which establishes a cultural history for the project area so that any resources identified in the project area could be evaluated in a regional context. Other steps include contacting the Native American Heritage Commission and performing field surveys.

The primary document used to prepare this section was the *Cultural Resources Report: Sutter Medical Center, Sacramento, Master Plan Projects and the Trinity Cathedral Project* prepared by Roland-Nawi Associates in June 2004. This report includes an archeological investigation that was completed by Tremaine & Associates, Inc. The North Central Information Center of the California Historical Resources Information System was consulted for information on previous studies and recorded sites, and the Native American Heritage Commission was contacted to determine if sites listed on their sacred lands inventory were present in or near the

2 21st Street in the south, from L and K Street alleys on the north to the N Street alley on the south.
The Tuesday Club was demolished in 2002.

project area and to obtain a list of knowledgeable Native Americans who could be contacted for additional information. Letters were written to these individuals asking for any information they could contribute regarding past Native American use of the project area. Upon completion of the research tasks, a complete reconnaissance survey of the project was undertaken to identify any cultural resources, and their significance, within the project area. Resources in the vicinity of the project site that could potentially be affected, either by construction activities or the altering of the context of the area, by the project was also investigated.

Standards of Significance

For the purposes of this EIR, an impact is considered significant if the Trinity Cathedral project would:

- Create a substantial adverse change in the significance of a historic or archaeological resource, pursuant to section 15064.5 of the State CEQA Guidelines;
- Directly or indirectly destroy a unique paleontological resource or unique geologic feature; or
- Disturb any human remains.

Impact 7.3-1: The Trinity Cathedral project could disturb or destroy unidentified subsurface archaeological resources during project construction.	
Significance Before Mitigation	Potentially Significant
Mitigation Measures	Mitigation Measure 7.3-1
Significance After Mitigation	Less than Significant

The Trinity Cathedral project site is located in close proximity to known archeological resources that could be adversely affected by project construction. Previously undiscovered archeological subsurface material and human remains could also be present within the project site. The Trinity Cathedral project would be constructed in two phases. The first phase includes the demolition of the existing cathedral building and the construction of a new cathedral building. The second phase includes the demolition of the existing multi-purpose space and construction of a new multi-purpose space with meeting rooms and administrative offices. Grading, excavation and other construction activities could have the potential to damage or destroy undocumented subsurface cultural resources or unearth human remains.

The project area is considered sensitive for subsurface prehistoric deposits due to the extensive historical use of the area. Because the project site has been occupied in recent times, since the 1860's, there is a strong potential for encountering historic subsurface features (e.g., privy pits, refuse dumps, and architectural foundations) associated with the earliest pre-Gold Rush and Gold Rush-era settlers, as well as material remains of later era residents or human remains.

Therefore, because construction of the Trinity Cathedral project could disturb or destroy unidentified subsurface resources during project construction this is considered a **potentially significant impact**.

Mitigation Measures

Compliance with Mitigation Measure 7.3-1 would reduce impacts to subsurface archaeological resources that could be caused by construction activities by surveying the area further for such resources, directing activities if such resources are found, and providing monitoring during construction. Therefore any impacts would be reduced to a *less-than-significant level*.

- 7.3-1 (a) *The project applicant shall hire a qualified professional to prepare a formal research design and testing strategy. Testing shall be conducted prior to initiation of construction for the project. Based on the results of testing recommendations shall be provided, which may include additional testing, data recovery, and future construction monitoring. All recommendations shall be submitted to the City of Sacramento’s Historic Preservation Director for approval.*
- (b) *Should any cultural resources, such as structural features, any amount of bone or shell, artifacts, human remains, or architectural remains be encountered during any subsurface development activities, work shall be suspended within 100 feet of the find, and the City of Sacramento shall be immediately notified. At that time, the project proponent in consultation with City staff shall coordinate any necessary investigation of the site with qualified archaeologists as needed to assess the resource and provide proper management recommendations. Possible management recommendations for important resources could include resource avoidance or data recovery excavations. The contractor shall implement any measures deemed necessary for the protection of the cultural resources. In addition, pursuant to section 5097.98 of the State Public Resources Code, and section 7050.5 of the State Health and Safety Code, in the event of the discovery of human remains, the County Coroner shall be immediately notified. If the remains are determined to be Native American, guidelines of the Native American Heritage Commission shall be adhered to in the treatment and disposition of the remains.*
- (c) *The project applicant shall ensure that archaeological monitoring is performed by a professional archaeologist during ground-disturbing construction activities for the duration of project construction. If resources are discovered during construction, the procedures laid out in the unanticipated Discovery Plan will be followed.*

Impact 7.3-2:	The Trinity Cathedral project could substantially adversely change the significance of a historic resource.
Significance Before Mitigation	Less than Significant
Mitigation Measures	None required
Significance After Mitigation	N/A

The Trinity Cathedral project is located in close proximity to known historic resources that could be adversely affected by project construction. Buildings adjacent to the project site and those in the vicinity that could be affected by construction activities were evaluated for significance. Several buildings in the vicinity of the project site were found to be significant historic resources including the Old Tavern Building, Pioneer Congregational Church, Sutter’s Fort, Eastern Star

Temple, 2730 Capitol Commercial Building and the 2600 Block of the Capitol Mansions Historic District. Therefore, if construction of the project would cause a substantial adverse change to any of these listed and/or eligible resources, it would constitute a significant environmental impact.

Carol Roland of Rowland-Nawi Associates did an intensive research and survey effort in 2004 and determined that the Trinity Cathedral and associated buildings are not designated or eligible for listing on the CRHR, or any contributor to a historic district. The project would not involve construction immediately adjacent to any of the designated historical resources identified in the area; however, construction would occur in the vicinity of the following historic resources (see Figure 6.3-2 in Section 6.3):

- Old Tavern building,
- Pioneer Congregational Church,
- Sutter's Fort,
- Eastern Star Temple,
- 2730 Capitol Commercial Building, and
- 2600 Block of the Capitol Mansions Historic District.

The structural system for the proposed new cathedral could require new pilings to support the building. If pilings are required, the proposed construction methodology would be drilling and insertion of piles at specific locations. Drilling, as opposed to pile driving, would cause less ground vibration; however, some vibration would occur.

The potential for significant adverse effects from vibration associated with drilling activities could be exacerbated by the adobe brick construction of Sutter's Fort, the physical proximity of the Old Tavern building to the vibration's source, the fragile nature of stained glass windows in Pioneer Congregational Church, the foundation of the Eastern Star Temple, which is presumed to be un-reinforced brick, and wood frame construction of residences located along Capitol Avenue. Stained glass windows in the Pioneer Congressional Church could be vulnerable to damage from vibrations from drilling or demolition activities associated with the project. However, as stated in the Section 6.6, Noise, of this EIR, structures over 50 feet away from drilling activities would not be significantly impacted. None of the above listed historic resources is within 50 feet of the project site; therefore, damage to historic properties from excess vibration levels is not anticipated and this impact would be ***less than significant***.

Mitigation Measures

None required.

Impact 7.3-3: The Trinity Cathedral project could directly or indirectly destroy a unique paleontological resource or unique geologic feature.	
Significance Before Mitigation	Less than Significant
Mitigation Measures	None required
Significance After Mitigation	N/A

Paleontological resources have been discovered in the greater Sacramento area in the recent past. Therefore, while there are no known resources in the project area the sensitivity for these types of resources has increased due to these recent discoveries.

The Sacramento Valley was likely occupied and used by humans during the late Pleistocene and early Holocene (14,000 to 8000 B.P.); however, the archaeological record of such use is sparse. This lack of archaeological evidence is understandable given that such evidence is likely deeply buried under accumulated gravels and silts and few sites have been excavated to a depth of more than a couple of meters. Thus chronology building in the Central Valley has focused on the latter half of the Holocene (i.e. the last 5,000 years) for which the archaeological record is more clearly understood.

Based on geotechnical bores done for a previous SMCS project (construction of SGH), the area is generally underlain with semi-consolidated gravel, sand, and silt. The topography of this Holocene alluvium is generally flat with some variable relief. The soil series mapped in the vicinity of the project is referred to as Rossmoor Fine Sandy Loam and Cosumnes Silty Loam. Rossmoor soils are associated with the high floodplains along the American River in the Sacramento Valley. This fine sandy loam soil is formed in alluvium, derived from mixed rock sources. Cosumnes series soils are formed from mixed sources and occur on low flood plains.

The project site is located in an urbanized area, which has been developed since the early 1900s. Since the site has previously been disturbed, there are no unique geologic features present at the surface. Also as discussed above, the soils in the area tend to be sandy and silty loams due the location within the floodplain. The abundance and diversity of paleontological resources such as fossils can potentially vary widely from place to place, with paleontological resource sensitivity likewise varying according to geologic rock unit. However, since there are no known paleontological resources within the proposed project area and the likelihood is low that they exist, this would be considered a **less-than-significant impact**.

Mitigation Measure

None required.

CUMULATIVE IMPACTS

Based upon previous cultural resource surveys and research, communities in the Sacramento Valley have been inhabited by prehistoric and historic peoples for thousands of years. The Trinity Cathedral project, in addition to other development in the Sacramento Valley could contribute to the potential for loss of significant cultural resources.

Trinity Cathedral project, in addition to other development in the Sacramento Valley could contribute to the potential for loss of significant cultural resources.

Impact 7.3-4: The Trinity Cathedral project, in combination with other development in the Sacramento Valley, could disturb or destroy unidentified subsurface archaeological resources during project construction.	
Significance Before Mitigation	Potentially Significant
Mitigation Measures	Mitigation Measure 7.3-2
Significance After Mitigation	Less than Significant

Cumulative development in the City could result in the damage or destruction of known and unknown archaeological resources. Based upon previous surveys and research, Sacramento has been inhabited by prehistoric and historic peoples for thousands of years.

While cumulative development throughout Sacramento would be anticipated to impact resources, it must be noted that many of the areas that are proposed for development are urban in character and have been build upon previously. Earlier development may have destroyed sites, resulting in the inadvertent dispersal or reduction in quality of artifacts or resources.

Artifacts and other cultural resources have been recorded during prior surveys near the project area and throughout Sacramento. Therefore, the development of the project, in combination with other developments in Sacramento, could contribute to the potential for loss of significant archaeological and prehistoric resources due to the location near Sutter’s Fort and Indian settlements.

Because all significant cultural resources are unique and non-renewable members of finite classes, all adverse effects or negative impacts erode a dwindling resources base. The loss of any one archaeological site affects all others in a region because these other properties are best understood completely in the context of the cultural system of which they (and the destroyed resource) were a part. The boundaries of an archaeologically important site could extend beyond the property boundaries. Therefore, this is considered a **potentially significant cumulative impact**.

Mitigation Measure

The following mitigation measure would ensure that in the event that subsurface resources are discovered, they would be preserved and their treatment would be consistent with professional standards for cultural resources. Therefore, the project would not contribute to the loss of archeological or paleontological resources, and its contribution to the cumulative loss would be *less than significant*.

7.3-2 Implement Mitigation Measure 7.3-1.

Impact 7.3-5: The Trinity Cathedral project, in combination with other development in Sacramento, could substantially adversely change the significance of a historic resource, which could result in a significant cumulative impact.	
Significance Before Mitigation	Less than Significant
Mitigation Measures	None required
Significance After Mitigation	N/A

The cumulative context for the evaluation of potential cumulative impacts on historic resources is the buildout of the City of Sacramento General Plan, as well as the proposed SMCS project. Cumulative development in the City could result in the damage or destruction of known historic resources. Sacramento has an array of historic cultural resources. General Plan goals and policies as well as the City's Historic Preservation Ordinance work to prevent the loss of historic resources.

Due to Sacramento's rich regional history, there is a strong potential for the presence of historic structures eligible for California Register designation within the City's General Plan area, known and unknown. Although we cannot quantify the number of historic resources present within the footprint of the City's development area, historic surveys performed within the project area concluded that designated and/or eligible buildings that could be affected by the project were located both within the project area and in the adjacent area. However, as previously stated, the Trinity Cathedral project would not damage historic properties; therefore, the project's cumulative contribution would be *less than significant*.

Mitigation Measure

None required.

Impact 7.3-6: The Trinity Cathedral project could substantially adversely alter paleontological resources, which could result in a significant cumulative impact.	
	Trinity Cathedral
Significance Before Mitigation	Potentially Significant
Mitigation Measures	Mitigation Measure 7.3-3
Significance After Mitigation	Less than Significant

Cumulative development in the City as a whole could result in the damage or destruction of unknown paleontological resources. Paleontological resources have been discovered in the greater Sacramento area.

While cumulative development throughout the City of Sacramento would be anticipated to impact paleontological resources, it must be noted that many of the areas that are proposed for development are urban in character and have been build upon previously. Earlier development may have destroyed sites, resulting in the inadvertent dispersal or reduction in quality of

resources. The development of the proposed project, in combination with other developments in Sacramento, could contribute to the potential for loss of significant paleontological resources.

Because all resources are unique and non-renewable members of finite classes, all adverse effects or negative impacts erode a dwindling resources base. The loss of any one site affects all others in a region because these other properties are best understood completely in the context of the region of which they (and the destroyed resource) were a part. The boundaries of an important site could extend beyond the property boundaries resulting in a ***potentially significant cumulative impact***.

Mitigation Measure

The following mitigation measure would ensure that in the event that subsurface resources are discovered, they would be preserved and their treatment would be consistent with professional standards for cultural resources. Therefore, the proposed project would not contribute to the loss of paleontological resources, and its contribution to the cumulative loss would be less than considerable resulting in a *less-than-significant cumulative impact*.

7.3-3 Implement Mitigation Measure 7.3-1.

7.4 Hazardous Materials and Public Safety

7.4 Hazardous Materials and Public Safety

INTRODUCTION

This section evaluates the potential for adverse impacts on human health due to exposure to hazards that could result from the Trinity Cathedral project. This section discusses the types of hazardous materials that could be used during construction and operation of the proposed Trinity Cathedral project, the regulatory setting applicable to such activities, and the potential for the project to result in health and safety impacts as a result of the use of hazardous materials. This section also addresses the potential for asbestos, lead-based paint, or soil or groundwater contamination to be present at this site, which could pose a human health risk or environmental hazard during demolition and construction activities.

One comment letter (from the Winn Park/Capitol Avenue Neighborhood Association) in response to the January 2004 NOP (see Appendix D), addressed site-specific issues related to public exposure to asbestos, lead, or other hazardous substances during remodeling and demolition of buildings. This issue is addressed in the following analysis. The Initial Study (see Appendix E) prepared for the Trinity Cathedral project determined that the project is not located in an area which is included on a list of hazardous materials sites, is not located within an airport land use plan or within the vicinity of a private airstrip, and would not expose people or structures to a significant risk of loss, injury or death involving wildland fires. These issues will not be discussed further in this EIR.

Information referenced to prepare this section includes a variety of city planning documents, including the City of Sacramento General Plan, agency correspondence, and published technical information available through various websites and documents, which are listed in the footnotes.

ENVIRONMENTAL SETTING

Project Site Conditions

Trinity Cathedral is located on the northwest corner of 27th Street and Capitol Avenue, and is included within the boundaries of the SMCS project area. The current cathedral, constructed in 1955, is a single floor brick building with an interior area of 8,057 square feet (sf). The Trinity Cathedral has occupied this site since 1895, when a wooden structure was first erected.

The church also owns an Administrative/Classroom building that is bounded by Trinity Cathedral to the east, Capitol Avenue to the north, St. Luke's Medical Office Building to the west and St. Luke's Parking Structure to the south. This 15,409-sf, single-floor building was constructed in 1968.

Phase I Environmental Site Assessments (ESAs) are used to assess whether past or existing uses on a site have resulted in a release of hazardous materials or wastes that present a hazard to people or the environment. Typically such hazards are associated with soil or groundwater contamination, including leaking underground tanks. The scope of issues investigated in Phase 1 ESAs is summarized in Section 6.4 of this EIR. The EIR authors are not aware of any ESAs that may have been prepared for the property on which the Trinity Cathedral is located. However, the Phase I ESAs for the House of Furs building and St. Luke's Medical Office Building (see Section 6.4), which are close to the site, included the results of a database search within ¼ mile of those structures. The database searches did not identify the Trinity Cathedral site as having any known contamination or leaking underground tanks. Nonetheless, it is unknown whether contaminated soil or groundwater is present at the site, or whether other hazards, such as underground fuel tanks, are present because a site-specific study has not been completed. Additionally, because of the age of the Trinity Cathedral buildings, they may contain asbestos or lead-based paint. No asbestos or lead-based paint studies are known to have been prepared for the Trinity Cathedral project.

Within the project area, only Capitol Avenue (eastbound) is a designated evacuation route. None of the numbered streets within or adjacent to the site are designated routes, nor are L or N Streets. In case of evacuation, traffic on these local streets would be directed to the designated routes.

REGULATORY SETTING

The Trinity Cathedral project would be subject to hazardous materials and public safety regulations established by federal, State, and local agencies. However, many regulations that pertain to the SMCS project that are specific to hospital- and medical-related use would not apply to the Trinity Cathedral project. Only those regulations that would apply to the Trinity Cathedral project are briefly described below. The reader is referred to Section 6.4 for additional detail.

Federal

Applicable federal Environmental Protection Agency (EPA) and Department of Transportation (DOT) regulations are contained in Titles 29 and 40 of the Code of Federal Regulations (CFR), respectively. These regulations are implemented, enforced, and monitored at the State and local level. As they pertain to the Trinity Cathedral project, these regulations address the use and transport of hazardous materials and specify protocols to minimize the release of hazardous materials to protect human health and the environment. For a complete discussion of the function of the EPA and DOT, please see Section 6.4.

State

The California Environmental Protection Agency (Cal/EPA), Office of Emergency Services (OES), California Highway Patrol (CHP), and California Department of Transportation (Caltrans) are the State enforcement agencies for hazardous materials.

The regulations applicable to the proposed Trinity Cathedral are California Code of Regulations (CCR) Titles 22 and 26, and the Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program).

For a complete discussion of the function of the State regulatory agencies and regulations, please see Section 6.4.

Local

The Sacramento County Environmental Management Department (SCEMD), Sacramento Fire Department, and Sacramento Metropolitan Air Quality Management District (SMAQMD) are the local enforcement agencies for hazardous materials.

Regulations applicable to the proposed Trinity Cathedral project would be the Area Plan developed by SCEMD, City of Sacramento General Plan, and Rule 902 developed and enforced by SMAQMD. For additional discussion of the function of the local regulatory agencies, and applicable policies, please see Section 6.4.

City of Sacramento General Plan

The City of Sacramento General Plan adopted the following community safety goal, policies, and implementation measures that pertain to the management of hazardous materials:¹

Health and Safety Element – Hazardous Materials

Goal: Provide for the health and safety of the citizens of Sacramento and for the protection of the environment by reducing, and where possible eliminating, exposure to hazardous materials and waste.

Policy 3: Encourage “clean industry” to operate in the City of Sacramento.

IMPACTS AND MITIGATION MEASURES

Methods of Analysis

The qualitative analysis of the potential public safety and hazards impacts identified is based on issues raised during the NOP process and review of the Trinity Cathedral site design and intended uses. The information obtained from these sources was reviewed and summarized to identify potential environmental effects, based on the standards of significance presented in this section. In determining the level of significance, the analysis assumes that the Trinity Cathedral project would comply with applicable ordinances and regulations. The analysis of potential effects related to emergency access/evacuation routes is based on the results and conclusions of the Traffic Study, which is presented in Section 6.7, Transportation and Circulation.

¹ City of Sacramento, *City of Sacramento General Plan*, adopted January 19, 1988, Pages 8-20, 8-21.

Standards of Significance

For the purposes of this EIR, impacts to public safety are considered significant if the Trinity Cathedral project would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- Emit any hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within ¼ mile of an existing or proposed school; or
- Impair implementation of or physically interfere with an adopted emergency response plans or emergency evacuation plan.

Impact 7.4-1: Asbestos or lead-based paint may be present in Trinity Cathedral structures. These substances could be released to the environment during demolition if not properly removed, contained, and transported for disposal at approved sites.

Significance Before Mitigation	Potentially Significant
Mitigation Measures	Mitigation Measure 7.4-1
Significance After Mitigation	Less than Significant

Construction of the Trinity Cathedral project would involve the demolition of existing on-site structures. Because of health hazards associated with these materials (see Section 6.4), current laws regulate the use of ACBM and lead-based paints. However, the Trinity Cathedral and Administrative/Classroom buildings predate these laws, and ACBM and lead-based paint are likely to be present in the structures. No testing has been performed to date to determine which building components may contain these materials and the amount of ACBM or lead-based paint that may be present.

If these potential hazards are not identified prior to demolition, hazardous levels of asbestos or lead could become airborne. These materials could also contaminate soil or be disposed of improperly at facilities not permitted to accept items containing asbestos or lead. The accidental or inadvertent release of asbestos or lead-based paint or improper disposal of debris containing these materials could present a human health or environmental hazard, which is considered a **potentially significant impact**.

Mitigation Measure

Implementation of the following mitigation measure would ensure ACBM, lead-based paint, or other hazardous substances in building components are identified, removed, packaged, and disposed of in accordance with applicable State laws and regulations. This would minimize the

risk of an accidental release of hazardous substances that could adversely affect human health or the environment, thus reducing impacts to a *less-than-significant level*.

7.4-1 *Prior to demolition of the Trinity Cathedral buildings, the project applicant shall provide written documentation to the City that ACBM and lead testing and abatement, if necessary, has been completed in accordance with applicable State and local laws and regulations.*

Impact 7.4-2: Demolition and site preparation activities associated with the Trinity Cathedral project (excavation, grading, trenching) have the potential to encounter previously unidentified contaminated soil or groundwater or buried debris that may contain hazardous substances.	
Significance Before Mitigation	Potentially Significant
Mitigation Measures	Mitigation Measure 7.4-2
Significance After Mitigation	Less than Significant

Construction of the Trinity Cathedral project would involve site preparation activities such as excavation (500 to 600 cubic yards) and grading.² Dewatering due to excavation could also be required in some locations. A site-specific investigation to determine whether the site contains any hazardous materials soil contamination or buried hazardous debris has not been prepared. During site excavation and grading, if contaminated soil or groundwater, underground fuel storage tanks, or other hazardous debris were present and not identified prior to earthwork, construction workers could be exposed to potential hazards. Hazardous materials or waste could be inadvertently spread over a larger area or transported and disposed of improperly.

Should contamination be present in areas to be disturbed, in areas directly adjacent to sites to be developed, or in areas open to public access, remediation of the contaminated areas would be necessary in most cases. Remediation would include, at a minimum, treatment of contaminated soils in a manner that would render them non-hazardous or otherwise protect public health and safety. Proper treatment and/or disposal of soils and groundwater could also be required. As discussed in Impact 7.5-3 in Section 7.5, Hydrology and Water Quality, the City has specific requirements for the disposal of contaminated groundwater.

Site remediation measures in themselves could also have adverse impacts. During site remediation, workers and possibly the nearby public could be exposed to chemical compounds in soils, soil gases, or groundwater. The public and the environment could be exposed to airborne chemical compounds migrating from a site under remediation. Accidents during transportation of contaminated soils or groundwater could lead to exposure of the public and the environment to the chemical compounds. Worker and public health and safety requirements described in the setting section would apply during remediation activities, minimizing the potential for the above exposures would occur.

Potential adverse impacts of remediation would be mitigated, in part, by legally required safety and hazardous waste handling and transportation precautions. For hazardous waste workers, OSHA regulations mandate an initial 40-hour training course and subsequent annual training review. Additionally, site-specific training would be required for some workers. In responsible

2 Mattheis, Tim, WMB Architects, Personal Communication, 03/25/04.

agency review of mitigation plans, procedures for protection of the public during remediation would be evaluated. These measures, along with application of state and regional cleanup standards, would serve to protect human health and environment during site remediation, thus minimizing remediation impacts.

Remediation of contaminated sites would eliminate the health threats posed by hazardous wastes and prevent workers and the public from encountering such materials in the event of any future excavation at the site. Removal of the toxic materials would also eliminate a potential local source of groundwater contamination; therefore, removal would be beneficial in the long run. Proper handling and disposal of excavated contaminated material would preempt potential health, safety, or environmental effects of the contaminated soil or groundwater.

The accidental discovery of unknown hazards during site preparation and inadvertent release of hazardous materials could create a significant hazard to the public or the environment if measures are not in place to safely manage such occurrences. This is considered a ***potentially significant impact***.

Mitigation Measure

The following mitigation measure requires a site-specific evaluation to determine the likelihood of contaminants within the site boundaries, removal or remediation of hazardous materials, and appropriate conditions outlining procedures in the event that additional hazards are discovered during construction. Implementation of the following mitigation measure would reduce construction-related impacts associated with exposure to hazardous materials to a *less-than-significant level*.

7.4-2 *The following measures shall be implemented at the Trinity Cathedral project site:*

- (a) *Prior to site preparation, the project applicant shall ensure the Trinity Cathedral site is investigated for the possible presence of hazardous materials in soil and groundwater, including underground tanks. Investigative measures shall include, but would not be limited to, a comprehensive review of historic maps and aerial photographs, Sanborn maps, review of available city or county records, and consultation with knowledgeable individuals, consistent with ASTM Phase I ESA requirements. A Phase II investigation, if recommended in the Phase I ESA, shall be completed prior to site preparation.*
- (b) *In the event that site inspections find evidence of contamination, waste discharges, underground storage tanks, abandoned drums, or other environmental impairment at locations to be developed or in the project area, the SCEMD shall be notified. A site remediation plan shall be prepared that (1) specifies measures to be taken to protect workers and the public from exposure to potential site hazards and (2) certifies that the proposed remediation measures would clean up the contaminants, dispose of the wastes, and protect public health in accordance with federal, state, and local requirements. Commencement of work in the areas of potential hazards shall not proceed until the site remediation plan has been completed to the satisfaction of the SCEMD.*

- (c) *A site health and safety plan, which meets the intent of OSHA hazardous materials worker requirements, shall be prepared and in place prior to commencing work on any contaminated sites. The project applicant, through its contractor, shall ensure proper implementation of the health and safety plan.*

- (d) *In the event that USTs or other features or materials that could present a threat to human health or the environment are discovered during excavation and grading, construction in that immediate area shall cease immediately. A qualified professional shall evaluate the location and hazards and make appropriate recommendations. Work shall not proceed in that area until identified hazards are managed to the satisfaction of SCEMD.*

Impact 7.4-3: Construction and operation of the Trinity Cathedral project would result in the limited use of hazardous materials.	
Significance Before Mitigation	Less than Significant
Mitigation Measures	None required
Significance After Mitigation	N/A

Construction of the Trinity Cathedral project would involve the use of various products that could contain materials classified as hazardous (e.g., solvents, adhesives and cements, certain paints, cleaning agents and degreasers). Fuels, such as gasoline and diesel, would also be used in heavy equipment and other construction vehicles. The use and storage of such products is subject to applicable hazardous materials regulations, and contract specifications would contain specific provisions regarding the use of these products to ensure compliance with applicable regulations and standards. Applicable hazardous materials laws and regulations would be implemented as standard procedure for construction of the project through contractor specifications and monitored by the project applicant.

Upon completion of reconstruction, the Trinity Cathedral project would continue to be used for worship and church-related purposes that would not require the routine transport, use or disposal of hazardous materials. Common household chemicals may be used and stored within the site, but these chemicals would not be a significant hazard to people or the environment because few products would be present and in small quantities.

The project site is located within one-quarter mile of four schools; Saint Francis Elementary School at 25th and K Street, Sutter Middle School at 3150 I Street, Fremont School for Adults at 2420 N Street, and a Montessori school located at 27th and L Street. Small amounts of products containing hazardous substances may be used and stored within the site during construction and operation, but these chemicals would not be a significant hazard to schools for the reasons described above. Therefore, this is considered a **less-than-significant impact**.

Mitigation Measure

None required.

Impact 7.4-4: The proposed Trinity Cathedral project would be located two blocks from a proposed helistop serving the SMCS Women’s and Children’s Center.	
Significance Before Mitigation	Less than Significant
Mitigation Measures	None required
Significance After Mitigation	N/A

The Trinity Cathedral project would not involve helicopter operations, but the SMCS project proposes to construct a helistop on top of the Women’s and Children’s Center, which would be a new use in the project area. The helistop would be used for periodic, but infrequent, scheduled transfers only. Helicopters would not be housed, parked, or refueled at the SMCS site. It is anticipated there would be approximately 200 take-offs/landings per year, or about 10 to 15 landings/take-offs per month.

The primary flight path would be arrivals from the northeast, along the Capital City Freeway. Departures would be along Capital City Freeway to the southwest, towards the U.S. Highway 50/State Route 99 interchange. Federal aviation regulations allow helicopter pilots to divert from these routes, but only in case of emergency. The proposed flight path would avoid Trinity Cathedral under normal operating conditions. For a discussion of noise impacts associated with the proposed helistop and helicopter operations see Section 6.6, Noise.

There is no operating helistop at Sutter General Hospital currently, so construction and operation of the Trinity Cathedral project would not affect the safety of helicopter operations if the cathedral project is constructed in advance of the proposed helistop. As discussed in Impact 6.4-5, helistop operation cannot commence until all FAA, Caltrans Division of Aeronautics, and local land use permits and approvals have been granted. This requirement, which is set forth in Mitigation Measure 6.4-5 for the SMCS project, would minimize aircraft safety hazards to people on the ground. If the helistop is constructed prior the cathedral project, it would be constructed on top of the Women’s and Children’s Center, at an elevation of approximately 167 feet above-grade. The tallest point on the reconstructed cathedral would be the top of the cross steeple at approximately 155 feet. Part of the process for determining whether to grant the helistop permit would be a consideration of the adjacent land uses and potential height obstructions, which would include the cathedral property. Under either scenario, this is considered a **less-than-significant impact**, and additional mitigation would not be required for the Trinity Cathedral project.

Mitigation Measure

None required.

Impact 7.4-5:	Implementation of the Trinity Cathedral project could interfere with emergency response plans and/or emergency evacuation plans.
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Significance Before Mitigation	Less than Significant
Mitigation Measures	None required
Significance After Mitigation	N/A

During construction of the Trinity Cathedral project, it may be necessary to restrict travel on certain roadways within the project area to facilitate construction activities such as demolition, material hauling, staging areas, and modifications to existing infrastructure. Such restrictions could include lane closures, lane narrowing, and detours, which would be temporary but could continue for extended periods of time. Lane restrictions, closures, and/or detours could cause an increase in traffic volumes on adjacent roadways. In the event of an emergency, emergency response access or response times could be adversely affected. These impacts would occur during the construction period and would not be permanent, however. The City of Sacramento would require the applicant prepare and implement a Construction Traffic Management Plan in accordance with Sections 12.20.020 and 12.20.030 of the Sacramento City Code. The plan must be approved by the City Public Works or Utilities Director prior to any work that would obstruct vehicular or pedestrian traffic on any City street.

Trinity Cathedral is also proposing a temporary restriction of traffic on Saturdays, Sundays, and other specific days and times along the portion of 27th Street between Capitol Avenue and the alley (Trinity Lane). It is anticipated this restriction would only be for short periods of time to accommodate special events such as weddings, funerals, and special masses. The cathedral would be required to obtain a permit from the City on those days travel would be restricted due to such events. The permit would stipulate conditions that must be adhered to so traffic circulation is not adversely affected.

The Trinity Cathedral project also proposes the narrowing of 27th Street between Capitol Avenue and the alley to create a pedestrian-friendly environment (see Figure 2-25). This would include wider sidewalks, decorative street paving and enhanced landscaping. When completed, the improvements would not affect travel lane capacity or circulation patterns on Capitol Avenue (a designated emergency evacuation route), however, so emergency response access or evacuation would not be impeded. Impacts associated with project construction, temporary closure of a portion of 27th Street, and emergency access would all be considered ***less than significant***.

Mitigation Measure

None required.

CUMULATIVE IMPACTS

The cumulative context for hazardous materials use and emergency response/evacuation would be the City of Sacramento. The Trinity Cathedral project, in addition to other development that

would occur in the City of Sacramento, would increase the potential for exposure to hazardous materials.

There would be no cumulative impact related to proximity to proposed helistop operations at the SMCS. This feature is not yet permitted, and the proposed Trinity Cathedral project would not involve helicopter operations. The location of the proposed Trinity Cathedral reconstruction would be taken into consideration during agency review of the helistop permit application and technical evaluations. No further cumulative impact evaluation is required for this topic.

Impact 7.4-6: The Trinity Cathedral project, in combination with other development in the City of Sacramento, could increase the risk of exposure of people to hazardous materials.	
Significance Before Mitigation	Potentially Short-Term Significant
Mitigation Measures	Mitigation Measure 7.4-3
Significance After Mitigation	Less than Significant

Cumulative development in the City of Sacramento, including the proposed Trinity Cathedral project, could result in increased risk of exposure to hazardous materials due to: (1) hazardous substances that could be present in older buildings, (2) soil or groundwater from past site uses; and (3) routine use of hazardous materials.

Hazardous Materials Contamination

As previously stated, the existing structures on the Trinity Cathedral project site likely contain lead paint and/or ACBM. During demolition, workers or the public could be exposed to these substances if these materials are not properly identified prior to demolition, properly removed, and disposed of at permitted facilities. Soil or groundwater contamination could also be present, which could be encountered during site preparation. For any projects in the City of Sacramento that would develop or redevelop an existing site where hazardous building materials such as asbestos or lead-based paint is present, the potential exists for release of hazardous materials during demolition/renovation of those sites. Previously unidentified soil or groundwater contamination or buried items containing hazardous substances (e.g., old heating oil underground tanks) could also be encountered during excavation and other site preparation activities. For individuals not involved in demolition/construction activities, the greatest potential source of exposure to contaminants would be airborne emissions, primarily through construction-generated dust from demolition or grading. Other potential pathways, such as direct contact with contaminated materials would not pose as great a risk to the public because such exposure scenarios would typically be confined to the demolition/construction zones. This assumption is based on implementation of site-specific risk management controls and compliance with applicable laws and regulations pertaining to site cleanup and hazardous materials management at locations in the areas surrounding the project site. Moreover, an individual who is directly outside the demolition/construction zone of one source of hazardous materials would be unlikely to be exposed to maximum levels from another source. Such exposure would typically be site-specific and would involve accidental or inadvertent exposure to hazardous building materials. Associated health and safety risks would generally be limited to those individuals working with the hazardous building materials or to persons in the project site. Furthermore, such impacts would only be temporary and intermittent. The cumulative effect would be a **potentially significant short-term impact**, but the project's contribution to releases of asbestos, lead-based paint, or other hazardous emissions and exposure to unidentified

contaminants in soil or ground water, in combination with other projects in the surrounding area, would not be cumulatively considerable with implementation of Mitigation Measures 7.4-1 and 7.4-2.

Hazardous Materials Use

The construction and operation of current and future projects within the City of Sacramento would continue to involve the use of hazardous materials, including projects within ¼ mile of a school. Projects that use, store, or dispose of hazardous materials would be required to comply with federal, State and local regulations to ensure the safe handling of these materials. Due to strict regulation, the risk of release or exposure to hazardous materials within Sacramento would be minimized. Associated health and safety risks would generally be limited to those individuals using the materials or to persons in the immediate vicinity of the materials. Although the risk of accident or inadvertent releases cannot be completely avoided, hazardous materials incidents would typically be site-specific, generally one-time occurrences that would not combine with similar effects elsewhere. Implementation of applicable hazardous materials management laws and regulations adopted at the federal, State, and local level, which are monitored by the City of Sacramento and SCEMD, would ensure cumulative impacts related to hazardous materials use remain less than significant.

Operation of the Trinity Cathedral project is not, however, anticipated to use or store hazardous materials in any substantial amounts. Because the proposed project's net contribution to this less-than-significant cumulative impact would be a small increment, the project's contribution would be less than cumulatively considerable, and no mitigation is required.

Mitigation Measure

Implementation of Mitigation Measure 7.4-3 would identify previously unknown hazards prior to demolition or construction of the project. Once identified, hazardous materials would be removed and handled consistent with applicable regulations. This would minimize potential risks associated with hazardous materials and, therefore, would reduce the project's contribution to cumulative risk due to hazardous materials to a *less-than-significant level*.

7.4-3 Implement Mitigation Measures 7.4-1 and 7.4-2.

Impact 7.4-7: Implementation of the Trinity Cathedral project in combination with other projects within the City involving changes in traffic circulation could interfere with emergency response plans and/or emergency evacuation plans.	
Significance Before Mitigation	Less than Significant
Mitigation Measures	None required
Significance After Mitigation	N/A

It may be necessary to restrict travel on nearby roadways to facilitate construction activities during construction of the Trinity Cathedral project. Although such restrictions would be

temporary, they could cause an increase in traffic volumes on adjacent roadways. If these restrictions coincide with other closures from other projects, emergency response access/evacuation or response times could be adversely affected. All construction projects in the City that could affect pedestrian or vehicle traffic are required to complete and implement a Construction Traffic Management Plan to the satisfaction of the City (see Impact 7.4-5), which would ensure the combined effect of simultaneous construction projects on pedestrian or vehicle routes would not be cumulatively significant. Further, construction projects would be of limited duration, and there would be no permanent effect.

Similarly, when special events are held throughout the City that could affect pedestrian or vehicle circulation, the City requires that project sponsors obtain and comply with special permits issued by the City to allow for parking or access restrictions. Special events at Trinity Cathedral would be subject to the same requirements. Such effects throughout the City would be site-specific and generally would not combine with similar effects elsewhere in the City; therefore, cumulative effects would not be significant.

City-sponsored improvements to local roadways, such as traffic-calming measures, take into account the need for emergency response and evacuation to ensure the improvements do not adversely affect public safety. Because the proposed project would not result in any permanent changes to local roadway circulation patterns as a result of pedestrian-scale enhancements along 27th Street, the project effects would be ***less than cumulatively considerable***.

Mitigation Measure

None required.

7.5 Hydrology and Water Quality

7.5 Hydrology and Water Quality

INTRODUCTION

This section addresses the hydrologic effects of the Trinity Cathedral project related to urban stormwater runoff and dewatering during construction. Applicable federal, State, and local regulations relevant to these topics are also included in this section. Impacts associated with water supply and the capacity of the storm drainage system of the project area are also discussed in greater detail in section 7.8, Utility Systems as well as in Section 6.5, Hydrology and Water Quality, of the SMCS project portion of this EIR.

Comments received in response to the January 2004 NOP (see Appendix D) did not raise any specific issues or concerns regarding hydrology and water quality.

The Initial Study (see Appendix E) prepared for the Trinity Cathedral project determined that the project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge, would not significantly impact water quality, is not located within the 100-year flood hazard zone, and is not subject to inundation by seiche, tsunami, or mudflow. These issues will not be discussed further in this EIR.

The Initial Study prepared for the SMCS project and the Trinity Cathedral project (see Appendix E) determined the following impacts to be less than significant: 100-year flood hazard, pollutants in construction site runoff depletion of groundwater supplies, inundation by seiche, tsunami, or mudflow, and dam failure inundation. Therefore, these issues will not be discussed in this section.

ENVIRONMENTAL SETTING

The Trinity Cathedral project site is located within the same area as the SMCS project, approximately two miles east of the Sacramento River and a little over one mile south of the American River in an urbanized portion of downtown/midtown Sacramento. The site is flat, and there are no natural drainage or surface waters within the site boundaries. Existing uses on the site are Trinity Cathedral, an administration/classroom building, and parking and landscaping.

Identical to the SMCS project, stormwater runoff within project site is currently collected by the City's Combined Sewer System (CSS) and transported to the Sacramento Regional Wastewater Treatment Plant (SRWTP) or the City's Wastewater Treatment Plant (CWTP) for treatment before discharging into the Sacramento River. The CSS and two wastewater treatment plants operate under current NPDES permits regulated by the Central Valley Regional Water Quality Control Board (CVRWQCB). Ambient water quality in the Sacramento River is significantly influenced by agricultural drainage, mine drainage, urban runoff, and National Pollution Discharge Elimination System (NPDES) industrial, municipal and construction discharges. With few exceptions, ambient water quality characteristics consistently meet applicable regulatory limits in the Sacramento River.

Please refer to Section 6.5, Hydrology and Water Quality, and Section 6.8, Utility Systems, for additional discussion about these features.

Groundwater within the project area has been recorded at fairly shallow depths. Groundwater has been reported at a depth of 20 feet below ground surface, flowing in a southeast direction. Groundwater quality in the regional sub-basin is generally within the secondary drinking water standards for municipal use. There are no known groundwater contamination issues at the site (see Section 6.4, Hazards and Public Safety).

The reader is referred to Section 6.5, Hydrology and Water Quality, for additional information about the hydrologic and water quality characteristics of the project area and Sacramento region.

REGULATORY SETTING

The Trinity Cathedral project and the SMCS project are both located in the City of Sacramento. Storm drainage, dewatering, and management of urban stormwater runoff for the Trinity Cathedral project would be regulated by the same agencies as the SMCS project. As such, the regulatory setting for the SMCS project would also apply to the Trinity Cathedral project. More specifically, the Trinity Cathedral project would need to comply with the City's standards for stormwater discharges into the CSS, construction dewatering, and limits on pollutants in urban runoff discharged to the CSS. The following summarizes the information presented in Section 6.5, Hydrology and Water Quality, and Section 6.8, Utility Systems, regarding these requirements.

The project area is served by the City of Sacramento's CSS, a wastewater collection system designed to convey domestic sewage, commercial and industrial wastewater, and surface stormwater runoff in a single pipeline. The capacity of the CSS is limited and requires all additional stormwater inflow into the system be mitigated. These requirements are outlined in Sections 6.8 and 7.8 (Utility Systems).

Stormwater runoff, dry weather surface runoff, wash water related to street cleaning or maintenance, infiltration, and drainage related to storm events is regulated under a joint NPDES permit (No. CAS085297), as described in greater detail in Section 6.5, Hydrology and Water Quality. The permit regulates the discharge of all wet and dry weather urban storm water runoff within the City of Sacramento and requires the City to implement Best Management Practices (BMPs) to reduce pollutants in stormwater. The Trinity Cathedral project would be required to include BMPs in drainage features at the site.

Groundwater discharges to the CSS from construction and/or long-term dewatering of excavated sites are regulated and monitored by the City's Utilities Department pursuant to Department of Utilities Engineering Services Policy No. 0001, adopted as Resolution No. 92-439 by the Sacramento City Council. The City requires that any short-term discharge be permitted, or an approved Memorandum of Understanding (MOU) for long-term discharges be established, between the discharger and the City. Short-term limited discharges of seven days duration or less must be approved through the City Department of Utilities by acceptance letter, and a permit must be obtained from the SRCSD Industrial Waste Group. Long-term discharges of greater duration than seven days must be approved through the City Department of Utilities and the City Manager through a MOU process.

City of Sacramento General Plan

The following goals and policies from the City of Sacramento General Plan are applicable to the Trinity Cathedral project:

Utilities - Drainage

Goal A: Provide adequate drainage facilities and services to accommodate desired growth level.

Policy 1: Ensure that all drainage facilities are adequately sized and constructed to accommodate the projected increase in stormwater runoff from urbanization.

IMPACTS AND MITIGATION MEASURES

Methods of Analysis

The qualitative analysis of the potential hydrology and water quality impacts is based on review of the Trinity Cathedral project site design and intended uses and information developed by the applicant's engineer to establish existing conditions, and to identify potential environmental effects, based on the standards of significance presented in this section. In determining the level of significance, the analysis assumes that the Trinity Cathedral project would comply with applicable ordinances and regulations.

Standards of Significance

For the purposes of this EIR, impacts to hydrology and water quality are considered significant if the proposed Trinity Cathedral project would:

- Violate any water quality standards or waste discharge requirements;
- Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
- Provide substantial additional sources of polluted runoff or otherwise substantially degrade water quality; or
- Create or contribute runoff water that would exceed the capacity of existing or planned wastewater or stormwater drainage systems.

Impact 7.5-1: Implementation of the Trinity Cathedral project could result in an increase in the rate of stormwater runoff from the project site, which could contribute to the potential for localized street flooding during large storm events.

Significance Before Mitigation	Less than Significant
Mitigation Measures	None required
Significance After Mitigation	N/A

The proposed Trinity Cathedral project would result in the demolition of the existing Cathedral and reconstruction of a new Cathedral at the same location. An existing multi-purpose space building would also be demolished and rebuilt on-site. The proposed new cathedral building would create 15,939 sf of space on the first floor, compared to 8,057 sf for the existing building. The proposed new multi-purpose building would create 10,500 sf of space on the first floor, compared to 15,409 sf for the existing building. It is assumed the existing and proposed first-floor square footages would also be the building footprints that would result in impervious surface coverage. Existing landscape plantings and hardscaping (e.g., sidewalks) are present at the site. Proposed pedestrian improvements would include new sidewalks around the Cathedral with areas of specialty paving at the main entrances and raised planters. The project would also include narrowing of 27th Street between Capitol Avenue and Trinity Lane (alley) to include wider sidewalks, decorative paving, and landscaping.

The site improvements would result in a small (approximately 10 percent) net increase in the amount of impervious surfaces at the site. This would generate a minimal increase in stormwater peak flows discharged to the CSS, as compared to existing conditions.

Due to the relatively small amount of potential increase in impervious surfaces, peak flow runoff from the Trinity Cathedral site would not measurably result in increased water surface elevations on the Sacramento River that could lead to flooding from increased water surface elevations or localized street flooding; therefore, impacts would be considered ***less than significant***.

Mitigation Measure

None required.

Impact 7.5-2: Implementation of the Trinity Cathedral project would generate stormwater runoff containing urban pollutants that could be discharged to the Sacramento River.

Significance Before Mitigation	Less than Significant
Mitigation Measures	None required
Significance After Mitigation	N/A

The Trinity Cathedral project would occur on land that currently contains urban development consisting primarily of impervious surfaces (parking lots, building rooftops, hardscaping, and roadways). Stormwater runoff from the project site contains varying types and amounts of chemical constituents typical of urban runoff. These pollutants are ultimately conveyed to the Sacramento River. Pollutants likely to occur in stormwater from the site include the target pollutants identified by the City of Sacramento’s *Stormwater Quality Improvement Plan* such as pesticides, metals, and fecal coliform, among other urban pollutants.

As discussed in Impact 7.5-1, development of the Trinity Cathedral project would generate a minimal net increase in stormwater runoff conveyed to the CSS (see also Impact 7.8-5 in Section 7.8, Utility Systems). Consequently, neither the rate nor volume of stormwater runoff discharged from the project site would result in a substantial increase in urban pollutant discharges to the river that would degrade river water quality or result in water quality violations. The types and concentrations of pollutants are not expected to vary significantly from existing conditions because the land uses would be nearly identical.

Modifications, if any, to the storm drain inlet locations and sizing to accommodate the Trinity Cathedral project would be a condition of project approval and would include stormwater quality BMPs, consistent with the City’s NPDES stormwater permit requirements and features in the existing system. This would ensure urban pollutants generated by the Trinity Cathedral project would continue to be managed in accordance with State and local regulations.

Because the Trinity Cathedral project would not result in a substantial net increase in urban pollutants in stormwater runoff and would include stormwater quality BMPs, discharges from the Trinity Cathedral project would not violate any water quality standards, exceed wastewater discharge requirements, or otherwise degrade water quality, and impacts would be **less than significant**.

Mitigation Measure

None required.

Impact 7.5-3: If dewatering is required during construction, groundwater would be discharged to the City’s CSS, which could affect CSS capacity and result in surface water quality impacts.	
Significance Before Mitigation	Less than Significant
Mitigation Measures	None required
Significance After Mitigation	N/A

Construction of the Trinity Cathedral would involve site preparation activities such as excavation and grading. Because some excavation activities of the Trinity Cathedral project could reach levels close to the depth of groundwater, dewatering activities may be necessary. Similarly, during the life of the project, shallow groundwater could infiltrate subsurface walls and foundations, potentially causing structural damage. The total volume of soil expected to be removed to accommodate the project is estimated to be 500 to 600 cubic yards. Some groundwater may need to be removed during project construction. If any groundwater is encountered it would be discharged to the CSS.

Groundwater discharges to the CSS are not accounted for in the CSS system design, so disposal of large volumes of extracted groundwater could cause localized overflows (street flooding) or Sacramento River outflows. Dewatering discharges could also temporarily or permanently remove sewer capacity from other system users. Shallow groundwater may also contain sediment that, if discharged to the treatment plant, could affect plant operating conditions or affect receiving water quality.

The City of Sacramento requires that any discharges of groundwater from construction foundation or basement dewatering be permitted through the City Utilities Department. All groundwater discharges to the sewer must also obtain a discharge permit from the SRCSD Industrial Waste Section. These requirements would be made part of the construction contract specifications and confirmed by City staff through the building permit process.

As discussed above, there are no known groundwater contamination issues at the site, so it is not anticipated that contaminated groundwater would be encountered during dewatering. However, part of the permitting process includes an assessment of groundwater quality. Should contaminants be detected in groundwater proposed for discharge to the CSS that were not previously detected, the City would require the applicant to initiate actions to control contaminant levels during dewatering.

The purpose of these requirements is to ensure project dewatering discharges to the CSS do not temporarily or permanently reduce system capacity to levels where overflows or outflows could occur and to protect influent and effluent water quality at the treatment plants. Such measures are necessary for the City to comply with adopted NPDES permits. Because there is an established regulatory mechanism in place that is enforced by the City and that would be applicable to the proposed project, the SMCS project would not violate any water quality standards or waste discharge requirements or cause exceedances of CSS capacity. Therefore, impacts would be ***less than significant***.

Mitigation Measure

None required.

CUMULATIVE IMPACTS

Potential impacts on hydrology and water quality are attributed to development not only within the City limits, but also in the Sacramento River watershed area that exists outside of the City limits. The context for the evaluation of potential cumulative impacts on stormwater runoff and water quality is defined within each impact.

Impact 7.5-4: The Trinity Cathedral project, in combination with other cumulative development in the CSS service area, would generate stormwater runoff that could result in localized flooding.

Significance Before Mitigation	Less than Significant
Mitigation Measures	None required
Significance After Mitigation	N/A

The CSS is considered an impacted system due to its lack of available capacity during storm events. During dry weather conditions, the CSS has enough available capacity to handle the total flow, which is primarily composed of sewage. During storm events, the combination of sewage and stormwater runoff has the potential to create localized street flooding.¹ Additional runoff from development within the CSS, including the project, could contribute to localized street flooding related to the exceedance of the system's capacity.

As discussed in Impact 6.5-5, the City has implemented a number of projects to address capacity issues, and funding mechanisms are in place for the projects. Moreover, future development in the CSS would be limited to infill and redevelopment projects, which would not create new, additional sources of stormwater runoff that could adversely affect system capacity. Therefore, with implementation of the existing City programs to ensure that capacity is available as growth occurs, this future growth would be accounted for in the system. The project would not result in an increase in impervious surfaces requiring mitigation, and the project's contribution would not be cumulatively considerable, resulting in a *less-than-significant cumulative impact*.

Mitigation Measure

None required.

Impact 7.5-5: Stormwater runoff from the Trinity Cathedral project, in combination with other cumulative development in the CSS service area, would discharge urban pollutants to the Sacramento River, which could affect water quality.

Significance Before Mitigation	Less than Significant
Mitigation Measures	None required
Significance After Mitigation	N/A

Cumulative urban development in the CSS service area would result in increased impervious surfaces which could increase the types and amounts of pollutants in stormwater runoff. Urban runoff within of the City and County of Sacramento, City of Folsom, City of Citrus Heights, City of Elk Grove and the City of Galt are regulated under a joint NPDES permit (No. CAS082597), and smaller jurisdictions, such as other cities in the Sacramento metropolitan area (e.g., Roseville, Rocklin) that also discharge urban runoff to the Sacramento River, were required to

¹ Batha, Rick, City of Sacramento, Department of Utilities, Personal Communication 5/26/04.

obtain permits under a Phase 2 program, which became effective in early 2003. The regional combined effect of the Phase 1 and Phase 2 programs is to reduce the types and amounts of urban pollutants discharged to waterways that drain to the Sacramento River. As discussed in Impact 7.5-2, the project's contribution to post-construction water quality impacts from urban development would be minimal due to the developed nature of the project site. Impacts would be **less than cumulatively considerable**.

Mitigation Measure

None required.

Impact 7.5-6:	The Trinity Cathedral project, in combination with other cumulative development in the CSS service area, would discharge groundwater from dewatering to the sewer.
Significance Before Mitigation	Less than Significant
Mitigation Measures	None required
Significance After Mitigation	N/A

Excavations requiring dewatering and subsurface features of new buildings in the downtown/midtown Sacramento area served by the CSS system are expected to require some level of dewatering because of shallow groundwater conditions. The volume of water removed and the rate and frequency it would be discharged to the sewer would be site-specific. If controls such as the City's permit process for dewatering were not in place, the combined effect of simultaneous and/or consecutive discharges could overwhelm the CSS system and/or adversely affect water quality in the system. It could also cause localized shifts in groundwater patterns that could cause areas of degraded groundwater quality to shift.

The dewatering protocol established by the City and enforced at the City level would apply to the proposed project and other development where dewatering is needed in the CSS service area. City staff review of permit applications for dewatering would allow the City to determine the volumes and frequencies of discharges that would be allowed to the CSS from each project to ensure capacity is not exceeded and water quality violations do not occur. This would ensure the project's contribution would be less than cumulatively considerable, and impacts would be **less than significant**.

Mitigation Measure

None required.

7.6 Noise

7.6 Noise

INTRODUCTION

This section evaluates the potential noise impacts due to and upon development of the Trinity Cathedral project, including the potential for adverse impacts associated with a substantial temporary and/or permanent increase in ambient noise levels within or around the project site or exposure of people to excessive noise levels, groundborne vibration, or groundborne noise levels and whether this exposure is in excess of standards established in the City's General Plan or Noise Ordinance.

The Trinity Cathedral project does not include helicopter operations; therefore, this issue will not be discussed in this section.

There were no comments specific to noise associated with the Trinity Cathedral project in response to the January 2004 NOP.

The Initial Study (see Appendix E) prepared for the Trinity Cathedral project determined that the project is not located within an airport land use plan or within two miles of a public airport, public use airport, or private airstrip. These issues will not be discussed further in this EIR.

Sources reviewed for this section include the *Sacramento Air Quality Management District Guide to Air Quality Assessment in Sacramento County* and the California Air Resources Board Web site.

ENVIRONMENTAL SETTING

Noise is often described as unwanted sound. Sound is defined as any pressure variation in air that the human ear can detect. If the pressure variations occur frequently enough (at least 20 times per second), they can be heard and hence are called sound. The number of pressure variations per second is called the frequency of sound, and is expressed as cycles per second, called Hertz (Hz).

The existing noise environment and information pertaining to acoustical terminology is included in Section 6.6. Because the Trinity Cathedral project site is located within the SMCS project area, the environmental setting for noise is the same; therefore, the reader is referred to Section 6.6. Only those site-specific issues that are unique to the Trinity Cathedral project will be discussed in this section.

Project Location and Existing Land Uses in the Project Vicinity

Trinity Cathedral is located on the southwest corner of 27th Street and Capitol Avenue in midtown Sacramento. The Trinity Cathedral project would involve demolition of the existing 8,057 square foot (sf) cathedral building and constructing a new 37,100 sf building at the same location, along with a new administrative, multi-purpose space.

REGULATORY SETTING

The Trinity Cathedral project and the SMCS project are both located in the same community in the City of Sacramento. Consequently, the two projects would be regulated by the same agencies, laws, and public policies. Please see Section 6.6 for a description of the applicable regulatory setting.

IMPACTS AND MITIGATION MEASURES

Methods of Analysis

The methods of analysis for evaluating noise impacts from the Trinity Cathedral are the same as those used for the SMCS project. This includes those methods used to evaluate noise from construction and operation of the Cathedral, and vibration impacts from project construction. Please see Section 6.6 for a description of this methodology. Because the Trinity Cathedral project would not involve a helistop, the methods that were used to evaluate helicopter noise created by the SMCS project are not applicable to the Cathedral project.

Standards of Significance

For the purposes of this EIR, an impact is considered significant if the Trinity Cathedral project would:

- Expose noise-sensitive land uses in the project vicinity to traffic noise levels in excess of the City of Sacramento General Plan Noise Element standards or result in a perceptible ambient noise level increase of 5 dB;
- Expose existing residences to noise levels in excess of the standards contained within the City of Sacramento Noise Ordinance standards;
- Result in residential interior noise levels of 45 L_{dn} or greater caused by noise level increases due to the project;
- Expose residences to groundborne vibration decibels (VdB) in excess of 81 VdB; or
- Expose occupied existing and project residential and commercial areas to vibration that would compromise the structural integrity of these buildings.

Impact 7.6-1: Construction activities associated with the Trinity Cathedral project would intermittently generate noise levels above existing ambient levels in the project vicinity.	
Significance Before Mitigation	Short-term Significant
Mitigation Measures	Mitigation Measure 7.6-1
Significance After Mitigation	Short-term Significant and Unavoidable

During construction of the Trinity Cathedral project, noise levels that would be produced by operation of construction equipment would be similar to those that would be produced during construction of the SMCS project. This construction noise would affect surrounding uses, but would be temporary, lasting only until the project is constructed. The closest sensitive receptors are residences located across Capitol Avenue to the north.

The Sacramento Municipal Code, Title 8 – Health and Safety, Chapter 8.68 – Noise Control, states that “it is unlawful for any person to make or continue or cause to be made or continued 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”. This chapter also sets “not-to-be-exceeded” exterior noise standards for residential and agricultural property.

Construction associated with the Trinity Cathedral project would occur during daytime hours in accordance with the provisions of the Sacramento Municipal Code. It can be assumed that most people living in the area would be gone during the day. However, due to the proximity of sensitive receptors including a senior housing project and Sutter General Hospital as well as other medical offices, it is assumed these people would be affected by construction noise. As shown in Table 6.6-7 on page 6.6-19 of Section 6.6, Noise, certain pieces of impact equipment could produce peak levels of up to 98 dBA L_{eq} at 50 feet. Jack-hammers or other impact equipment would be expected to be used during demolition of the existing buildings. Since noise from a point source usually attenuates at approximately 6 dBA per doubling of distance, this would result in noise levels of about 101 dBA L_{eq} at 100 feet, and 95 dBA L_{eq} at 200 feet when this activity was ongoing. Noise levels such as these would be noticeable at nearby residential uses, and could possibly disturb people that may be trying to sleep.

The City of Sacramento Municipal Code exempts construction activities from the noise standards specified elsewhere in the Municipal Code. However, this would not reduce the levels of construction noise experienced by occupants of nearby buildings during the day. Construction activities such as the use of jackhammers and trucks would also produce high levels of noise. Consequently construction noise, at least during the initial phases of demolition and grading, would create a **short-term significant impact** to surrounding uses.

Mitigation Measure

The following measures would reduce construction noise. However, it is not likely that construction noise would be reduced to the point that the impact would be substantially lessened. Consequently, this would remain a *short-term significant and unavoidable impact*.

7.6 Noise

7.6-1 The project applicant shall require all construction contracts include the following provisions:

- (a) All construction equipment shall be equipped with factory matching mufflers and in good working order.
- (b) All staging areas, and water tanks shall be located as far away from residential and other noise-sensitive uses as possible.

Impact 7.6-2: Construction activities could result in groundborne vibration.	
Significance Before Mitigation	Less than Significant
Mitigation Measures	None required
Significance After Mitigation	N/A

In addition to construction noise, construction activity would 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 6.6-8 on page 6.6-19 of Section 6.6, Noise, shows typical vibration levels for construction equipment.

Construction-related vibration has two potential impacts. First, vibration at high enough levels can disturb people trying to sleep. Thresholds for this vibration have been developed by the Federal Railway Administration, which has determined that any vibration over 80 vibration decibels (VdB) can be a significant impact at places where people sleep. Second, groundborne vibration can potentially damage the foundations and exteriors of existing, older structures. Groundborne vibration that can cause this kind of damage is typically limited to impact equipment, especially pile-drivers. Pile driver vibration can affect the structural integrity of existing buildings up to 50 feet away.

The closest buildings not owned by the Cathedral are over 50 feet away from the project site boundary. As shown in Table 6.6-8 on page 6.6-19 of Section 6.6, Noise, this distance would ensure that VdB levels would not exceed the 80 VdB threshold at which disturbance could occur.

Structural damage to existing buildings due to construction vibration would only be an issue during pile-driving, since pile-drivers are the only pieces of impact equipment that produce peak particle velocity levels great enough to result in this kind of damage. Currently, pile-driving is not expected to occur as part of the project. Instead, the project applicant intends to use ground-drilling equipment in order to sink piles.

Because the nearest existing sensitive buildings to the project site are all at least 50 feet away, construction-related vibration would not reach the 80 VdB threshold of significance and would not cause annoyance to occupants of these buildings. Likewise, since no pile-driving would occur, construction activities would not generate vibration levels that could result in structural damage. Consequently construction vibration would be a **less-than-significant impact**.

Mitigation Measures

None required.

Impact 7.6-3: The Trinity Cathedral project could result in an increase in existing noise levels at existing land uses in the project vicinity.	
Significance Before Mitigation	Less than Significant
Mitigation Measures	None required
Significance After Mitigation	N/A

The expansion of Trinity Cathedral would increase the square footage of the cathedral and its associated buildings by almost 30,000 sf. This would allow more activities to take place at the cathedral. It would also allow a greater number of congregants to worship at the cathedral during services. As activities at the church increase in number and size, noise levels could also increase.

The largest event that is expected to occur at the church on a regular basis would be the weekly Sunday worship services. While an increase in the number of attendees might be expected as the sanctuary expands, it is not likely that this increase would result in additional noise that may affect nearby receptors. The church services would occur indoors, minimizing the noise that would be heard at other properties. Also, the portion of the services that produce the highest levels of sound would most likely be the music associated with the worship services. This music would continue once the expansion of the cathedral is complete, but it is doubtful whether the music would require much more additional amplification to accommodate more service attendees.

Other activities, such as church meetings or church fellowship activities would be expected to increase in number and/or size as the cathedral's size increases. These types of activities do not typically generate high levels of noise.

An increase in traffic could occur as the number of people attending functions at the cathedral increases. Any new traffic generated by the project would not cause traffic volumes to increase throughout the day. Instead, it is expected that traffic volumes would be higher only before and after events, as people arrive and depart from the events. Table 7.6-1 shows Existing and Existing Plus Project traffic noise levels. As shown in the table, the most that traffic noise levels on roadways in the vicinity of the cathedral would increase would be approximately 0.4 dB L_{dn} . This would not be a perceptible increase.

Because expansion of Trinity Cathedral is not expected to result in operational noise increases that would be substantial enough to impact nearby sensitive receptors, this would be considered a ***less-than-significant impact***.

Mitigation Measures

None required.

Table 7.6-1

**Existing Traffic Noise Levels With and Without
Trinity Cathedral Project**

Roadway	Segment	Noise Levels (L _{dn}) 35 Feet From Centerline		
		Existing No Project (dB)	Existing Plus Project (dB)	Change (dB)
J Street	27 th /28 th	66.8	66.8	0
J Street	28 th /29 th	67.0	67.0	0
26 th Street	K/L	55.4	55.8	+0.4
26 th Street	L/Capitol Avenue	55.4	55.3	-0.1
26 th Street	Capitol Avenue/N	54.7	55.0	+0.3
K Street	27 th /28 th	64.5	64.5	0
K Street	28 th /29 th	65.0	65.0	0
L Street	25 th /26 th	63.6	63.8	+0.2
L Street	26 th /27 th	63.5	63.7	+0.2
28 th Street	J/K	59.5	59.5	0
28 th Street	N/O	58.2	58.2	0
29 th Street	L/Capitol Avenue	66.3	66.3	0
Capitol Avenue	25 th /26 th	63.9	64.2	+0.3
Capitol Avenue	26 th /28 th	64.1	64.5	+0.4
Capitol Avenue	28 th /29 th	64.8	64.9	+0.1
N Street	27 th /28 th	63.9	64.0	+0.1

Source: EIP Associates, 2005.

CUMULATIVE IMPACTS

The cumulative context for the Trinity Cathedral project is the existing and future uses in the vicinity of the project area that would contribute noise and combine with the noise generated by the project to potentially affect sensitive receptors in the surrounding area. Cumulative construction noise is not usually addressed because this is a short-term condition.

Impact 7.6-4:	The Trinity Cathedral project, in addition to other development in the vicinity of the project area, could add to a cumulative increase in noise levels.
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Significance Before Mitigation	Less than Significant
Mitigation Measures	None required
Significance After Mitigation	N/A

The Trinity Cathedral project would contribute to the overall noise levels created by development in the project's vicinity. Because the project area is a dense urban area in the central part of Sacramento, there are already many existing noise sources, and noise levels overall in this area are relatively high.

The Trinity Cathedral project may add to noise levels at certain times as a result of traffic and church activities, but since events at the cathedral would occur intermittently any noise increases would not be experienced constantly throughout the day. High existing noise levels in the area indicate that the project's incremental contribution to overall noise levels in the area would be quite small, and would not be cumulatively considerable. Cumulative future traffic noise, both with and without the project, is shown in Table 7.6-2. As shown, the project would not add more than 0.5 dB L_{dn} to existing traffic noise levels along any existing roadway. Seven road segments would actually experience traffic noise decreases as a result of the project. Consequently, this would be considered a *less-than-significant cumulative impact*.

Table 7.6-2

**Future (Year 2025) Traffic Noise Levels With
and Without Trinity Cathedral Project**

Roadway	Segment	Noise Levels (L _{dn}) 35 Feet From Centerline		
		Future No Project (dB)	Future Plus Project (dB)	Change (dB)
J Street	27 th /28 th	67.9	68.0	+0.1
J Street	28 th /29 th	68.3	68.3	0
26 th Street	K/L	55.3	55.2	-0.1
26 th Street	L/Capitol Avenue	55.5	55.5	0
26 th Street	Capitol Avenue/N	54.7	54.8	+0.1
K Street	27 th /28 th	65.3	65.3	0
K Street	28 th /29 th	65.8	65.8	0
L Street	25 th /26 th	64.9	64.9	0
L Street	26 th /27 th	65.2	64.9	-0.3
28 th Street	J/K	59.3	59.8	+0.5
28 th Street	N/O	58.8	58.8	0
29 th Street	L/Capitol	66.9	66.3	-0.6
Capitol Avenue	25 th /26 th	65.8	65.7	-0.1
Capitol Avenue	26 th /28 th	66.0	65.9	-0.1
Capitol Avenue	28 th /29 th	65.5	65.4	-0.1
N Street	27 th /28 th	64.4	64.2	-0.2

Source: EIP Associates, 2005.

7.7 Transportation and Circulation

7.7 Transportation and Circulation

INTRODUCTION

The Transportation and Circulation section discusses existing and cumulative (2025) transportation and circulation conditions associated with the Trinity Cathedral project. The analysis includes an evaluation of impacts to intersections, roadway and freeway segments, freeway ramps, and freeway merge/diverge operations from traffic generated by the project. Potential impacts to transit, bicycles, pedestrians, and parking are also included in the analysis. Quantitative analyses of a.m. and p.m. peak hour conditions have been conducted for the following scenarios:

- Existing without Trinity Project (included in Section 6.7)
- Existing with Trinity Project
- Cumulative without Trinity Project (included in Section 6.7)
- Cumulative with Trinity Project
- Cumulative with SMCS Program and Trinity Project (included in Section 6.7)
- Cumulative without Project with City's Two-Way Conversion Project (included in Section 6.7)
- Cumulative with SMCS Program and Trinity Project with Two-Way Conversion (included in Section 6.7)

Preparation of the Transportation and Circulation section included review of various sources of information. These sources include, but are not limited to, the 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, and Sacramento Central City Two-Way Conversion Studies.

Comments received in response to the 2004 Notice of Preparation (NOP) addressed several subject areas including study content, study area, parking impacts, and construction impacts. Please see Appendix D for a copy of all the NOP comment letters received.

Trinity Cathedral Project

As illustrated in Figure 6.7-1 (see Section 6.7), the project site is located at 27th Street and Capitol Avenue within the SMCS project area.

The Trinity Cathedral project would include a new cathedral building of approximately 37,100 square feet (sf), and a new multi-purpose building of 30,750 sf. These facilities would replace

the existing Cathedral and administrative/multi-purpose building. In addition, the Trinity Cathedral project is proposing to narrow the portion of 27th Street between Capitol Avenue and the alley (Trinity Lane) to create a more pedestrian-friendly environment. The narrowing may include wider sidewalks, decorative paving, and landscaping. The project applicant may also request the temporary closure of this portion of 27th Street for weddings, special services, and other events.

ENVIRONMENTAL SETTING

The Trinity Cathedral project site is located within the SMCS project area; therefore, the existing transportation system will be identical to that discussed as part of the SMCS project in Section 6.7 of this EIR. Please see Section 6.7 for a detailed discussion of the environmental setting.

Only those issues that are unique to the Trinity Cathedral project or the Trinity Cathedral project site will be discussed in this section.

REGULATORY SETTING

Please see Section 6.7 for a complete discussion of the applicable regulatory context.

IMPACTS AND MITIGATION MEASURES

Methods of Analysis

Analysis of the “Existing with Trinity Project” scenario consists of estimating the traffic “generated” by the Trinity Cathedral 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 used to determine roadway operating conditions. The conditions are then compared to existing conditions in accordance with the standards of significance to determine the significance of project traffic impacts.

Trip Generation

Trip generation of the Trinity Cathedral project and project alternatives is based upon data collected specifically for this study as well as information on trip generation compiled by the Institute of Transportation Engineers (*Trip Generation, Seventh Edition*).

Table 6-7.13 in Section 6.7 summarizes the project trip generation during the a.m. and p.m. peak hours. The project is estimated to generate 32 vehicle trips during the a.m. peak hour, and 29 vehicle trips during the p.m. peak hour.

Trip Distribution and Assignment

The distribution and assignment of project trips to the roadway network was accomplished through a specialized travel model developed for the City of Sacramento. This travel model is currently being used in the analysis of the City's Central City Two-Way Conversion Study. The travel model distributes project trips throughout the region, and assigns the trips to specific roadway paths. Figure 6.7-8 in Section 6.7 illustrates the distribution of vehicular trips associated with the Trinity Cathedral project.

Standards of Significance

The standards of significance in this analysis are based upon the City of Sacramento standards and current practice of the appropriate regulatory agencies.

Intersections

For the purposes of this EIR, impacts to intersections are considered significant if the Trinity Cathedral project would:

- Degrade peak period level of service from A, B, or C (without project) to D, E, or F (with project); or,
- Increase the peak period average vehicle delay by five seconds or more if the LOS (without project) is D, E, or F.

Freeway System

For the purposes of this EIR, impacts to the freeway system are considered significant if the Trinity Cathedral project would:

- Allow off-ramps with vehicle queues that extend into the ramp's deceleration area or onto the freeway;
- Add traffic to a freeway facility that is already operating at LOS "F";
- Increase traffic volumes to cause any ramp's merge/diverge level of service to be worse than the freeway's level of service; or
- Project traffic increases that cause the freeway level of service to deteriorate beyond level of service "E."

Bikeways

For the purposes of this EIR, impacts to existing bikeways are considered significant if the Trinity Cathedral project would:

- Hinder or eliminate an existing designated bikeway, or if the project interfered with implementation of a proposed bikeway; or

- Result in unsafe conditions for bicyclists, including unsafe bicycle/pedestrian or bicycle/motor vehicle conflicts.

Pedestrian Facilities

For the purposes of this EIR, impacts to existing pedestrian facilities are considered significant if the Trinity Cathedral project would:

- Result in unsafe conditions for pedestrians, including unsafe increase pedestrian/ bicycle or pedestrian/motor vehicle conflicts.

Transit System

For the purposes of this EIR, impacts to the existing transit system are considered significant if the Trinity Cathedral project would:

- Generate ridership, when added to existing or future ridership, which exceeds available or planned system capacity. Capacity is defined as the total number of passengers the system of buses and light rail vehicles can carry during the peak hours of operation.

Parking

For the purposes of this EIR, impacts to parking are considered significant if the Trinity Cathedral project would:

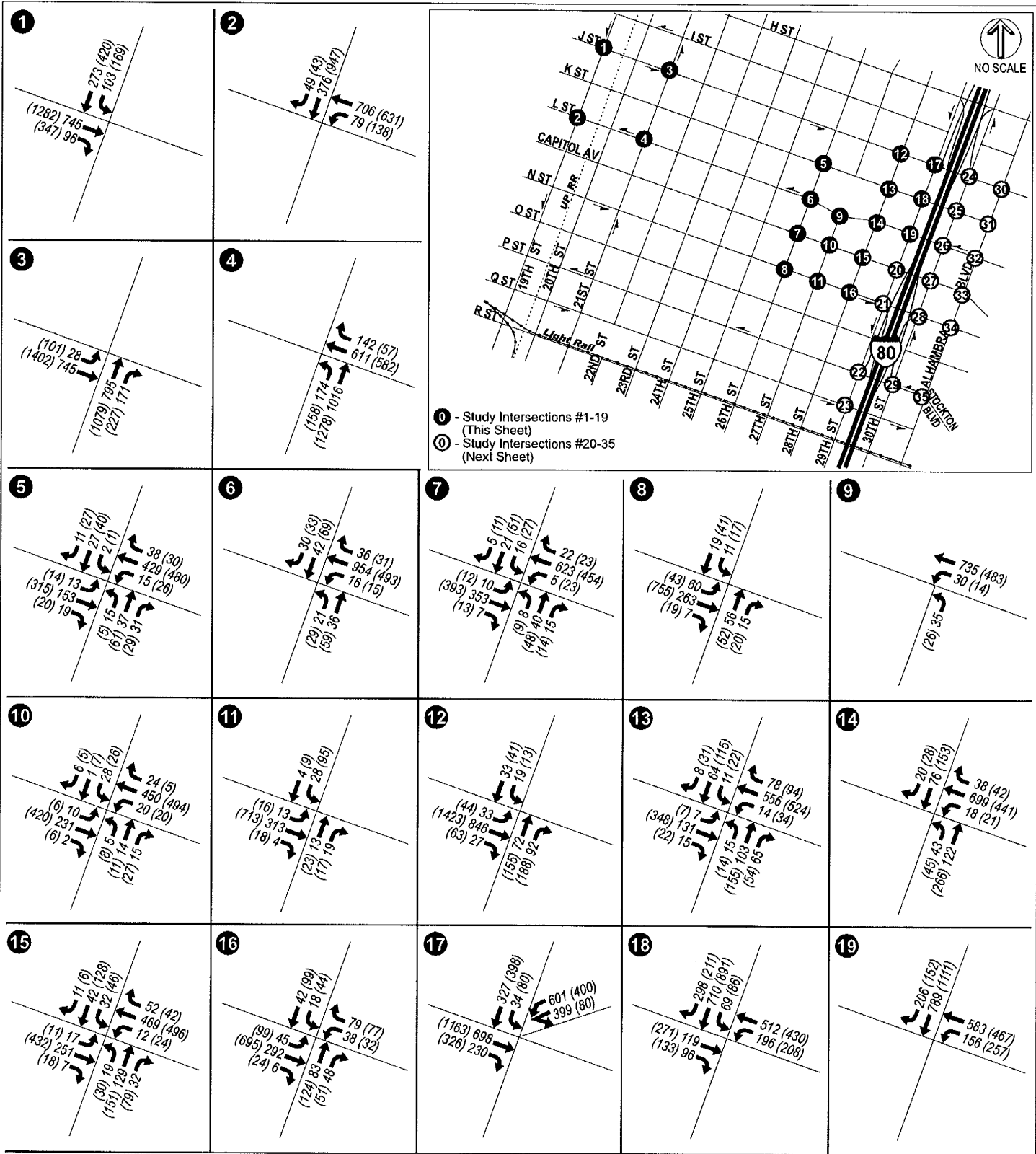
- Result in an increase in parking demand that exceeds the estimated parking supply.

Impact 7.7-1: Intersections – The Trinity Cathedral project would increase traffic volumes at study intersections.	
Significance Before Mitigation	Less than Significant
Mitigation Measures	None required
Significance After Mitigation	N/A

The Trinity Cathedral project would increase traffic volumes at study area intersections. Figure 7.7-1 illustrates the a.m. and p.m. peak hour intersection volumes. Table 7.7-1 summarizes the resultant conditions. The changes in intersection operating conditions with the addition of project-generated traffic would not exceed the standards of significance for impacts to intersections. Therefore, the impacts are considered ***less than significant***.

Mitigation Measures

None required.



Study Intersections Continued Next Page

LEGEND

1 - Study Intersection & Number

← AM (PM) - Peak Hour Traffic Volume

NO SCALE

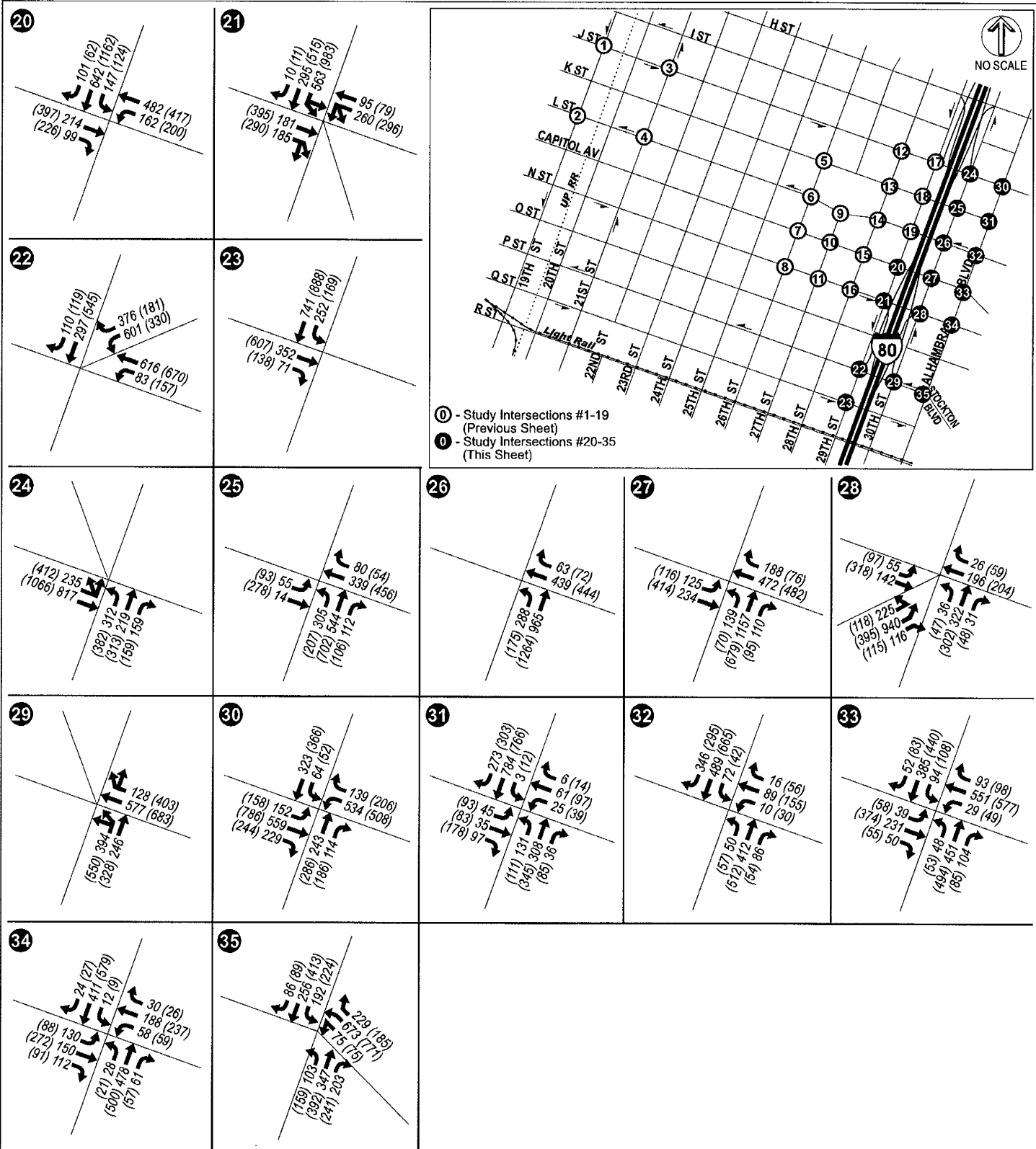
DKS Associates

TRANSPORTATION SOLUTIONS

Figure 7.7-1 (1 of 2)

EXISTING PLUS

TRINITY PROJECT VOLUMES



Study Intersections Continued from Previous Page

LEGEND

- ① - Study Intersection & Number
- ← AM (PM) - Peak Hour Traffic Volume



NO SCALE

DKS Associates
TRANSPORTATION SOLUTIONS

Figure 7.7-1 (2 of 2)
EXISTING PLUS
TRINITY PROJECT VOLUMES

Table 7.7-1

Existing Plus Trinity Project Intersection Operating Conditions

Intersection	A.M. Peak Hour				P.M. Peak Hour			
	Without Project		With Trinity Project		Without Project		With Trinity Project	
	LOS	Delay (seconds)	LOS	Delay (seconds)	LOS	Delay (seconds)	LOS	Delay (seconds)
1. 19th and J Streets	A	9.9	A	9.9	B	11.0	B	11.2
2. 19th and L Streets	A	6.3	A	6.3	A	6.9	A	7.7
3. 21st and J Streets	A	3.0	A	3.4	A	5.5	A	5.8
4. 21st and L Streets	A	8.8	A	9.0	B	10.1	B	10.5
5. 26th and K Streets	A	2.5	A	2.6	A	3.5	A	3.4
6. 26th and L Streets	B	10.9	B	10.4	A	9.8	A	9.7
7. 26th Street and Capitol Ave.	B	9.9	A	9.7	B	10.8	B	10.7
8. 26th and N Streets	A	8.2	A	8.2	B	12.3	B	10.1
9. 27th and L Streets	A	0.9	A	0.8	A	0.7	A	0.7
10. 27th St. and Capitol Ave.	A	1.4	A	1.6	A	1.7	A	1.8
11. 27th and N Streets	A	1.5	A	1.8	A	1.1	A	1.8
12. 28th and J Streets	B	12.8	B	12.8	B	15.9	B	15.9
13. 28th and K Streets	B	10.5	B	10.5	B	10.1	A	9.7
14. 28th and L Streets	A	7.6	A	7.4	A	9.9	A	9.9
15. 28th St. and Capitol Ave.	B	7.9	A	7.8	B	10.9	B	10.7
16. 28th and N Streets	B	18.7	A	18.5	B	15.3	B	12.5
17. 29th and J Streets	B	19.9	B	19.9	B	17.0	B	17.0
18. 29th and K Streets	B	10.7	B	10.9	B	11.4	B	11.6
19. 29th and L Streets	A	6.8	A	6.3	B	10.2	B	10.1
20. 29th St. and Capitol Ave.	A	5.4	A	5.4	A	7.9	A	8.9
21. 29th and N Streets	B	20.0	B	20.0	C	21.9	C	21.8
22. 29th and P Streets	B	17.3	B	17.3	B	14.4	B	14.3
23. 29th and Q Streets	A	6.0	A	6.0	A	9.2	A	9.3
24. 30th and J Streets	A	7.8	A	8.0	A	5.8	A	5.8
25. 30th and K Streets	A	7.6	A	7.6	B	10.2	A	9.6
26. 30th and L Streets	A	6.9	A	7.1	A	9.1	A	9.0
27. 30th St. and Capitol Ave.	B	10.9	B	11.1	B	12.3	B	14.7
28. 30th and N Streets	B	19.7	B	19.9	B	16.8	B	16.2
29. 30th and P Streets	A	8.6	A	8.7	A	9.2	A	9.1
30. Alhambra Blvd. and J St.	B	19.0	B	19.8	C	21.1	C	20.9
31. Alhambra Blvd. and K St.	A	8.1	A	7.8	A	8.6	A	8.7
32. Alhambra Blvd. and L St.	B	16.4	A	8.5	B	10.3	B	10.3
33. Alhambra Blvd. and Capitol Avenue	C	25.2	C	28.0	C	28.7	C	28.5
34. Alhambra Blvd. and N St.	B	13.3	B	13.1	B	17.1	B	16.4
35. Alhambra Blvd. and P St.	C	24.5	C	25.5	C	28.0	C	28.2

Source: DKS Associates, 2005.

Impact 7.7-2: Freeway System – The Trinity Cathedral project would increase traffic volumes on the freeway system.	
Significance Before Mitigation	Significant
Mitigation Measures	None available
Significance After Mitigation	Significant and Unavoidable

The Trinity Cathedral project would increase traffic volumes on the freeway system. Tables 7.7-2 through 7.7-4 summarize the resultant conditions. The changes in the freeway system operating conditions with the addition of project-generated traffic would exceed the standards of significance for impacts to the freeway system because the Trinity Cathedral project would add trips to a freeway that is currently operating at LOS “F”. Even though the project would only contribute a very small number of trips, Caltrans considers the addition of only one car significant. Intersection queuing on freeway exit ramps is not anticipated to extend into critical areas. Therefore, impacts associated with traffic volumes on freeways are considered *significant*.

Mitigation Measures

No mitigation measures are available to reduce traffic volumes on the freeway system; therefore, the impact would be *significant and unavoidable*.

None available.

Impact 7.7-3: Bikeways – The Trinity Cathedral project would result in the addition of employees, Church members, and visitors to the site, some of whom would travel by bicycle.	
Significance Before Mitigation	Less than Significant
Mitigation Measures	None required
Significance After Mitigation	N/A

The Trinity Cathedral project would result in the addition of employees, church members, and visitors to the site, some of whom would travel by bicycle. The project would not result in any changes to the existing or future bikeway system, nor is the project anticipated to hinder or eliminate an existing designated bikeway, or interfere with implementation of a proposed bikeway. The project proposes to close the portion of 27th Street between Capitol Avenue and the alley to host special events and Sunday services. The temporary closure of the portion of 27th Street would not interfere with any existing or proposed bikeways. The project is not anticipated to result in unsafe conditions for bicyclists, including unsafe bicycle/pedestrian or bicycle/motor vehicle conflicts. Therefore, bicycle impacts are considered *less than significant*.

Mitigation Measures

None required.

Table 7.7-2

**Existing Plus Trinity Project Peak Hour Capital City Freeway
Mainline Operating Conditions**

Direction	Location	Through Lanes	Auxiliary Lanes	Volume	Volume / Capacity Ratio	LOS
A.M. Peak Hour						
Northbound	South of N Street Exit	4	1	7,534	0.72	C
	N Street Exit to P Street Entrance	4	0	6,248	0.71	C
	P Street Entrance to H Street Exit	4	1	6,697	0.64	C
	H Street Exit to J Street Entrance	4	0	6,110	0.69	C
	North of J Street Entrance	3	0	6,557	0.99	E
Southbound	North of J Street Exit	3	0	6,361	0.96	E
	J Street Exit to H Street Entrance	3	0	5,368	0.81	D
	H Street Entrance to P Street Exit	3	1	5,868	0.72	C
	P Street Exit to N Street Entrance	3	0	4,894	0.74	D
	South of N Street Entrance	3	1	5,746	0.70	C
P.M. Peak Hour						
Northbound	South of N Street Exit	4	1	5,568	0.54	F ¹
	N Street Exit to P Street Entrance	4	0	5,161	0.59	F ¹
	P Street Entrance to H Street Exit	4	1	5,540	0.53	F ¹
	H Street Exit to J Street Entrance	4	0	4,941	0.56	F ¹
	North of J Street Entrance	3	0	5,676	0.86	F ¹
Southbound	North of J Street Exit	3	0	5,802	0.88	D
	J Street Exit to H Street Entrance	3	0	5,158	0.78	D
	H Street Entrance to P Street Exit	3	1	5,947	0.73	C
	P Street Exit to N Street Entrance	3	0	5,430	0.82	D
	South of N Street Entrance	3	1	6,811	0.83	D

Notes:

1. LOS "F" conditions due to queuing from downstream bottleneck.

Source: DKS Associates, 2005.

Table 7.7-3

**Existing Plus Trinity Project Peak Hour Capital City Freeway
Ramp Junction Operating Conditions**

Direction	Location	Junction Type	Ramp Volume	LOS
A.M. Peak Hour				
Northbound	N Street Exit	Lane Drop	1,286	D
	P Street Entrance	Lane Addition	449	C
	H Street Exit	Lane Drop	587	C
	J Street Entrance	Single lane on ramp	488	B
Southbound	J Street Exit	Single lane off ramp	1,082	E
	H Street Entrance	Lane Addition	500	C
	P Street Exit	Lane Drop	974	C
	N Street Entrance	Lane Addition	852	C
P.M. Peak Hour				
Northbound	N Street Exit	Lane Drop	407	F ¹
	P Street Entrance	Lane Addition	379	F ¹
	H Street Exit	Lane Drop	599	F ¹
	J Street Entrance	Single lane on ramp	802	F ¹
Southbound	J Street Exit	Single lane off ramp	703	E
	H Street Entrance	Lane Addition	789	C
	P Street Exit	Lane Drop	517	C
	N Street Entrance	Lane Addition	1,381	D

Notes:

1. LOS "F" conditions due to queuing from downstream bottleneck.

Source: DKS Associates, 2005.

Table 7.7-4

**Existing Plus Trinity Project Peak Hour Capital City Freeway Weaving
Segment Operating Conditions**

Direction	Location	Weaving Segment Speed (mph)	Weaving Segment Density (pcplph)	LOS
A.M. Peak Hour				
Northbound	U.S. 50 Entrance to N Street Exit	41.7	39.4	E
	P Street Entrance to H Street Exit	55.8	26.2	C
Southbound	H Street Entrance to P Street Exit	48.8	32.8	D
	N Street Entrance to U.S. 50 Exit	43.2	29.0	D
P.M. Peak Hour				
Northbound	U.S. 50 Entrance to N Street Exit	47.9	25.4	F ¹
	P Street Entrance to H Street Exit	57.6	21.0	F ¹
Southbound	H Street Entrance to P Street Exit	50.1	32.4	D
	N Street Entrance to U.S. 50 Exit	38.1	39.0	E

Notes:

1. LOS "F" conditions due to queuing from downstream bottleneck.

Source: DKS Associates, 2005.

Impact 7.7-4: Pedestrian Facilities – The Trinity Cathedral project would result in the addition of employees, church members, and visitors to the site.

Significance Before Mitigation	Less than Significant
Mitigation Measures	None required
Significance After Mitigation	N/A

The Trinity Cathedral project would result in the addition of employees, church members, 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. The project would maintain all the existing sidewalks that currently exist on the project site. Therefore, pedestrian impacts are considered *less than significant*.

Mitigation Measures

None required.

Impact 7.7-5: Transit Services – The Trinity Cathedral project would increase demand for transit services.

Significance Before Mitigation	Less than Significant
Mitigation Measures	None required
Significance After Mitigation	N/A

The Trinity Cathedral project would increase demand for transit services. The project would result in the addition of employees, church members, 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. Therefore, the impact of the Trinity Cathedral project on the transit system is considered *less than significant*.

Mitigation Measures

None required.

Impact 7.7-6: Parking – The Trinity Cathedral project would increase demand for parking.

Significance Before Mitigation	Potentially Significant
Mitigation Measures	Mitigation Measure 7.7-1
Significance After Mitigation	Potentially Significant and Unavoidable

The Trinity Cathedral project would also increase the demand for parking. SMCS has a written agreement with Trinity Cathedral to reserve 25 spaces in the parking structure for daily use with 150 spaces reserved for evening use and 500 spaces for Sunday services. Because the evening and weekend use are off-peak it is anticipated that adequate parking would be available in the Community Parking Structure. However, the midday parking demand associated with the cathedral may not be met. The total midday parking demand of 25 spaces is in addition to the 1,427-space demand of the SMCS project and 60 spaces for the Children’s Theatre resulting in a proposed supply that is less than the proposed demand. As described in Impact 6.7-6 in Section 6.7, the SMCS Parking Management Program is designed to provide sufficient parking through demand management, on-going monitoring, and increases in parking supply as necessary.

However, taken together, the SMCS, Trinity, and Children’s Theater projects could result in a parking shortfall of up to 686 spaces. Taking into account the quantifiable factors discussed in Impact 6.7-6, the combined SMCS, Trinity, and Children’s Theater projects parking shortfall could be as low as 215 spaces. Therefore, this is considered a **potentially significant impact**.

Mitigation Measures

Parking for the Trinity Cathedral project is to be provided in the Community Parking Structure. Mitigation Measure 6.7-1 would require SMCS provide adequate parking if a shortfall is identified. However, because at this time there could be periods where there is a parking shortfall even with mitigation this is considered a **potentially significant and unavoidable impact**.

7.7-1 Implement Mitigation Measure 6.7-1.

CUMULATIVE IMPACTS

Analysis of cumulative impacts is based upon projection of transportation conditions in the year 2025. These projections are based upon land use and transportation network assumptions adopted by the Sacramento Area Council of Governments (SACOG).

Cumulative impacts on intersections and the freeway system are evaluated in this section. Impacts on bikeways, pedestrian facilities, parking, and the transit system are not evaluated separately, since these impacts are the same as project impacts discussed earlier.

Planned Transportation Improvements

Planned transportation improvements are discussed in Section 6.7.

Impact 7.7-7:	Intersections – The Trinity Cathedral project would increase traffic volumes at study intersections under 2025 conditions.
	Cumulative with Trinity Project
Significance Before Mitigation	Less than Significant
Mitigation Measures	None required
Significance After Mitigation	N/A

Cumulative with Trinity Project

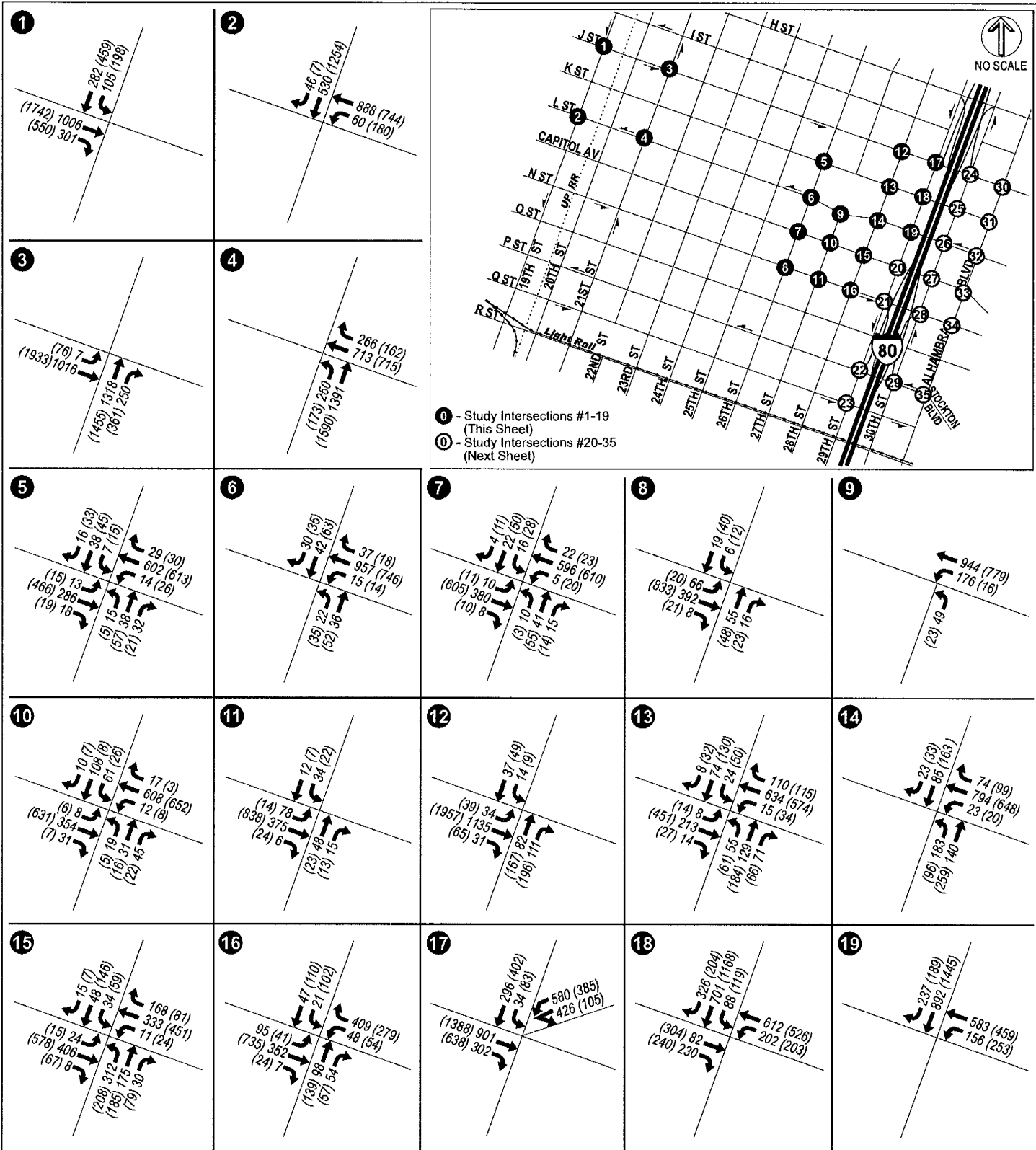
The Trinity Cathedral project would increase traffic volumes at study area intersections. Figure 7.7-2 illustrates the a.m. and p.m. peak hour intersection volumes. Table 7.7-5 summarizes the resultant conditions. The changes in intersection operating conditions with the addition of project-generated traffic under 2025 conditions would not exceed the standards of significance for impacts to intersections. Therefore, the impacts are considered *less than significant*.

Table 7.7-5

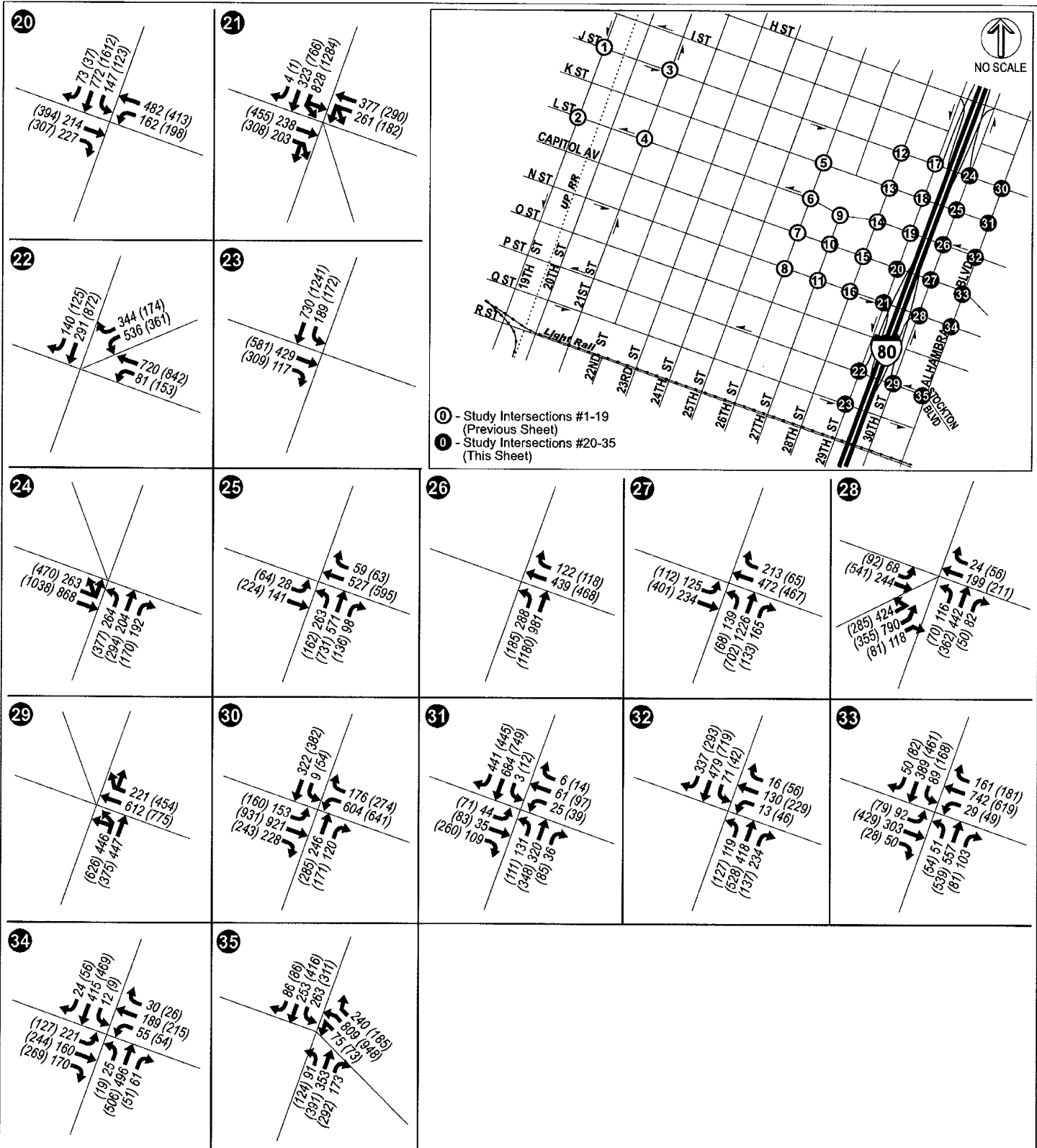
Cumulative with Trinity Project Intersection Operating Conditions

Intersection	A.M. Peak Hour				P.M. Peak Hour			
	Without Project		With Trinity Project		Without Project		With Trinity Project	
	LOS	Delay (seconds)	LOS	Delay (seconds)	LOS	Delay (seconds)	LOS	Delay (seconds)
1. 19th and J Streets	B	10.9	B	10.7	B	13.3	B	13.4
2. 19th and L Streets	A	7.5	A	6.8	A	9.7	A	9.6
3. 21st and J Streets	A	5.7	A	5.4	B	11.5	B	13.1
4. 21st and L Streets	B	11.8	B	11.8	B	13.0	B	13.3
5. 26th and K Streets	A	2.7	A	3.0	A	2.7	A	4.8
6. 26th and L Streets	B	10.5	B	10.5	B	11.1	B	11.3
7. 26th Street and Capitol Ave.	B	12.5	B	11.9	B	11.4	B	11.7
8. 26th and N Streets	A	8.4	A	8.6	B	10.6	B	10.3
9. 27th and L Streets	A	0.8	A	2.2	A	0.5	A	0.5
10. 27th St. and Capitol Ave.	A	1.7	B	12.8	A	2.0	A	2.0
11. 27th and N Streets	A	1.2	A	3.9	A	1.1	A	1.2
12. 28th and J Streets	B	14.7	B	13.0	C	20.5	C	20.3
13. 28th and K Streets	B	11.3	B	11.0	B	16.0	B	15.3
14. 28th and L Streets	B	10.2	B	10.2	B	11.0	B	10.9
15. 28th St. and Capitol Ave.	B	18.5	B	22.0	C	21.2	C	22.7
16. 28th and N Streets	B	14.4	A	24.9	C	29.4	C	21.3
17. 29th and J Streets	C	22.3	C	21.8	B	18.6	B	19.3
18. 29th and K Streets	B	13.6	B	11.0	B	15.6	B	16.2
19. 29th and L Streets	A	9.7	A	8.7	A	9.6	A	9.5
20. 29th St. and Capitol Ave.	A	8.6	A	5.1	B	12.3	B	11.1
21. 29th and N Streets	C	23.2	C	24.5	D	36.4	C	30.4
22. 29th and P Streets	C	18.7	B	19.6	B	18.3	B	18.9
23. 29th and Q Streets	A	7.6	A	7.7	B	11.5	B	11.9
24. 30th and J Streets	B	6.1	A	4.8	A	4.5	A	4.9
25. 30th and K Streets	B	11.9	B	18.1	B	15.0	B	13.5
26. 30th and L Streets	A	6.7	A	9.0	A	7.5	A	7.5
27. 30th St. and Capitol Ave.	B	18.7	B	17.4	B	15.1	B	16.0
28. 30th and N Streets	C	29.0	C	25.0	C	28.4	C	30.3
29. 30th and P Streets	A	8.5	A	7.8	B	11.2	B	12.1
30. Alhambra Blvd. and J St.	C	24.4	C	26.7	C	29.4	C	29.3
31. Alhambra Blvd. and K St.	A	8.7	A	6.3	B	10.9	B	10.4
32. Alhambra Blvd. and L St.	A	9.6	B	13.8	C	27.8	C	26.3
33. Alhambra Boulevard and Capitol Avenue	D	40.8	D	39.4	D	38.5	D	38.0
34. Alhambra Blvd. and N St.	C	29.7	C	23.4	C	22.3	C	23.0
35. Alhambra Blvd. and P St.	C	29.4	C	27.1	D	40.8	D	39.6

Source: DKS Associates, 2005.



Study Intersections
Continued Next Page



Study Intersections Continued from Previous Page

LEGEND

- ① - Study Intersection & Number
- ← AM (PM) - Peak Hour Traffic Volume



NO SCALE

DKS Associates
TRANSPORTATION SOLUTIONS

Figure 7.7-2 (2 of 2)
CUMULATIVE WITH TRINITY
PROJECT VOLUMES

Mitigation Measures

None required.

Impact 7.7-8: Freeway System – The Trinity Cathedral project would increase traffic volumes on the freeway system under 2025 conditions.	
	Cumulative with SMCS Project
Significance Before Mitigation	Significant
Mitigation Measures	None available
Significance After Mitigation	Significant and Unavoidable

Cumulative With SMCS Project

The Trinity Cathedral project, combined with the SMCS project, would increase traffic volumes on the study area freeway system under 2025 conditions. Tables 7.7-6 through 7.7-8 summarize the resultant conditions. The changes in freeway operating conditions with the addition of project-generated traffic would exceed the standards of significance for impacts to the freeway system. Intersection queuing on freeway exit ramps is not anticipated to extend into critical areas. Therefore, the impacts to freeways are considered **significant**.

Mitigation Measures

No mitigation measures are available to reduce traffic volumes on the freeway system; therefore, the impacts would be *significant and unavoidable*.

None available.

Table 7.7-6

**Cumulative with Trinity Project Peak Hour Capital City Freeway
Mainline Operating Conditions**

Direction	Location	Through Lanes	Auxiliary Lanes	Volume	Volume / Capacity Ratio	LOS
A.M. Peak Hour						
Northbound	South of N Street Exit	4	1	7,881	0.76	D
	N Street Exit to P Street Entrance	4	0	6,812	0.77	D
	P Street Entrance to H Street Exit	4	1	7,314	0.70	C
	H Street Exit to J Street Entrance	4	0	6,353	0.72	C
	North of J Street Entrance	3	0	6,762	1.02	F
Southbound	North of J Street Exit	3	0	6,501	0.99	E
	J Street Exit to H Street Entrance	3	0	5,494	0.83	D
	H Street Entrance to P Street Exit	3	1	6,094	0.74	D
	P Street Exit to N Street Entrance	3	0	5,217	0.79	D
	South of N Street Entrance	3	1	6,297	0.77	D
P.M. Peak Hour						
Northbound	South of N Street Exit	4	1	6,094	0.59	F ¹
	N Street Exit to P Street Entrance	4	0	5,641	0.64	F ¹
	P Street Entrance to H Street Exit	4	1	6,034	0.58	F ¹
	H Street Exit to J Street Entrance	4	0	5,164	0.59	F ¹
	North of J Street Entrance	3	0	5,916	0.90	F ¹
Southbound	North of J Street Exit	3	0	5,954	0.90	E
	J Street Exit to H Street Entrance	3	0	5,301	0.80	D
	H Street Entrance to P Street Exit	3	1	6,310	0.77	D
	P Street Exit to N Street Entrance	3	0	5,769	0.87	D
	South of N Street Entrance	3	1	7,194	0.88	D

Notes:

1. LOS "F" conditions due to queuing from downstream bottleneck.

Source: DKS Associates, 2005.

Table 7.7-7

**Cumulative with Trinity Project Peak Hour Capital City Freeway
Ramp Junction Operating Conditions**

Direction	Location	Junction Type	Ramp Volume	LOS
A.M. Peak Hour				
Northbound	N Street Exit	Lane Drop	1,069	C
	P Street Entrance	Lane Addition	502	C
	H Street Exit	Lane Drop	961	C
	J Street Entrance	Single lane on ramp	446	B
Southbound	J Street Exit	Single lane off ramp	1,100	E
	H Street Entrance	Lane Addition	600	C
	P Street Exit	Lane Drop	877	C
	N Street Entrance	Lane Addition	1,080	C
P.M. Peak Hour				
Northbound	N Street Exit	Lane Drop	453	F ¹
	P Street Entrance	Lane Addition	393	F ¹
	H Street Exit	Lane Drop	870	F ¹
	J Street Entrance	Single lane on ramp	820	F ¹
Southbound	J Street Exit	Single lane off ramp	713	E
	H Street Entrance	Lane Addition	1,009	C
	P Street Exit	Lane Drop	541	C
	N Street Entrance	Lane Addition	1,425	D

Notes:

1. LOS "F" conditions due to queuing from downstream bottleneck.

Source: DKS Associates, 2005.

Table 7.7-8

**Cumulative with Trinity Project Peak Hour Capital City Freeway
Weaving Segment Operating Conditions**

Direction	Location	Weaving Segment Speed (mph)	Weaving Segment Density (pcplph)	LOS
A.M. Peak Hour				
Northbound	U.S. 50 Entrance to N Street Exit	40.8	42.1	E
	P Street Entrance to H Street Exit	52.1	30.6	D
Southbound	H Street Entrance to P Street Exit	49.2	33.8	D
	N Street Entrance to U.S. 50 Exit	40.4	34.0	D
P.M. Peak Hour				
Northbound	U.S. 50 Entrance to N Street Exit	46.3	28.7	F ¹
	P Street Entrance to H Street Exit	54.1	24.3	F ¹
Southbound	H Street Entrance to P Street Exit	48.4	35.6	E
	N Street Entrance to U.S. 50 Exit	36.9	42.6	E

Notes:

1. LOS "F" conditions due to queuing from downstream bottleneck.

Source: DKS Associates, 2005.

7.8 Utility Systems

7.8 Utility Systems

INTRODUCTION

This section evaluates the effects of the Trinity Cathedral project on water distribution and supply, wastewater, storm drainage, and solid waste. This evaluation assesses existing and planned infrastructure and identifies anticipated demand. Three subsections are presented below: water supply and distribution, wastewater and storm drainage, and solid waste.

One comment letter in response to the January 2004 NOP expressed concern about the adequacy and capacity of the City's sewer system to serve the Trinity Cathedral project. This issue is addressed in this section.

ENVIRONMENTAL SETTING

Water Supply and Distribution

The Trinity Cathedral project site is located within the SMCS project area on the northeast portion of the block bounded by 26th and 27th Streets and Capitol Avenue and N Street. Please refer to the Environmental Setting discussion in Section 6.8, Utility Systems, subsection Water Supply and Distribution, for a complete discussion of existing water supply and water distribution infrastructure.

REGULATORY SETTING

The Trinity Cathedral project site is located in essentially the same area as the SMCS project; therefore, the regulatory setting would be the same. The Trinity Cathedral project would not be subject to a Water Supply Assessment, however. Please see Section 6.8 for a complete discussion of the applicable regulatory setting.

IMPACTS AND MITIGATION MEASURES

Methods of Analysis

The evaluation of the Trinity Cathedral project for impacts to water supply and distribution used the same methods as the SMCS project. Projected water use as a result of implementation of the Trinity Cathedral project was analyzed and calculated using the office/retail standard use (or demand) factor of 6.1 gpd/100 sf provided by the City of Sacramento Utilities Department. The total demand for water was calculated using proposed development.

Standards of Significance

For the purposes of this EIR, impacts to water supply and distribution are considered significant if the Trinity Cathedral project would:

- Increase the demand for potable water in excess of available supplies;
- Result in inadequate treatment, capacity, and/or infrastructure to supply the project, with no plans or processes in place for obtaining needed infrastructure; or
- Create an increase in water demand of more than 10 million gallons per day.

Impact 7.8-1: The Trinity Cathedral project could increase the demand for potable water in excess of available supplies.	
Significance Before Mitigation	Less than Significant
Mitigation Measures	None required
Significance After Mitigation	N/A

Development of the Trinity Cathedral project would include the construction of a new 37,100 square foot (sf) cathedral and 30,750 sf multi-purpose building that would be used for meetings, administrative offices, and other functions. As shown in Table 7.8-1, the Trinity Cathedral project would generate an additional water demand of 4,134 gallons per day (gpd) (4.6 acre-feet per year (AFY)). Phase 1 of the Trinity Cathedral project would include the demolition of the existing 8,000 sf cathedral to accommodate the new Cathedral. The demolition of the existing cathedral would eliminate an estimated 491 gpd (0.55 AFY) of water demand (refer to Table 7.8-2). Phase 2 would require the demolition of the existing multi-purpose building to accommodate the new multi-purpose space. The demolition of this building would eliminate 940 gpd (1.05 AFY) of current water demand. Thus, the Trinity Cathedral project would result in a net increase in demand for water of 3 AFY. Water is supplied to the project area from the American and Sacramento Rivers. As discussed in Section 6.8 (Environmental Setting, Water Supply and Distribution), the City’s current surface water entitlement totals 192,000 AFY. Total water consumption for the year 2002/03 totaled 44,165 million gallons (135,537 AF), leaving the City with an excess supply of 56,464 AFY. Thus, projected water demand for the Trinity Cathedral project would be less than 0.01 percent of the excess supply. This impact would be ***less than significant***.

Mitigation Measure

None required.

Table 7.8-1

Proposed Trinity Cathedral Water Demand

Building	Proposed Square Footage	Water Demand Factor	Estimated Daily Water Demand	Estimated Annual Water Demand
Phase 1				
New Trinity Cathedral	37,100 sf	6.1 gpd/100 sf	2,258 gpd	.82 mgy
Phase 2				
New Multi-Purpose Building	30,750 sf	6.1 gpd/100 sf	1,876 gpd	.68 mgy
Trinity Cathedral Project Total (Gross)			4,134 gpd	4.6 AFY
Trinity Cathedral Project Net Demand (minus existing water use)			2,703 gpd	3 AFY

Source: EIP Associates, 2005.

Table 7.8-2

Existing Trinity Cathedral Water Use

Existing Use	Square Footage	Water Demand Factor	Estimated Daily Water Demand	Estimated Annual Water Demand
Phase 1				
Trinity Cathedral	8,057 sf	6.1 gpd/100 sf	491 gpd	.18 mgy
Phase 2				
Administration/Classroom Building	15,409 sf	6.1 gpd/100 sf	940 gpd	.34 mgy
TOTAL			1,431 gpd	1.6 AFY

Source: EIP Associates, 2005.

Impact 7.8-2: The Trinity Cathedral project could result in inadequate water treatment capacity with no plans or processes in place for obtaining needed infrastructure.

Significance Before Mitigation	Less than Significant
Mitigation Measures	None required
Significance After Mitigation	N/A

The City of Sacramento is responsible for ensuring the treatment of all of its surface water supplies. The Sacramento River Treatment Plant and E.A. Fairbairn Water Treatment Plant have a combined capacity of 360 mgd [403,398 AFY]. For the year 2002/03, average daily demand was 59.2 mgd for the American River and 56.8 mgd for the Sacramento River, totaling 116 mgd. Thus, an excess treatment capacity of 244 mgd currently exists. As discussed in, the Trinity Cathedral project would require 4,134 gpd (0.004 mgd) of water. This is within the excess capacity of the existing treatment facilities. Therefore, impacts to water treatment facilities would be *less than significant*.

Mitigation Measure

None required.

Impact 7.8-3: The Trinity Cathedral project could result in inadequate distribution infrastructure with no plans or processes in place for obtaining needed infrastructure.	
Significance Before Mitigation	Less than Significant
Mitigation Measures	None required
Significance After Mitigation	N/A

Existing water conveyance infrastructure serving the Trinity Cathedral project area consists of 8-inch water lines in public rights-of-ways, including Capitol Avenue. Existing conveyance lines serving the Trinity Cathedral project site are discussed in Section 6.8. No utility or physical abandonment's would occur as a result of the Trinity Cathedral project. It is anticipated that adequate infrastructure is available to serve the project. Therefore, impacts to water distribution infrastructure would be *less than significant*.

Mitigation Measure

None required.

Impact 7.8-4: The Trinity Cathedral project could increase water demand by more than 10 million gallons per day.	
Significance Before Mitigation	No Impact
Mitigation Measures	None required
Significance After Mitigation	N/A

As discussed in Impact 7.8-1, the Trinity Cathedral project would require approximately 4,134 gpd (0.004 mgd) of water, significantly below the 10 mgd threshold. Thus, *no impact* would occur.

Mitigation Measure

None required.

CUMULATIVE IMPACTS

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 existing water provisions.

Impact 7.8-5: The Trinity Cathedral project, in combination with other development in the City of Sacramento, could increase demand for one or more of the following in excess of available supplies: potable water, water treatment capacity, and/or infrastructure.

Significance Before Mitigation	Less than Significant
Mitigation Measures	None required
Significance After Mitigation	N/A

The Trinity Cathedral project would increase the demand for water in the City's service area beyond the existing demand of approximately 3 AFY. As described in the Environmental Setting discussion in Section 6.8, the City's authorized supply under the Water Forum Agreement would also increase in the future. As shown in Table 6.8-2, the City's authorized supply in 2030 would be 325,800 AFY. Therefore, the Citywide water demand would be required to more than double the 2002/2003 demand in order to exceed the available supply. Although the City is in the process of updating its General Plan, it is highly unlikely that the new General Plan would include a doubling of the population over buildout of the Plan. In fact, population projections for Sacramento County as a whole, estimate that growth would occur at a rate of less than ten percent every 5 years.¹ At that rate, it would take 40 to 45 years for population increases to generate demand equal to supplies. In addition, it is likely that the City would implement water-saving methods, such as metering water, which would reduce demand. Because that time far exceeds the typical timeline considered in a general plan, this impact would be considered less than significant.

In addition, although much of the midtown area is already developed, it is likely that the land uses within midtown could intensify in the future as development pressure throughout the City increases. The intensification of uses could result in the need for upgrades in the City's water distribution and/or treatment systems. As stated in Impact 6.8-3, the City would require a water system test for new development to ensure that the system capacity is sufficient to serve development. In addition, as previously stated, the City's treatment plants have a combined treatment capacity of 360 mgd, which is more than three times Sacramento's 2002/2003 water demand of 116 mgd.

Therefore, the project's contribution would not be cumulatively considerable resulting in a **less-than-significant** cumulative impact on water supplies and infrastructure.

Mitigation Measure

None required.

¹ State of California, *Interim County Population Projections, Estimated July 1, 2000 and Projections for 2005, 2010, 2015, and 2020*, June 2001.

WASTEWATER AND STORMWATER DRAINAGE

Environmental Setting

The Trinity Cathedral site is located within the SMCS project area. Please refer to the Environmental Setting discussion in Section 6.8, Utility Systems, subsection Wastewater and Stormwater Drainage, for a detailed discussion of wastewater and storm drainage infrastructure.

Regulatory Setting

The Regulatory Setting is the same for the Trinity Cathedral project as the SMCS project. Therefore, the reader is referred to Section 6.8 for a detailed discussion of the applicable regulatory setting.

IMPACTS AND MITIGATION MEASURES

Methods of Analysis

To determine the amount of wastewater generated by the project, the following generation rates were used. The rates were provided by the City of Sacramento Utilities Department.² One equivalent single family dwelling unit (ESD) is estimated to produce 400 gallons of wastewater per day

- Places of Worship: 0.2 ESD/1,000 sf
- Office Buildings (including eating facilities): 0.2 ESD/1,000 sf

These generation rates were also applied to the existing uses in the project area to estimate the amount of wastewater currently entering the CSS system. This amount was deducted from the Trinity Cathedral project's generation to determine the net increase in wastewater to the CSS.

Impacts to the drainage facilities were addressed qualitatively. The analysis estimates the amount of developed surfaces currently on site. A qualitative analysis to determine if a significant increase in impervious surface would result from the proposed Trinity Cathedral is presented below.

Standards of Significance

For the purposes of this EIR, impacts associated with the City's wastewater distribution, treatment and conveyance system and storm drainage facilities are considered significant if the Trinity Cathedral project would:

- Result in or require the construction of new or expansion of existing wastewater collection or treatment facilities that would create significant environmental effects;

² City of Sacramento Utilities Department, Section 9 of Regulations, *Infill and ESD*, September 1, 1990.

- Result in an increase in wastewater discharge in excess of that allowed by the applicable Regional Water Quality Control Board or the capacity of existing City infrastructure; or
- Create or contribute runoff water over pre-development conditions that would exceed the capacity of existing or planned stormwater drainage systems, including the City's Combined Sewer System.

Impact 7.8-6: The Trinity Cathedral project could result in or require the construction of new or expansion of existing wastewater collection or treatment facilities or exceed RWQCB requirements.

Significance Before Mitigation	Less than Significant
Mitigation Measures	None required
Significance After Mitigation	N/A

The Trinity Cathedral project would construct a new cathedral and multi-purpose building, larger than the existing facilities, which would result in the increased generation and discharge of wastewater requiring treatment at the SRWTP. The project would generate approximately 5,421 gpd (0.005 mgd) of wastewater, as shown in to Table 7.8-3. The demolition of the existing cathedral and multi-purpose building would eliminate approximately 1,877 gpd of wastewater currently entering the CSS. Subsequently, the Trinity Cathedral project would result in a net increase of wastewater of 3,544 gpd (0.003 mgd) to the system.

Table 7.8-3

Proposed Trinity Cathedral Wastewater Flows

Building	Square Footage	Wastewater Generation Factor¹	Estimated Wastewater Generation (gpd)
Phase 1			
New Trinity Cathedral	37,100 sf	0.2 ESD/1,000 sf	2,961.2 gpd
Existing Trinity Cathedral	8,057 sf	0.2 ESD/1,000 sf	644.6 gpd
<i>Net Increase</i>			<i>2,316.6 gpd</i>
Phase 2			
New Multi-Purpose Building	30,750 sf	0.2 ESD/1,000 sf	2,460 gpd
Existing Administration/Classroom Building	15,409 sf	0.2 ESD/1,000 sf	1,232.7 gpd
<i>Net Increase</i>			<i>1,227.3 gpd</i>
Trinity Cathedral Project Total (Gross)			5,421.2 gpd
Trinity Cathedral Project Net Demand (minus existing water use)			3,543.9 gpd

Notes:

1. For those areas where the sanitary sewer is existing, the category Equivalent Single Family dwelling unit (ESD) is used for computing average flow (1 ESD = 400 gallons/day).

Source for generation rates: City of Sacramento, Department of Utilities. Section 9 of Regulations. September 1, 1990, provided by: Rich Batha.

The Trinity Cathedral project would not generate wastewater in excess of the capacity of the City’s wastewater treatment system. Currently, the SRWTP treats an average of 165 mgd of wastewater per day. The SRWTP has an overall capacity of 390 mgd, of which 60 mgd is dedicated to receiving flows from the City of Sacramento’s CSS. The project’s flows represent less than 0.006 percent of the 60 mgd the City is authorized to deliver to the SRWTP. Thus, the project would not require the construction of new or the expansion of existing wastewater treatment facilities.

The Trinity Cathedral project would be required to comply with the City of Sacramento Municipal Code and the NPDES program, which would ensure the project would not exceed wastewater treatment requirements. These programs are identical to those required for the SMCS project and they are described in more detail in Section 6.8.

No utility or physical abandonments would occur with construction of the project and the existing infrastructure would remain in place and continue to serve the project site. Compliance with the City’s Combined System Development Fee ordinance would reduce the project impact by providing (1) additional capacity in the City’s system to reduce the potential for flooding and CSOs system-wide, or (2) requiring storage of project flows to ensure that the proposed project would not contribute to flooding and CSOs. This would reduce this impact to a **less-than-significant level**.

Mitigation Measure

None required.

Impact 7.8-7:	The Trinity Cathedral project could create or contribute runoff water over pre-development conditions that would exceed the capacity of existing or planned stormwater drainage systems, including the City’s CSS.
Significance Before Mitigation	Less than Significant
Mitigation Measures	None required
Significance After Mitigation	N/A

The proposed Trinity Cathedral project would result in the demolition of the existing Cathedral and reconstruction of a new Cathedral at the same location. An existing multi-purpose building would also be demolished and rebuilt on-site. The proposed new cathedral building would create 15,939 sf of space on the first floor, compared to 8,057 sf for the existing building. The proposed multi-purpose building would create 10,500 sf of space on the first floor, compared to 15,409 sf for the existing building. It is assumed the existing and proposed first-floor square footages would also be the building footprints that would result in impervious surface coverage. Existing landscape plantings and hardscaping (e.g., sidewalks) are present at the site. Proposed pedestrian improvements would include new sidewalks around the Cathedral with areas of specialty paving at the main entrances and raised planters. The project also proposes to narrow 27th Street between Capitol Avenue and Trinity Lane (alley) to include wider sidewalks, decorative paving, and landscaping.

The site improvements would result in a small net increase in the amount of impervious surfaces at the site, which would generate a minimal increase in stormwater peak flows

discharged to the CSS, as compared to existing conditions. Based on a review of the project site and proposed development, less than 0.25 acres of the project site would be developed with impervious surface area. Compliance with the City's new Combined System development Ordinance would reduce the project impact by: (1) providing additional capacity in the City's system to reduce the potential for flooding, or (2) requiring the storage of project flows to ensure the project would not contribute to flooding and CSOs. Therefore, this is considered a **less-than-significant impact**.

Mitigation Measures

None required.

CUMULATIVE IMPACTS

The cumulative context for wastewater and drainage includes all development within the CSS service area, which primarily includes downtown Sacramento.

Impact 7.8-8:	The Trinity Cathedral project, in combination with other development within the CSS service area, could result in or require the construction of new or expansion of existing wastewater and stormwater collection or treatment facilities.
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Significance Before Mitigation	Less than Significant
Mitigation Measures	None required
Significance After Mitigation	N/A

The average daily dry weather flow at full build-out of the City's General Plan is estimated at 129.1 mgd and peak flow is estimated at 305.9 mgd. As discussed in the Environmental Setting portion in Section 6.8, the SRWTP currently receives an average dry weather flow of 155 mgd, less than its permitted capacity of 181 mgd of dry weather flow, 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.³

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

³ Robert Seyfried, Senior Civil Engineer, Sacramento County Sanitation District, personal communication, March 14, 2005.

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 project's cumulative contribution would not be considerable resulting in a ***less-than-significant impact***.

Mitigation Measure

None required.

SOLID WASTE

Environmental Setting

The Trinity Cathedral is located within SMCS project area. Please refer to the Section 6.8, Environmental Setting, for a complete discussion of solid waste facilities and service providers in the project area.

Regulatory Setting

The reader is referred to Section 6.8 for a detailed discussion of the applicable regulatory setting.

IMPACTS AND MITIGATION MEASURES

Methods of Analysis

This analysis used the following generation rate, from the City of Sacramento Utilities Department, to estimate the amount of solid waste generated by the Trinity Cathedral project.⁴ This rate includes all solid waste and does not account for any potential recycling.

- RO SPD: 1 pound/100 square feet

The generation rate was also applied to the existing uses in the project area to estimate the current solid waste generated on site. This was deducted from the estimated project waste flow to determine the net increase in the solid waste stream due to implementation of the project.

Standards of Significance

For the purposes of this EIR, impacts associated with the increase in solid waste are considered significant if the Trinity Cathedral project would:

- Substantially increase the production of solid waste in excess of available distribution or landfill capacity;

⁴ Michael Root, City of Sacramento Utilities Department, personal communication, March 8, 2005.

- Substantially increase the production of recyclable solid waste in excess of available distribution or materials recovery facilities' (MRF) capacity without also including provisions to adequately accommodate the increased production; or
- Generate more than 500 tons of solid waste per year.

Impact 7.8-9: The Trinity Cathedral project could substantially increase the production of solid waste in excess of available distribution or landfill capacity.

Significance Before Mitigation	Less than Significant
Mitigation Measures	None required
Significance After Mitigation	N/A

As noted in the Environmental Setting (see Section 6.8) the City of Sacramento is served by various disposal companies and solid waste is distributed to a variety of landfills, including Kiefer Landfill, Yolo County Landfill, Anderson Landfill, and Lockwood Landfill. If the Trinity Cathedral project chooses the City of Sacramento as its solid waste disposal provider, it is most likely that the project's solid waste would be sent to Lockwood Landfill in Nevada.

The Trinity Cathedral project would generate 678 lbs/day of solid waste, or 124 tons/year, as shown in Table 7.8-4. Demolition of the existing buildings would eliminate approximately 245 lbs/day currently entering the solid waste stream. The net increase in solid waste generated by the Trinity Cathedral project would be 433 lbs/day, or 81 tons per year, before recycling.

Table 7.8-4

Trinity Cathedral Solid Waste Generation

Building	Square Footage	Waste Generation Rate (per day)	Estimated Daily Solid Waste (lbs/day)	Estimated Annual Solid Waste (tons/year)
Phase 1				
New Trinity Cathedral	37,100 sf	1 lb/100 sf	370.2	67.6
Existing Trinity Cathedral	8,057 sf	1 lb/100 sf	80.6	14.8
<i>Net Increase</i>			289.6	52.8
Phase 2				
New Multi-Purpose Building	30,750 sf	1 lb/100 sf	307.5	56.1
Existing Administration/ Classroom Building	15,409 sf	1 lb/100 sf	154.1	28.1
<i>Net Increase</i>			153.4	28.0
Trinity Cathedral Project Total (Gross)			677.7 lbs/day	123.7 tons/year
Trinity Cathedral Project Net Demand (minus existing solid waste)			443 lbs/day	80.8 tons/year

Source: Michael Root, Program Analyst. Department of Utilities. City of Sacramento. Written Communication, April 12, 2004.

The project's solid waste would represent a 0.003 percent increase in the total waste received each day at Lockwood Landfill (from 7,700 tons/day). The City of Sacramento currently delivers

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approximately 800 tons/day to Lockwood Landfill; the Trinity Cathedral project would increase this delivery by 0.03 percent. As discussed in the Environmental Setting, the landfill has 32.5 million tons of capacity remaining, is currently working on expansion plans, and has no estimated closure date.

If the project is served by a private waste disposal company, the waste may be delivered to a variety of landfills, depending on market conditions. This mechanism would ensure the waste is disposed of at a facility with adequate capacity.

In addition to the operational waste described above, the Trinity Cathedral project also includes the demolition of existing buildings and construction of new buildings, which would result in debris requiring disposal. However, in accordance with Sacramento City Code 17.72, the Trinity Cathedral project is required to submit a statement of recycling information to the City's solid waste manager. This statement includes a site plan and design specifications including the materials to be recycled, a demolition and construction plan, and a description of proposed education/public relations programs.

The statement of recycling information must also include the location and design specifications of proposed recycling and trash enclosure(s) and receptacle(s) that meet the volume and material requirements and the development standards and identify materials to be recycled. Recycling programs can reduce the amount of solid waste by 50 to 80 percent, depending on how aggressive a program is. Trinity Cathedral's recycling program is unknown at this time; however, as stated above, Sacramento City Code requires implementation of these recycling measures which would reduce the amount of solid waste generated by the project.

Compliance with the City recycling code would ensure the project would not require the expansion or construction of landfills; this impact would be ***less than significant***.

Mitigation Measure

None required.

Impact 7.8-10: The Trinity Cathedral project could substantially increase the production of recyclable solid waste in excess of available Material Recycling Facility (MRF) capacity.	
Significance Before Mitigation	Less than Significant
Mitigation Measures	None required
Significance After Mitigation	N/A

As stated in Impact 7.8-9 the solid waste facilities serving the project area have adequate capacity to meet the project demands. The Sacramento Recycling and Transfer Station currently accepts an average of 2,000 tons per day and is permitted to process up to 3,000 tons/day. As discussed above, the Trinity Cathedral project would generate a net increase of approximately 433 lbs/day of solid waste. This increase would constitute 0.01 percent of the materials received daily at the MRF. The current operating capacity of the Sacramento Recycling and Transfer Station would accommodate the demand associated with the Trinity Cathedral project. This impact would be ***less than significant***.

Mitigation Measure

None required.

Impact 7.8-11: The Trinity Cathedral project could generate more than 500 tons of solid waste per year.	
Significance Before Mitigation	No Impact
Mitigation Measures	None required
Significance After Mitigation	N/A

Operation of the new Trinity Cathedral and multi-purpose building would generate a net increase in solid waste less than 81 tons per year, without any reductions for recycling. Required recycling would significantly decrease this amount. This is less than the threshold of 500 tons per year, and, therefore, ***no impact*** would occur.

Mitigation Measure

None required.

CUMULATIVE IMPACTS

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.

Impact 7.8-12: The Trinity Cathedral project, in combination with other development, could substantially increase the production of solid waste in excess of available distribution or landfill and MRF capacity without also including provisions to adequately accommodate the increased production.	
Significance Before Mitigation	Less than Significant
Mitigation Measures	None required
Significance After Mitigation	N/A

There are several landfills available to serve the general project area. The City currently exports a significant amount of its solid waste to Nevada and other nearby counties. The Lockwood Landfill and the Anderson Landfill, the primary solid waste disposal facilities used by the City, each have at least 20 years of remaining capacity. Additionally, the City has continually met goals set by the SRRE. It is likely that disposal rates would continue to decrease as development exceeds the recycling volumes required by the City, which reduce solid waste at the source. The existence of significant capacity at the City's primary landfills, the exporting of solid waste and aggressive recycling policy indicate a less-than-significant

impact on a cumulative level. The project's contribution, relative to other cumulative development would be considered *less than significant*.

Mitigation Measure

None required.

Chapter 8 Alternatives

Chapter 8 Alternatives

INTRODUCTION

The purpose of this chapter is to identify and describe the alternatives to the proposed SMCS project and the Trinity Cathedral project. Project alternatives are developed to reduce or eliminate the potentially significant adverse environmental effects of the “Proposed Project” while still meeting most of the basic project objectives. CEQA requires that a No Project Alternative be analyzed for each project.

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 (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 identified for 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 15126.6(f)(3)).”

The selection of alternatives takes into account the project objectives provided in Chapter 2 (Project Description) for the SMCS project and the Trinity Cathedral project. The SMCS project objectives are re-printed below followed by the Trinity Cathedral objectives.

SMCS has identified the following project objectives for the SMCS project.

- Consolidate all acute care facilities presently at SMH and SGH into one health care complex that will offer high quality care for patients; promote new, highly accessible and innovative care models; and provide efficient, cost-effective delivery of health care treatment for all its patients;
- Ensure that the hospital redevelopment is part of a master planned medical complex which complements cultural, business, residential, historic, and religious aspects of the surrounding neighborhood;
- Complement and add to existing SMCS employee, community and environmental programs including TSM (ride-share, public transit subsidies, etc.) environmentally-sensitive and energy-conservation design, and practices;
- Promote community involvement and neighborhood-building by including community theatre, housing, neighborhood-serving retail, and other institutions that reflect and enhance the character of the neighborhood and by placing the most intense project uses away from residential portions of the neighborhood;
- Redesign SGH to offer the latest treatment for adult cardiovascular, orthopedic, spine, neuroscience, cancer, transplant, medical/surgical and outpatient surgery services;
- Expand cardiovascular facilities at SGH to enhance a growing array of leading medical procedures and new treatment technologies on one floor of the hospital, thereby improving patient accessibility and physician deployment;
- Build a new Anderson-Lucchetti Women’s and Children’s Center to deliver both high tech and “high touch” care in a unique environment. The Women’s and

Children's Center will feature the highest level of neonatal and pediatric intensive care services, pediatric cardiac care, pediatric neurosurgery services, pediatric cancer services, and high risk and conventional maternity services. A life-saving "helistop" atop the hospital building will serve critically sick patients from across Northern California and will be used only occasionally, principally in the treatment of high-risk pediatric patients;

- Bridge the Women's and Children's Center with SGH via a unique, three-story spanning structure that will enable the two buildings to function as a single unified hospital building;
- Provide additional capacity for quality specialized care at both SGH and the Women's and Children's Center to increase capacity and complement SMCS' twice recognized status as one of America's "Top 100 Hospitals";
- Plan, stage and construct the project in a manner that provides minimal disruption of the surrounding neighborhood and which is compatible with the preservation of the historic character of the area and cultural attractions, including the Old Tavern Building, Pioneer Church and Sutter's Fort;
- Complement the existing neighborhood and environment by providing clear way-finding to reduce traffic in the surrounding neighborhood and enhance pedestrian safety alongside new housing, retail and cultural amenities to the extent feasible;
- Comply with the requirements set forth in California law (Senate Bill 1953) that seeks to ensure the highest level of structural safety for hospital buildings.

The following are Trinity Cathedral's project objectives.

- To improve the Cathedral's ability to minister from the Midtown location to its immediate neighborhood, the Sacramento region, and more widely, to Northern California in general;
- To create a facility that is adequate to accommodate the existing and future needs of the congregation, including a facility of approximately 70,000 square feet to include worship space seating for 1,000 people, multi-purpose dining hall, meeting rooms, administrative offices, and ancillary support services, such as a nursery;
- To create a facility that could also serve as a medium-sized performing arts venue to serve the Sacramento Region;
- To establish an accessible and convenient Cathedral complex for its patrons, members of the community, and neighborhood and community service groups;
- To provide sufficient parking for Cathedral patrons, neighborhood and community service groups;
- To create an urban plaza area and provide open space for the Midtown community, including gathering, socializing, and transition space for large groups attending theatre events and worship services;

- To complement the mission of the Cathedral by designing the new cathedral project to reflect the spiritual beliefs of the church in the physical forms of the building, while complimenting the existing and changing neighborhood context;
- To continue to serve the Sacramento and Northern California community through community-wide ecumenical and interfaith public gatherings at times of crisis and need;
- To construct a project consistent with the evolving nature of the neighborhood.

Equally important to attaining the project objectives is the reduction of some or all significant impacts identified for the proposed project, particularly those that could not be mitigated to a level below the threshold of significance.

Significant and unavoidable project-specific and cumulative impacts identified for the SMCS project (including the Theatre) include:

SMCS Project-Specific Significant and Unavoidable Impacts

- Construction of the SMCS project would increase emissions of nitrogen oxide (NO_x) generated by construction on a short-term basis (6.2-3).
- Operation of the SMCS project would generate an increase in ROG and NO_x (criteria pollutants) (6.2-4).
- Construction activities of the SMCS project would intermittently generate noise levels above existing ambient levels in the project vicinity on a short-term basis (6.6-1).
- The SMCS project and Children's Theatre would increase traffic volumes on the freeway system (6.7-2).
- The SMCS project and Children's Theatre would increase demand for parking (6.7-6).
- The SMCS project would generate more than 500 tons of solid waste per year (6.8-11).

SMCS Project Cumulative Significant and Unavoidable Impacts

- The SMCS project, in combination with other projects in the Sacramento Valley Air Basin, could result in a cumulative impact on criteria pollutants associated with project operation (6.2-8).
- The SMCS project would increase traffic volumes on the freeway system under year 2025 conditions (6.7-9).
- The SMCS program and Trinity Cathedral project would increase traffic volumes at study intersections under year 2025 conditions (6.7-10).
- The SMCS program and Trinity Cathedral project would increase traffic volumes on the freeway system under year 2025 conditions (6.7-11)

- The SMCS project (with Two-Way Conversion) would increase traffic volumes at study intersections under year 2025 conditions (6.7-12).
- The SMCS program and Trinity Cathedral project (with Two-Way Conversion) would increase traffic volumes at study intersections under year 2025 conditions (6.7-14).
- The SMCS program and Trinity Cathedral project (with Two-Way Conversion) would increase traffic volumes on the freeway system under year 2025 conditions (6.7-15).

Significant and unavoidable project-specific and cumulative impacts identified for the Trinity Cathedral project include:

Trinity Project-Specific Significant and Unavoidable Impacts

- Construction of the Trinity project would intermittently generate noise levels above existing ambient levels in the project vicinity on a short-term basis (7.6-1).
- The Trinity Cathedral project would increase traffic volumes on the freeway system (7.7-2).
- The Trinity Cathedral project would increase demand for parking (7.7-6).

Trinity Project Cumulative Significant and Unavoidable Impacts

- The Trinity Cathedral project would increase traffic volumes on the freeway system under 2025 conditions (7.7-8).

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 SMCS project, or that would not meet most of the project objectives, were rejected from further consideration.

SMCS Alternatives Considered and Dismissed

The following alternatives for the SMCS project were considered but rejected from further analysis because none of the alternatives listed below were determined to be feasible.

Seismic upgrade to Sutter Memorial Hospital: To address the need to comply with SB 1953, the option of upgrading the existing SMH was contemplated. However, due to the costs associated with retrofitting this existing facility it was determined this was not a feasible option. Under this alternative, additional space for medical offices would need to be developed elsewhere in the City or the region. This option does not meet a majority of the project objectives identified in Chapter 2.

Relocate Cardiac Services to Sutter General Hospital and Develop a new Women's and Children's Center at SMH: The option of relocating some services to SGH from SMH was considered, along with developing a new women's and children's tower at the existing SMH. This option was contemplated but dismissed because it would be very costly to upgrade the existing SMH to meet current codes and to construct a new portion of the hospital. Adequate parking also became a concern under this alternative. In addition, this alternative would not meet one of the primary project objectives to consolidate all acute care facilities presently at Sutter Memorial Hospital and Sutter General Hospital into one complex.

Close SMH and Relocate Services to SGH or throughout the Region: The option of closing SMH and relocating all of the hospital services to SGH or to other Sutter facilities throughout the region was also considered. However, it was determined that SGH was not large enough to absorb the critical hospital functions required. Distributing these services/functions throughout the region would not assist Sutter in their quest to consolidate these services in one area. This alternative option was considered but dismissed because it was determined to not be feasible.

Trinity Cathedral Alternatives Considered and Dismissed

Alternatives considered but dismissed from further consideration for the proposed Trinity Cathedral project include:

Retrofit and Rehabilitate the Existing Cathedral: One alternative that was considered was to retrofit and rehabilitate the existing cathedral. This would allow Trinity Cathedral to continue its current ministries at the same level for approximately the next 25 years. In order for this to occur, major building upgrades would be required to continue immediate operations and this alternative would not allow an expansion of worship, ministry programs, or office space. Currently administrative space and worship space are not adequate to allow future growth of the ministry in the larger community. Under this alternative there would be fewer impacts associated with project construction and operation because the existing structure would not be removed and ultimately fewer people would be able to attend the cathedral. However, the congregation could not expand and the existing facilities would not be adequate to meet the growing demand. In addition, this alternative would not meet a majority of the project objectives that call for providing a facility that meets a growing community.

Lease Space in St. Luke's Medical Office Building: Another alternative that was considered was to retrofit and rehabilitate the existing facility (as discussed above) and to lease space in the basement of St. Luke's Medical Office Building to provide additional office and program space. However, this alternative would not address the issue of providing additional worship space in the cathedral. This alternative would result in fewer impacts associated with project construction and operation; however, this alternative would not meet a majority of the project objectives that call for providing a facility that meets a growing community.

Purchase St. Luke's Medical Office Building: Trinity Cathedral also explored the possibility of purchasing St. Luke's Medical Office Building and parking structure to expand their office and program space. In 2000, the Cathedral Vestry voted to negotiate purchase of the St. Luke's building but was unsuccessful. In addition to purchase of the St. Luke's building the Cathedral also looked at making minor repairs to the existing facility. This alternative was considered but dismissed because it would not enable expansion of the existing cathedral which would not meet one of the project's primary objectives to provide a facility that can accommodate worship space for up to 1,000 people.

Purchase of The Church of Christ, Scientist (Christian Science) Church Building: Several years ago Trinity Cathedral also considered purchasing the former Christian Science building on Capitol Avenue near 22nd Street when that site was for sale. Although the site would have provided some additional worship space within the Sacramento Midtown area, Trinity Cathedral decided not to purchase the site primarily because it contained an inadequate amount of parking and classroom space. This alternative would result in fewer impacts associated with project construction and operation; however, this alternative would not meet a majority of the project objectives that call for providing a facility that meets the needs of a growing community by providing a sufficient amount of parking and ancillary support services. The site has since been sold to another entity and no feasible alternative sites have been identified within the Midtown area.

Trinity Cathedral evaluated a number of different design options in order to address aesthetic concerns raised by the neighborhood before selecting the current design. Building design options considered but dismissed from further consideration for the proposed Trinity Cathedral project include:

Option One: This is the original design first considered on March 2, 2005, by the City of Sacramento Design and Review Board. This design was eliminated from further consideration based on the unfavorable comments received from the public and Board members, see Figure 8-1.

Option Two: This is the simplified curved-wall design without a tower element. This alternative was rejected because it did not sufficiently reflect the image of the Episcopal tradition and because it does not have a tower element. This alternative design therefore does not meet the project objective to compliment the mission of the Cathedral by designing the new cathedral to reflect the Anglican Episcopal tradition of the church in the physical forms of the building, while complimenting the existing and changing neighborhood context (see Figure 8-2).

Option Three: This is the enlargement of the existing Trinity Cathedral design. This alternative design was rejected because it is a design reflective of the past and therefore does not represent the progressive evolving nature of the Cathedral or the neighborhood. The massive brick walls would also be out of scale and context in the neighborhood. The design was also rejected because the box-like form of the exterior walls and the low-flat roof structure behind the false façade roof slope would not create the interior functional or aesthetic worship space required of the Cathedral program. This alternative design therefore does not meet several fundamental project objectives; namely, (1) to compliment the mission of the Cathedral by designing the new cathedral to reflect the Anglican Episcopal traditions of the church in the physical forms of the building; (2) to construct a project that meets the future program needs of the Cathedral and particularly with regard to the worship space; and (3) to construct a project consistent with the evolving nature of the neighborhood (see Figure 8-3).

Option Four: This is the exterior staircase design option. This option was initially desirable but ultimately rejected because placement of the exterior stair and balcony to the second floor at the property's north-east corner required the removal of interior square footage from the building, and thus the Cathedral's functional building program requirements could not be met. There was also concern that the open stairway at the corner would exacerbate the vagrancy problems currently experienced at the Cathedral. Although the exterior stairway could be gated, installation of a gate would defeat the purpose of including an exterior stairway in the project design (see Figure 8-4).

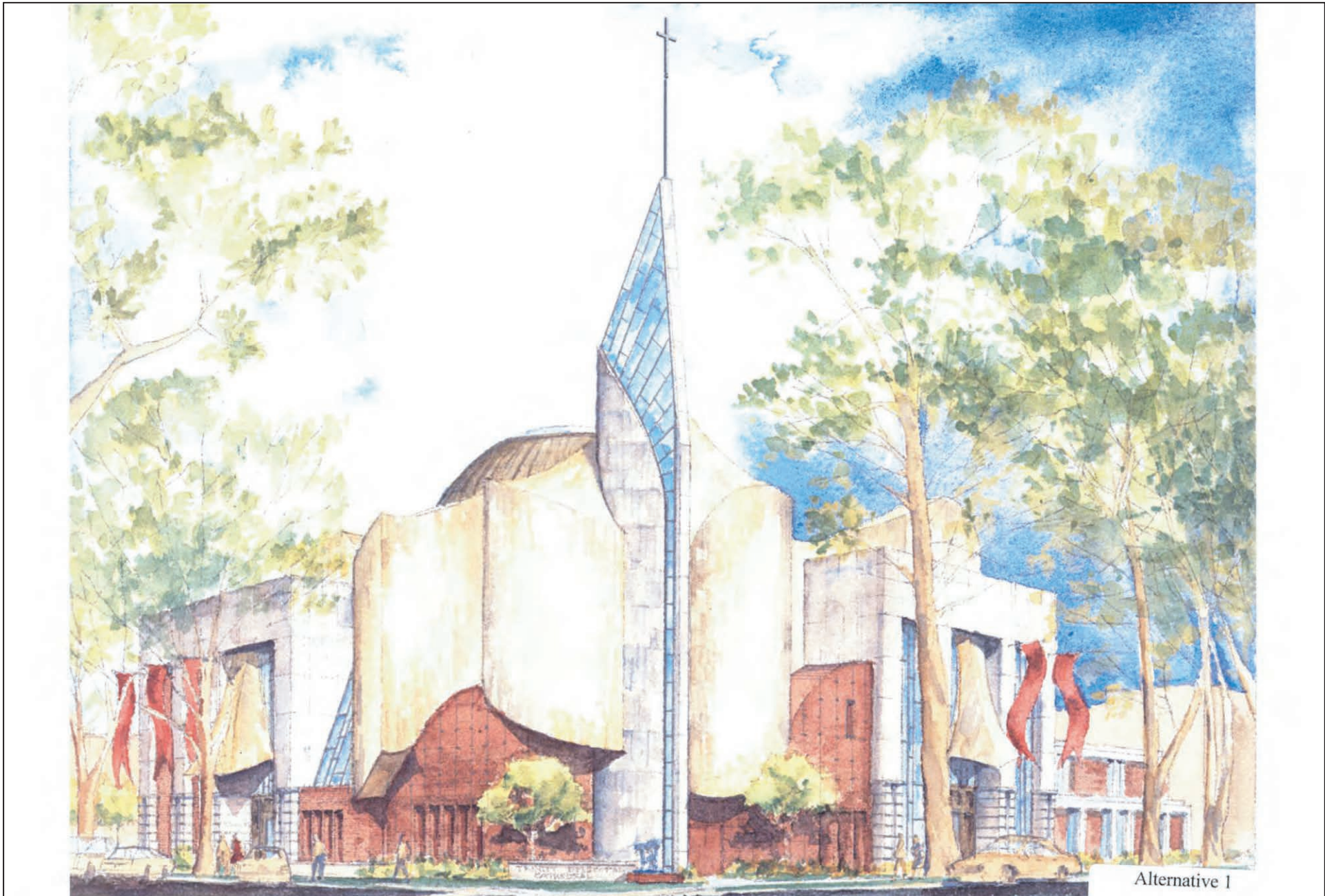


FIGURE 8-1
Original Design Concept

10828-02 **Source:** WMB Architecture, 2005

Sutter Medical Center, Sacramento

EIP
ASSOCIATES

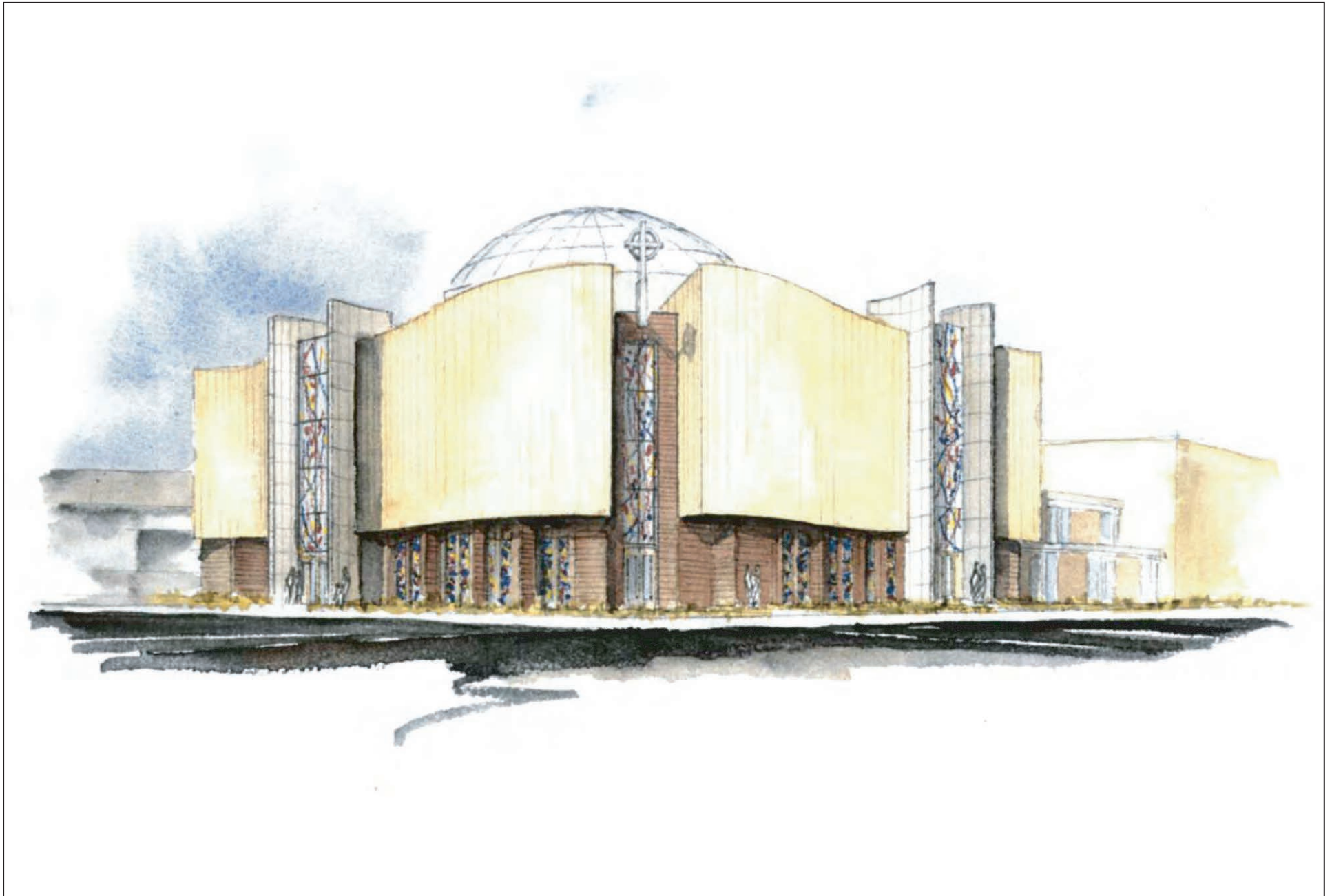


FIGURE 8-2
Curved Wall Design Concept

10828-02 **Source:** WMB Architecture, 2005

Sutter Medical Center, Sacramento

EIP
ASSOCIATES



FIGURE 8-3
Large Existing Design Concept

10828-02 Source: WMB Architecture, 2005

Sutter Medical Center, Sacramento



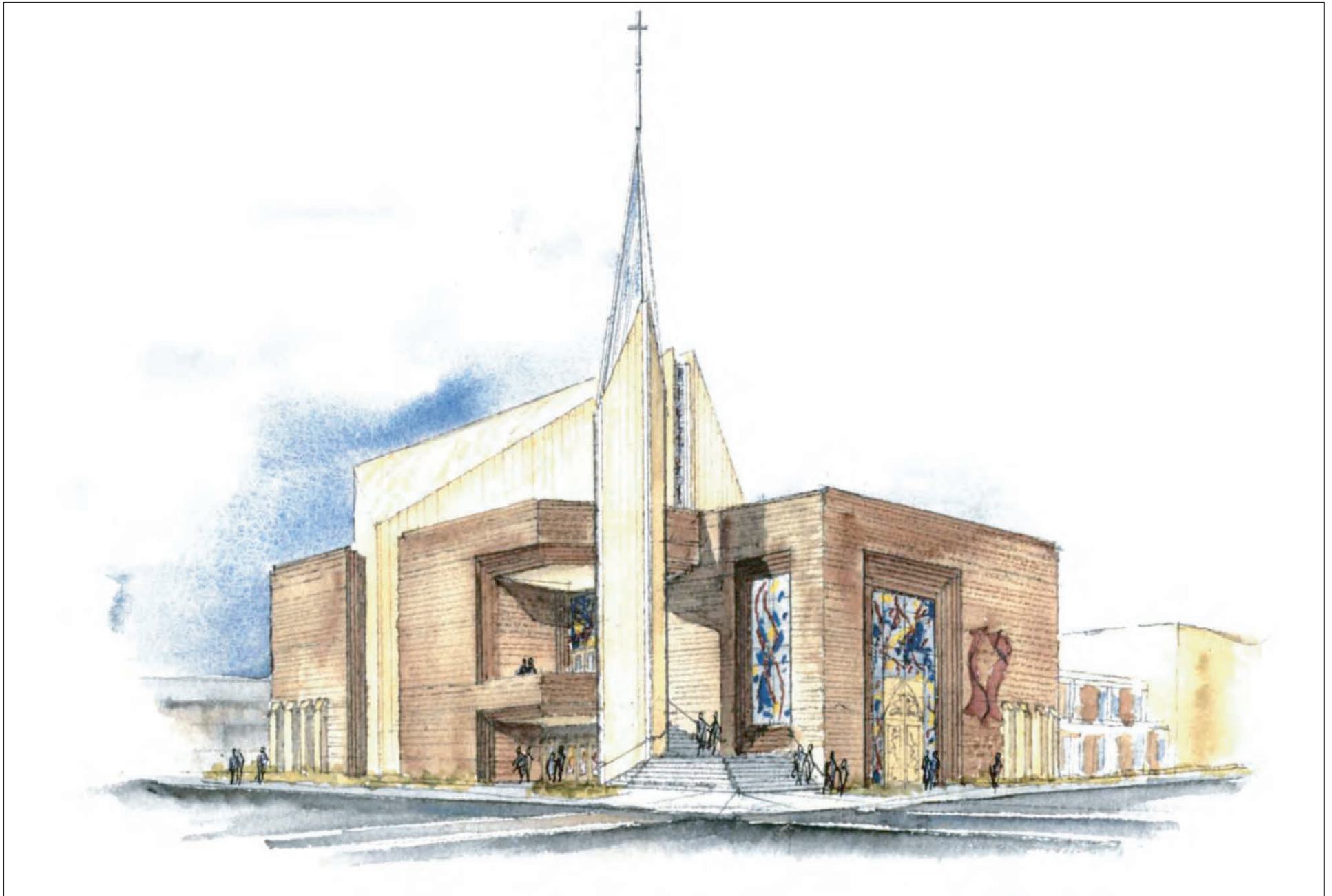


FIGURE 8-4
Exterior Staircase Design Concept

10828-02 Source: WMB Architecture, 2005

Sutter Medical Center, Sacramento



Option Five: This is the prairie/craftsman style design alternative. This option was rejected because it did not sufficiently reflect the image of the cathedral or the Episcopal tradition. This design was also deemed to evoke the image of a bank or an office building rather than a church or cathedral. This alternative design therefore does not meet the project objective to compliment the mission of the Cathedral by designing the new cathedral to reflect the Anglican Episcopal traditions of the church in the physical forms of the building, while complimenting the existing and changing neighborhood context (see Figure 8-5).

The design ultimately selected for the Trinity Cathedral project meets all of the project objectives while best reflecting the criteria of the Cathedral building program in spatial functionality, cost and maintenance efficiency as well as interior and exterior aesthetic image. Specifically, the preferred design has a distinctive urban feel which will serve as a landmark located at the eastern gateway to the central city.

Alternatives Considered within this EIR

The following alternatives were considered for the SMCS project followed by the project alternatives for the Trinity Cathedral project.

SMCS Project

- **SMCS No Project/No Action Alternative**, which assumes that the SMCS project would not be developed but development could occur on any undeveloped land owned by SMCS within the project area. This alternative assumes uses at Sutter Memorial Hospital (SMH) would not change and the existing Sutter General Hospital (SGH) and Buhler Building would remain, the same as all the other existing structures.
- **Smaller SMF Building Alternative**, assumes the Specialty Care medical office uses (63,400 +/- sf) would not be constructed in the SMF Building thereby reducing the overall size of the building. The medical uses proposed to relocate into the SMF Building would stay where they are currently located.
- **SMCS Reduced Size Alternative**, this alternative assumes the WCC, Energy Center, Housing and Community Parking Structure would be constructed but the SMF Building and Future MOB would not be constructed.
- **SMCS Full Parking Supply Alternative**, this alternative assumes the Community Parking Structure would be larger in order to accommodate the parking demand of the SMCS project, Trinity Cathedral and the Children's Theatre on-site.
- **SMCS Off-Site Alternative**, this alternative assumes the SMCS project would be constructed on an approximately 40-acre parcel of land located in North Natomas. Under this alternative the WCC, SGH and the SMF Building would be constructed at this location creating a new medical complex.

Trinity Cathedral Project

- **Trinity No Project/No Development Alternative**, under this alternative the existing Trinity Cathedral project would not be altered.

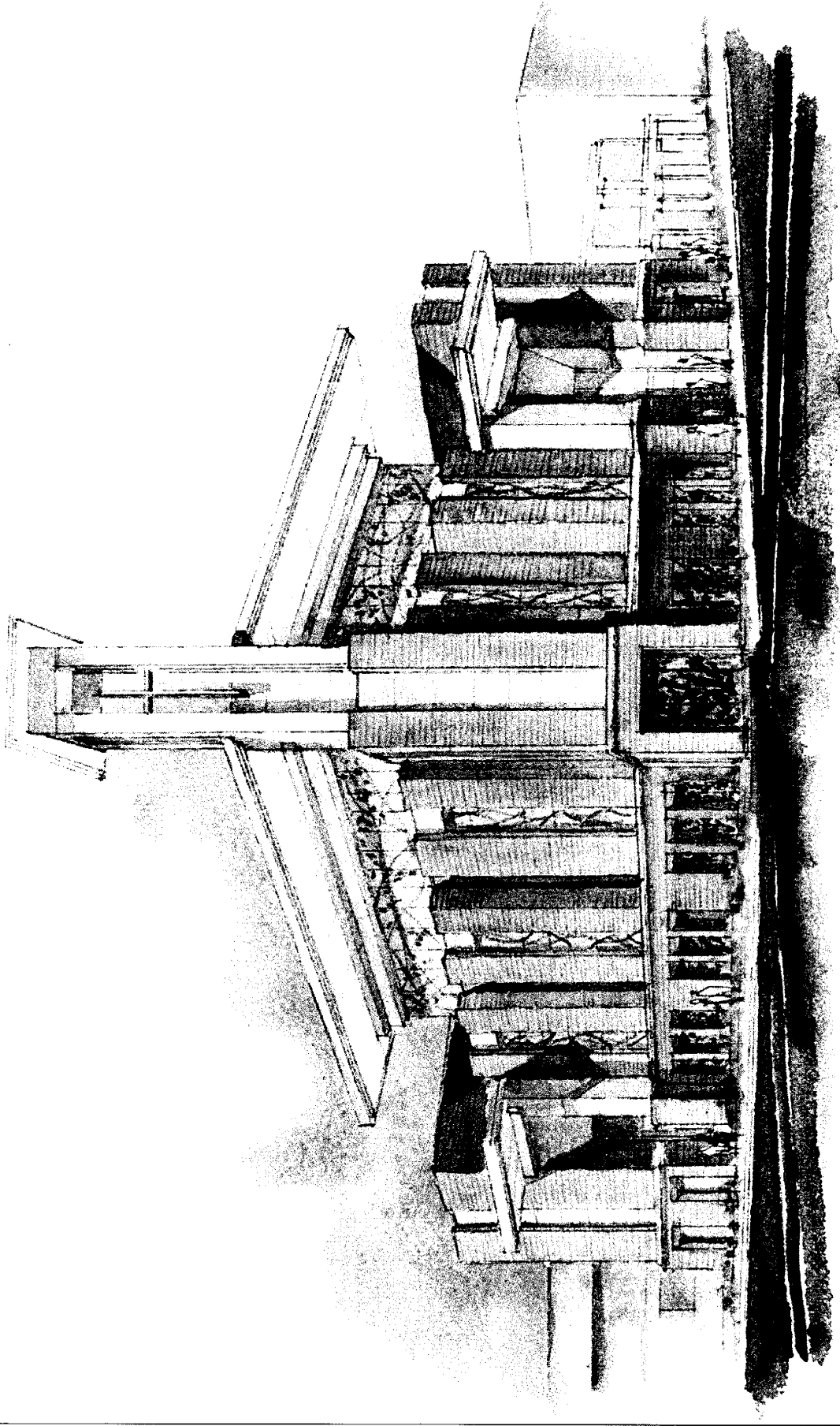


FIGURE 8-5
Craftsman Style Design Concept

Source: WMB Architecture, 2005

10828-02

- **Smaller Cathedral Alternative**, under this alternative the new Trinity Cathedral Building would be reduced in size to approximately 27,750 sf, while the multipurpose space would be reduced to 23,062 sf.
- **Trinity Off-site Alternative**, this alternative assumes the Trinity Cathedral project would be developed on an approximately 15 to 20-acre site located along Capitol City Freeway in the City of Sacramento.

Each of the alternatives is described in more detail below, followed by an assessment of the alternative's impacts relative to either the SMCS project or the Trinity Cathedral project. The focus of this analysis is the difference between the alternative and the project, with an emphasis on addressing the significant impacts identified under each project. For each issue area, the analysis indicates which mitigation measures would be required of the alternative, and which significant and unavoidable impacts identified as part of the project would be avoided or which significant impacts reduced in severity. In some cases, the analysis indicates what additional mitigation measures, if any, would 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 project and no further statement of the level of significance is made. Table 8-1 provides a summary comparison of the severity of impacts for each alternative by section for the SMCS project while Table 8-2 provides the same information for the Trinity Cathedral project.

Table 8-1

SMCS Alternative Impact Comparison

Issue Area	SMCS Proposed Project	SMCS No Project/ No Action	Smaller SMF Alternative	SMCS Reduced Size Alternative	SMCS Parking Supply Alternative	SMCS Off-Site Alternative
6.1 Aesthetics	S	Reduced	Reduced	Reduced	Greater	Equal
6.2 Air Quality	SU	Reduced	Reduced	Reduced	Greater	Greater
6.3 Cultural	S	Reduced	Equal	Reduced	Equal	Greater
6.4 Hazardous Materials/Public Safety	S	Reduced	Equal	Reduced	Equal	Reduced
6.5 Hydrology and Water Quality	LS	Reduced	Equal	Equal	Equal	Greater
6.6 Noise	SU	Reduced	Reduced	Reduced	Greater	Reduced
6.7 Transportation and Circulation	S	Reduced	Reduced	Reduced	Greater	Greater
6.8 Utility Systems	LS	Reduced	Reduced	Reduced	Equal	Greater

Notes:

SU= Significant and Unavoidable – If any impact was identified as significant and unavoidable in the technical analysis.
 S= Significant before mitigation – If any impact was identified as being significant before mitigation but reduced to a less- than-significant level.
 LS= Less than Significant – If all impacts were identified as being less than significant in the analysis.
 NI= No Impact – no impact would occur compared to the project.
 Equal = Level of significance is equal to the project.
 Greater = Level of significance is greater compared to the project.
 Reduced = Level of significance is reduced compared to the project, but not necessarily to a less-than-significant level.
 Source: EIP Associates, 2005.

Table 8-2

Trinity Cathedral Alternative Impact Comparison

Issue Area	Proposed Project	Trinity No Project/No Development	Smaller Cathedral Alternative	Trinity Off-Site Alternative
Aesthetics	LS	NI	Equal	Greater
Air Quality	S	NI	Reduced	Greater
Cultural	S	NI	Equal	Greater
Hazardous Materials/Public Safety	S	NI	Equal	Reduced
Hydrology and Water Quality	LS	NI	Equal	Greater
Noise	SU	NI	Equal	Equal
Transportation and Circulation	LS	NI	Equal	Greater
Utility Systems	LS	NI	Equal	Greater

Notes:

SU= Significant and Unavoidable – If any impact was identified as significant and unavoidable in the technical analysis.

S= Significant before mitigation – If any impact was identified as being significant before mitigation but reduced to a less- than-significant level.

LS= Less than Significant – If all impacts were identified as being less than significant in the analysis.

NI= No Impact – no impact would occur compared to the project.

Equal = Level of significance is equal to the project.

Greater = Level of significance is greater compared to the project.

Reduced = Level of significance is reduced compared to the proposed project, but not necessarily to a less-than-significant level.

Source: EIP Associates, 2005.

SMCS Project Alternatives**SMCS No Project/No Action Alternative**Description

Under CEQA, the No Project (No Action) Alternative must consider the effects of foregoing 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 the Notice of Preparation (NOP) is published, or if no NOP is published, at the time environmental analysis commences, or well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services (CEQA Guidelines, section 15126.6(e)(2)).

Under the SMCS No Project Alternative the WCC, SMF Building, Community Parking Structure, Energy Center, Housing and Future MOB as well as the Children's Theatre of California would not be constructed. The existing buildings within the SMCS project area would remain with no further modifications and SMH would not be closed. Existing medical office uses would remain where they are currently located and would not relocate. However, for the purposes of this analysis it is assumed that any vacant land within the SMCS project area would be developed consistent with the underlying land use designation and zoning for the site. All of the undeveloped land within the SMCS project area is owned by SMCS.

Undeveloped land within the SMCS project area includes the ½ to ¾ of a block bounded by N Street to the south, Capitol Avenue to the north, 27th Street to the west and 28th Street to the east (location of the proposed Community Parking Structure) and the “green lot” surface parking lot located at the corner of 28th and L Streets (location of the proposed SMF Building). The undeveloped land owned by SMCS is currently being used for surface parking. Under the City’s General Plan land use designations the parcel located between Capitol Avenue and N Street (proposed site of the Community Parking Structure) is designated for High Density Residential and Community/Neighborhood Commercial & Offices. The site is zoned Multi-Family (R-3A-SPD) and General Commercial (C-2). The parcel located at 28th and L Streets is designated for Regional Commercial & Office and is zoned Office Building (OB). Under the City’s Zoning Ordinance the maximum density for the R-3A zone is 36 units per acre. Approximately half of the 1.7 acre site is designated for residential uses with the remainder designated for Community/Neighborhood Commercial & Office. Therefore, assuming the maximum density of 36 units/acre a total of up to 42 residential units could be constructed. For the purposes of this analysis based on the land use and zoning an approximately 35-foot tall, 17,000 square foot commercial use could be developed on the remainder of the site. Assuming the current land use and zoning an approximately 35-foot tall 29,750 square foot office building or 21 residential units could be constructed on the parcel located at 28th and L Streets.

Comparative Environmental Effects

Under the No Project/No Action Alternative, the existing structures within the SMCS project area would remain and the area would not be redeveloped with the exception of the existing surface parking area located between N Street and Capitol Avenue, 27th and 28th Streets and the surface parking lot located at the corner of 28th and L Streets. Operations at SGH and the Buhler Building would continue and improvements to those buildings previously anticipated to occur (that are not subject to environmental review) would still happen. The existing St. Luke’s Medical Office Building and parking garage, MTI office buildings, House of Furs building, (former) RAS Building, Old Tavern garage and associated office uses, and EAP office building would not be removed. It is assumed that any unoccupied buildings could be occupied with office and/or medical office uses in the future and that the undeveloped parcels could be developed with High Density Residential (multi-family), General Commercial and Office uses.

All of the existing buildings proposed for demolition would not be removed, but there could be limited development on the two undeveloped parcels within the project area. It is assumed any new development would meet the City’s existing land use and zoning requirements; therefore, any new building would not exceed the current 35-foot height limitation. From an aesthetics standpoint, there would be very little change in the visual character of the area. However, new office and residential uses could be constructed at the two undeveloped parcels which include the corner of 28th and L Streets and on the site of the proposed Community Parking Structure. These new uses would be limited to a 35-foot height limitation and would be subject to the City’s design review process. Construction of any new buildings in this area would contribute to a change in the visual character, but it would not be considered significant. The environment is urban and is designated for development under the City’s General Plan. Assuming future development of these sites is consistent with the City’s Design Review Board the change in the visual character and aesthetics would not be considered significant, the same as the SMCS project. If all of the existing buildings were fully occupied, the building occupants’ would generate increased traffic and parking demand when compared to existing conditions, but not on the same scale as the SMCS project. It is unlikely that traffic generated under this alternative would result in any significant traffic or parking impacts. Under existing conditions there is adequate parking available and the roadway system is not adversely impacted. Under this alternative it is anticipated there would be no significant impacts to intersections, the freeway system, pedestrian, bicycle, transit, or parking associated with development.

Air emissions anticipated to occur due to construction of the SMCS project would be substantially reduced under the No Project Alternative because only two parcels could be developed. Assuming these buildings are built at the same time and on different parcels, peak NO_x levels of 121.75 pounds per day could occur. Emissions associated with project operation would be less than the SMCS project, as shown in Table 8-3. Noise associated with project construction would also be significantly reduced under this alternative because construction would be limited to two sites, there would be no building demolition, and no helicopter operations would occur because the new WCC would not be constructed.

Table 8-3
SMCS No Project Alternative

	SMCS No Project Alternative	SMCS Project
Solid Waste	135 tons/year	1,162 tons/year
Water	20.4 AFY	230 AFY
Wastewater	0.02 mgd	0.15 mgd
Air Quality – Operation ¹		
ROG	5.58 lbs/day	122.03 lbs/day
NO _x	4.72 lbs/day	148.9 lbs/day

Notes:

1. Please see the discussion on Section 6.2, Air Quality for emissions associated with project construction.

Source: EIP Associates, 2005.

Because building demolition would not occur, public safety impacts to construction workers and the general public associated with building demolition and the generation of fugitive dust would not be a concern. Increases in stormwater flows and contributions to the City's Combined Sewer System (CSS) would be less than the SMCS project because overall less development is planned. However, there might be a small increase due to occupying buildings that are currently unoccupied and development of new commercial and housing uses; however, compared to the SMCS project the contribution to the CSS would be small, as shown in Table 8-3. Any increase in water demand or wastewater services would be less than the SMCS project and no significant impacts are anticipated to occur. The increase in wastewater flows could result in impacts to existing infrastructure, the same as the SMCS project. The amount of solid waste that would be generated would be less than the SMCS project, and would not exceed the City's threshold of 500 tons of solid waste per year (see Table 8-3).

Mitigation That Would No Longer Be Required

A majority of the mitigation measures identified under the SMCS project would no longer be required under the No Project Alternative because development would be limited. However, it is anticipated that if any new construction were to occur on the land currently undeveloped (28th/L Street and Community Block) the following mitigation measures would still be required. Mitigation measures required to mitigate potential impacts associated with the increase in air pollutants (see Mitigation Measures 6.2-2, 6.2-3) and noise (see Mitigation Measure 6.6-1) associated with project construction would still be required. Any potential land disturbance would require compliance with Mitigation Measures 6.3-1 and 6.3-2 to ensure impacts to any unknown cultural resources are less than significant. Mitigation Measures 6.5-1 and 6.8-1 would still be required to mitigate any contribution to the City's CSS.

Significant and Unavoidable Impacts That Would No Longer Occur

It is assumed that project construction could contribute to an increase in NO_x and construction noise resulting in short-term significant and unavoidable impacts. Development of this alternative would not generate more than 500 tons per year of solid waste, nor is it estimated that project operation would contribute to an increase in criteria pollutants resulting in both a project-specific and cumulative significant and unavoidable impact. Therefore, under this alternative only two of the five significant and unavoidable impacts would occur.

Relationship of the SMCS No Project Alternative to the Project Objectives

The SMCS No Project Alternative would not meet any of the project objectives identified by SMCS. The SMCS No Project Alternative would not consolidate healthcare facilities, would not expand specialty care services, or provide a new women's and children's center. Therefore, this alternative would be considered infeasible because it would fail to meet any of the identified project objectives.

Smaller SMF Building Alternative

Description

Under this alternative, approximately 63,400 +/- sf of Specialty Care medical office uses proposed in the SMF Building would not be constructed thereby reducing the size of the SMF Building. All of the other components of the SMCS project would not change. The WCC, Housing, Future MOB, Energy Center, and Community Parking Structure as well as the Children's Theatre of California would all be constructed. Under this alternative, the amount of useable medical office space within the SMF Building would be reduced from 131,737 sf to 68,371 sf. Two levels of parking would be provided below-grade with two levels of medical office space located above grade. The building design would not change with the exception of a smaller structure. A total of 90 parking spaces and the Energy Center would still be included below-grade. Due to the reduction in medical office space, the demand for parking would be reduced by approximately 224 spaces.

Under the SMCS project, the medical office uses to be re-located in the SMF Building would come from medical offices currently located in the Fort Sutter and Alhambra medical buildings, as well as from SMH. By reducing the SMF Building by approximately 63,400 +/- sf of specialty care medical office space, the uses proposed to be re-located would remain where they are currently located. In essence, there would be no change relative to existing conditions for these components of the project.

Comparative Environmental Effects

Under the Smaller SMF Building Alternative approximately 63,400 sf of Specialty Care services would not be constructed. The specialty care medical office uses proposed in the SMF Building would not relocate from either the Fort Sutter or Alhambra medical office buildings; therefore, those medical office uses in SMH proposed to relocate into the vacant space to be created in the Fort Sutter Building and the Alhambra medical office building would not occur. Those medical uses would stay where they are currently located. The reduction of approximately 63,400 sf of medical space and the need for 224 fewer parking spaces would still however,

result in the need to construct the 1,100 space Community Parking Structure. The reduction of 63,400 sf of building space would enable a smaller SMF Building to be constructed by two floors; however, the change in visual character would remain a less-than-significant impact the same as the SMCS project. Construction of a smaller building on this site would fit into the urban environment essentially the same as a four story structure. Because the surrounding buildings vary in size from two stories to over six stories a two or a four story structure would be consistent with the surrounding buildings.

Under this alternative, the amount of construction activity would be similar to what was analyzed under the SMCS project. However, because the SMF Building would be smaller it is assumed impacts associated with an increase in air pollutants and noise associated with project construction would be similar to what was analyzed for the project; although, slightly less severe, as shown in Table 8-4. Impacts to cultural resources would essentially be the same as the SMCS project because the same area would be disturbed and/or excavated. The same would be true for hazards and public safety. Because the number of buildings to be demolished would not change under this alternative, the impacts would be the same as what was analyzed for the SMCS project. The same is true for the increase in stormwater flows and potential impacts to the City's CSS. The reduction in size of the SMF Building would result in the same impacts to hydrology and water quality as analyzed under the SMCS project. Because the SMF Building would be smaller there would be a reduction in the number of vehicle trips accessing the project area. This alternative would generate 157 fewer a.m. peak hour trips and 236 fewer p.m. peak hour trips. The impacts on intersections and freeways would also be less than significant, the same as the project. Due the reduction in building size, fewer parking spaces would be required. A total of approximately 224 fewer spaces would be needed. However, even with this reduction in parking demand, there still could be a parking deficit of approximately 313 spaces for the project and 373 spaces for Trinity Cathedral and the Children's Theatre combined that would require mitigation. There would be no adverse impacts to bicycle, transit or pedestrian facilities, the same as the project.

The amount of water required for the project would be similar under this alternative as what was analyzed under the SMCS project, shown in Table 8-4. Due to the reduction in size of the SMF Building the total demand for water would be slightly less. The same is true for the increase in wastewater, as shown in Table 8-4. Overall, the amount of wastewater generated by the Smaller SMF Building alternative would be very similar to the SMCS project, but slightly less severe. The amount of solid waste generated by this alternative would be very similar to the SMCS project and would trigger the 500 pound threshold of significance, as shown in Table 8-4.

Table 8-4

Smaller SMF Alternative

	Smaller SMF Alternative	SMCS Project
Solid Waste	1,046 tons/year	1,162 tons/year
Water	220 AFY	230 AFY
Wastewater	0.14 mgd	0.15 mgd
Air Quality – Operation ¹		
ROG	106.15 lbs/day	122.03 lbs/day
NO _x	128.82 lbs/day	148.9 lbs/day

Notes:

1. Please see the discussion in Section 6.2 pertaining to emissions associated with project construction.

Source: EIP Associates, 2005.

Mitigation That Would No Longer Be Required

All of the mitigation measures identified under the SMCS project would also still be required for this alternative because essentially the same project would be constructed in the same location as what was analyzed under the SMCS project. Even though the project is slightly smaller, it would still require excavation that would disturb the soil and could impact unknown cultural resources; generate air pollutants and noise associated with project construction and building demolition; and generate an increase in parking demand.

Significant and Unavoidable Impacts That Would No Longer Occur

It is anticipated that the same significant and unavoidable impacts associated with project construction activities and the increase in solid waste identified under the SMCS project would still occur under the Smaller SMF Building Alternative. The significant and unavoidable cumulative impacts also would occur.

Relationship of the Smaller SMF Building Alternative to the Project Objectives

The Smaller SMF Building Alternative would fail to achieve the project applicant's primary project objective of consolidating all acute care facilities at SMH and SGH, as well as other disparate facilities into one health complex. By reducing the size of the SMF Building some of the medical office uses to be re-located in the SMF Building from medical offices currently located in the Fort Sutter and Alhambra medical buildings, as well as from SMH would not occur. The uses proposed to be relocated would remain where they are currently located. In essence, there would be no change relative to existing conditions for these components of the project. Not allowing these medical office uses to be relocated from SMH, and the Fort Sutter and Alhambra medical office buildings would not meet the primary objective of consolidating disparate health care functions into one complex. Therefore, the Smaller SMF Alternative fails to meet SMCS's most important objective for the project.

SMCS Reduced Size Alternative

Description

Under the SMCS Reduced Size Alternative, the WCC, Energy Center, Housing, and Community Parking Structure as well as the Children's Theatre of California would be constructed as currently proposed; however, the SMF Building and the Future MOB (St. Luke's MOB) would not be constructed. Under this alternative, the existing St. Luke's MOB would remain and would not be occupied and the entire SMF Building would not be constructed. The other existing uses on the site would remain. The elimination of the SMF Building and the Future MOB would reduce parking demand by approximately 540 spaces; therefore, the Community Parking Structure would be reduced to six floors above grade with one floor below grade. A total of approximately 417 spaces would no longer be required for the SMF Building and 124 spaces would no longer be required for the Future MOB.

As discussed in the Smaller SMF Building Alternative, the medical offices proposed to re-locate to the SMF Building under the SMCS project would come from the Fort Sutter and Alhambra medical buildings, as well as from SMH. Not constructing the SMF Building or the Future MOB

would therefore eliminate the relocation of any medical office uses to the SMCS medical complex. All of the medical uses would remain where they are currently and there would be no change relative to existing conditions.

Comparative Environmental Effects

Under the Reduced Size Alternative, all of the components of the project would be constructed with the exception of the SMF Building and the Future MOB. A total of approximately 540 parking spaces would no longer be required and the Community Parking Structure would be a total of six stories above grade versus seven stories. The visual impacts of the project would essentially be the same as what was analyzed for the SMCS project. The change in visual character would remain less than significant. Impacts caused by construction activities, including an increase in air pollutants and noise from construction equipment, would essentially be the same as the SMCS project; however, slightly less severe because two buildings would not be constructed and some buildings would not be demolished. Table 8-5 indicates emissions associated with project construction attributed to the Reduced Size Alternative prior to mitigation. Under the Reduced Size Alternative there would be no impacts associated with project construction. Impacts due to project excavation and land disturbance which include impacts to cultural resources would be similar to those presented for the SMCS project because for all practical purposes a majority of the site would be developed.

Table 8-5

SMCS Reduced Size Alternative

	SMCS Reduced Size Alternative	SMCS Project
Solid Waste	858 tons/year	1,162 tons/year
Water	139 AFY	230 AFY
Wastewater	0.12 mgd	0.15 mgd
Air Quality – Operation ¹		
ROG	51.36 lbs/day	122.03 lbs/day
NO _x	59.21 lbs/day	148.9 lbs/day

Notes:

1. Please refer to Section 6.2, Air Quality for a discussion on the construction emissions associated with the project.

Source: EIP Associates, 2005.

Under the Reduced Size Alternative, impacts associated with building demolition activities and the potential for hazards to be present on the site would still occur because a number of buildings would be demolished under this alternative. In addition, because the WCC would be constructed it is assumed helicopter operations would still continue contributing to an increase in noise associated with helicopter operations. Impacts to hydrology and water quality would also be very similar to the SMCS project. Although two buildings would not be constructed the overall amount of impervious surface area would not change much relative to existing conditions. The total amount of stormwater runoff would be very similar to what was analyzed under the SMCS project. The potential for the project to exceed or adversely impact the City's CSS would be similar to the SMCS project, as shown in Table 8-5. The amount of water and wastewater generated under this alternative would be less than the project.

Under this alternative there would be a reduction in vehicle trips which would generate 363 fewer peak hour a.m. trips and 521 fewer p.m. peak hour trips. Similar, to the project impacts to

intersections and freeway segments would be less than significant. In addition, a total of approximately 540 parking spaces would no longer be required. This would enable a reduction in size of the Community Parking Structure to six stories above grade. The parking demand associated with this alternative would be accommodated by the parking provided by the project. There would be a parking shortfall of approximately 146 spaces associated with Trinity Cathedral and the Children's Theatre. Based on the proposed and available parking it is assumed there still could be a deficit in available on-site parking to meet the parking demand of this alternative. Impacts to pedestrian, bicycle and transit systems would remain less than significant, the same as the project.

Mitigation That Would No Longer Be Required

Under the Reduced Size Alternative, all of the mitigation measures identified under the SMCS project would still be required because essentially the entire project area would be developed. Overall, the severity of the impacts identified would be less than the project because a smaller project would be constructed. However, there still could be a parking shortfall under this alternative that would need to be mitigated.

Significant and Unavoidable Impacts That Would No Longer Occur

Under the Reduced Size Alternative, all of the project-specific and cumulative significant and unavoidable impacts identified for the SMCS project associated with project construction and operation would still occur.

Relationship of the SMCS Reduced Size Alternative to the Project Objectives

The SMCS Reduced Size Alternative, similar to the Smaller SMF Building Alternative would fail to achieve the project applicant's primary project objective of consolidating all acute care facilities from SMH and SGH, as well as other disparate facilities, into one medical complex. By eliminating the SMF Building and the Future MOB, the medical office uses to be relocated into the SMF Building would not occur. The uses proposed to be relocated would remain where they are currently located in either the Fort Sutter or Alhambra medical office buildings or SMH. If these medical office uses are not relocated it would be difficult for this alternative to meet the primary objective of consolidating all health care functions into one complex. Therefore, the SMCS Reduced Size Alternative fails to meet the project applicant's most important objective for the project.

SMCS Full Parking Supply Alternative

Under the SMCS Full Parking Supply Alternative, the Community Parking Structure would be redesigned to accommodate the maximum calculated midday parking demand associated with the SMCS project, Trinity Cathedral project, and the future Children's Theatre. As discussed in the Transportation section, Section 6.7, the parking shortfall estimated for the SMCS project is approximately 537 spaces, combined with the parking needs of Trinity Cathedral (25 midday spaces) the parking shortfall increases to 562 spaces, adding the Children's Theatre the full midday parking demand shortfall increases to 686 spaces. Under this alternative the Community Parking Structure would be expanded and redesigned to accommodate up to approximately 1,685 spaces in a ten-story above-grade structure. The redesign could

necessitate removal of the proposed 9,000 sf of retail uses proposed along N Street because a larger building floor plate may be required to accommodate a taller structure. A 1,685 space structure assumes approximately 85 percent occupancy. This alternative also does not assume the project would include the additional TSM/Parking Demand Management Program Elements. This alternative does assume compliance with the City-required TSM Plan, but the additional program elements would not be required. Under this alternative other components of the SMCS project would not change, the only component that would change would be the expansion and redesign of the parking structure.

Comparative Environmental Effects

Under the SMCS Full Parking Supply Alternative, all of the project components would be constructed with the exception of the expanded and redesigned Community Parking Structure. The parking structure would be one story below-grade and ten stories above-grade to accommodate a total of approximately 1,685 parking spaces; this would be an increase of three stories compared to the current design of one story below-grade with seven stories above-grade. All of the impacts addressed in Chapter 6 associated with the other project components including construction and operation (i.e., SMF Building, WCC, housing, etc) would not change under this alternative. The reader is referred to Chapter 6 for a full discussion of impacts associated with other project components.

Under this alternative, the increased height and mass of the expanded and redesigned parking Community Parking Structure would be out-of-scale with the adjacent structures and surrounding neighborhood. The expanded building would cast shadows on adjacent sidewalks, storefronts and other uses for longer periods of time than the SMCS project. Although there are other noticeably tall buildings in the vicinity including the seven-story Buhler Building, five-story Sutter General Hospital, and the seven-story senior apartment building on Capitol Avenue, because the buildings immediately adjacent to the project site primarily include one and two-story structures a ten-story structure would appear to be out-of-scale with the adjacent uses. However, in the central business district/midtown area the City uses a different threshold to determine the significance of visual impacts and may not find the presence of a ten-story building an aesthetic impact.

Increasing the amount of parking in the Community Parking Structure would tend to concentrate of traffic flow in and around the parking structure, increasing the potential for congestion and other related impacts. However, the analysis of traffic, included in Section 6.7, assumed adequate parking was available to serve the project assuming compliance with the TSM Monitoring Program; therefore, under this alternative constructing a larger structure to accommodate the potential parking shortfall should not change the results of the traffic analysis. Traffic volumes under this alternative would not be reduced compared to the SMCS project. However, the total amount of available parking would be increased under this alternative.

The maximum practical height of a parking garage is normally seven or eight levels. A taller structure results in increased vehicle circulation on the lower levels as people are looking for spaces in the lower floors. A taller structure could be designed with express ramps that lead vehicles up to the higher floors without having to circulate through all the lower floors. However, this design would require a larger building footprint to construct and may not be feasible in the current location. An increase in vehicles circulating around the structure could contribute to an increase in localized air pollutants as a result of more vehicles queuing to enter or exit the structure or circulating on streets in the vicinity of the parking structure. In addition, construction of a taller parking structure would contribute more air emissions of ROG and NO_x associated with a longer construction schedule. In addition, the concentration of vehicles in this area could

also contribute to an increase in traffic noise and an increase in pedestrian/bicycle and vehicle conflicts and other safety issues.

Mitigation that Would No Longer Be Required

Under the SMCS Full Parking Supply Alternative, since all of the other project components are remaining unchanged, the same mitigation measures identified under the SMCS project would still be required under this alternative. All of the mitigation measures identified under the SMCS project would be required with the exception of mitigation identified to address the parking shortfall (Mitigation Measure 6.7-1).

It is conceivable that additional mitigation could be required to address potential impacts associated with an increase in vehicles in the area and pedestrian/bicycle and vehicle conflicts.

Significant and Unavoidable Impacts that Would No Longer Occur

Under the SMCS Full Parking Supply Alternative the only significant and unavoidable impact that would no longer occur would be the potentially significant and unavoidable impact identified for the parking shortfall. Because this alternative meets the parking demand associated with the project the impact would be less than significant.

It is not anticipated that this alternative would create any new significant and unavoidable impacts.

Relationship of the SMCS Full Parking Supply Alternative to the Project Objectives

The SMCS Full Parking Supply Alternative is similar to the SMCS project and would essentially not change the primary SMCS project components. However, this alternative would fail to achieve all of the project applicant's project objectives by not designing a project that is environmentally sensitive and includes an aggressive TSM program, and places the most intense project uses away from residential areas. In addition, this alternative would not fully meet the intent of the second objective which states a desire to design a project that complements the residential aspect of the surrounding neighborhood. Therefore, the SMCS Full Parking Supply Alternative fails to meet a majority of the project objectives.

Section 15126.6(f)(1) of the CEQA Guidelines defines feasible as taking into account "site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries". In the spirit of full disclosure this alternative was presented in the EIR to address the parking shortfall identified. However, the question of is this alternative even deemed feasible is raised due to 1) affordability and 2) technical feasibility. SMCS has indicated that to construct a parking structure of this size would not be economically viable for the project. In addition, the technical feasibility of constructing a ten-story parking structure on this project site has not been determined. Therefore, at this time it is not known if this project alternative would even be considered a feasible alternative; however, it was presented in the spirit of full disclosure.

SMCS Off-Site Alternative

Under the SMCS Off-Site Alternative, the WCC, SMF Building and SGH would be constructed on an approximately 40-acre parcel of land located in North Natomas at the intersection of Arena Boulevard and East Commerce Way, east of I-5, as shown in Figure 8-6. The parcel is currently zoned EC 50, which would allow a hospital use. Under this alternative, the Housing, Future MOB and Community Parking Structure, as well as the Children's Theater of California would not be project components. However, if a new medical complex were to be constructed in a different location the existing SGH facility located in midtown Sacramento as well as SMH would be closed and a new hospital building constructed along with the WCC and the SMF Building in this new location. It would not be practical to maintain SGH in its current location; therefore, SGH would be closed and the building more than likely sold. This new medical complex would include a combination of surface and structured parking and it is anticipated a new Energy Center would also be constructed to serve the buildings.

This alternative assumes an approximately 400,000 sf new hospital would be constructed along with an approximately 398,000 sf WCC (including a helistop) and a 150,000 sf medical office building at this new location. An approximately 24,000 sf Energy Center would also be constructed to provide the heating and cooling needs of the new complex. It is assumed parking would be provided in a mix of surface parking and parking structures.

The project site is currently undeveloped and does not contain any buildings or structures. The site has previously been used for agricultural operations. No paved roads exist on the site.

Comparative Environmental Effects

Under the SMCS Off-Site Alternative it is assumed Sutter would construct a new medical complex in North Natomas on a 40-acre parcel of land. Three new buildings would be constructed as well as any required parking structures. Development of the project in this location would result in the creation of new impacts associated with development of raw land versus development in a developed, urban environment. The project site is located within the North Natomas Community Plan area and is therefore subject to compliance with the Natomas Basin Habitat Conservation Plan (NBHCP). The land is currently designated by the State Farmland Mapping and Monitoring Program as a combination of Farmland of Local Importance and other lands. The introduction of development on this parcel would change the visual character of the area relative to existing conditions. However, this portion of the city is planned and zoned for development and is adjacent to existing development to the north, east and west. It is not anticipated that development of this site would contribute to any significant visual impacts. The site would be visible to motorists along I-5 so there could be impacts associated with light and glare that would need to be mitigated. Project construction would contribute to an increase in air emissions associated with grading activities and construction equipment. It is anticipated that PM_{10} associated with grading activities would be increased compared to the SMCS project because a much larger site is being disturbed in an undeveloped area. In addition, no paved roads currently exist on the site so it is assumed additional dust would be created due to construction equipment accessing the site. As with the project it is assumed emissions associated with the increase in NO_x attributed to construction equipment could be reduced to less-than-significant levels through mitigation. Operational emissions associated with project operation are assumed to be very similar to what was analyzed as part of the SMCS project, as shown in Table 8-6. Construction noise would be a short-term effect of the project yet due to its location it is not anticipated to disturb any sensitive receptors. The closest residential areas are located approximately 1,800 feet to the southwest across I-5. Because an undeveloped site would be disturbed it is assumed there could be adverse impacts to any

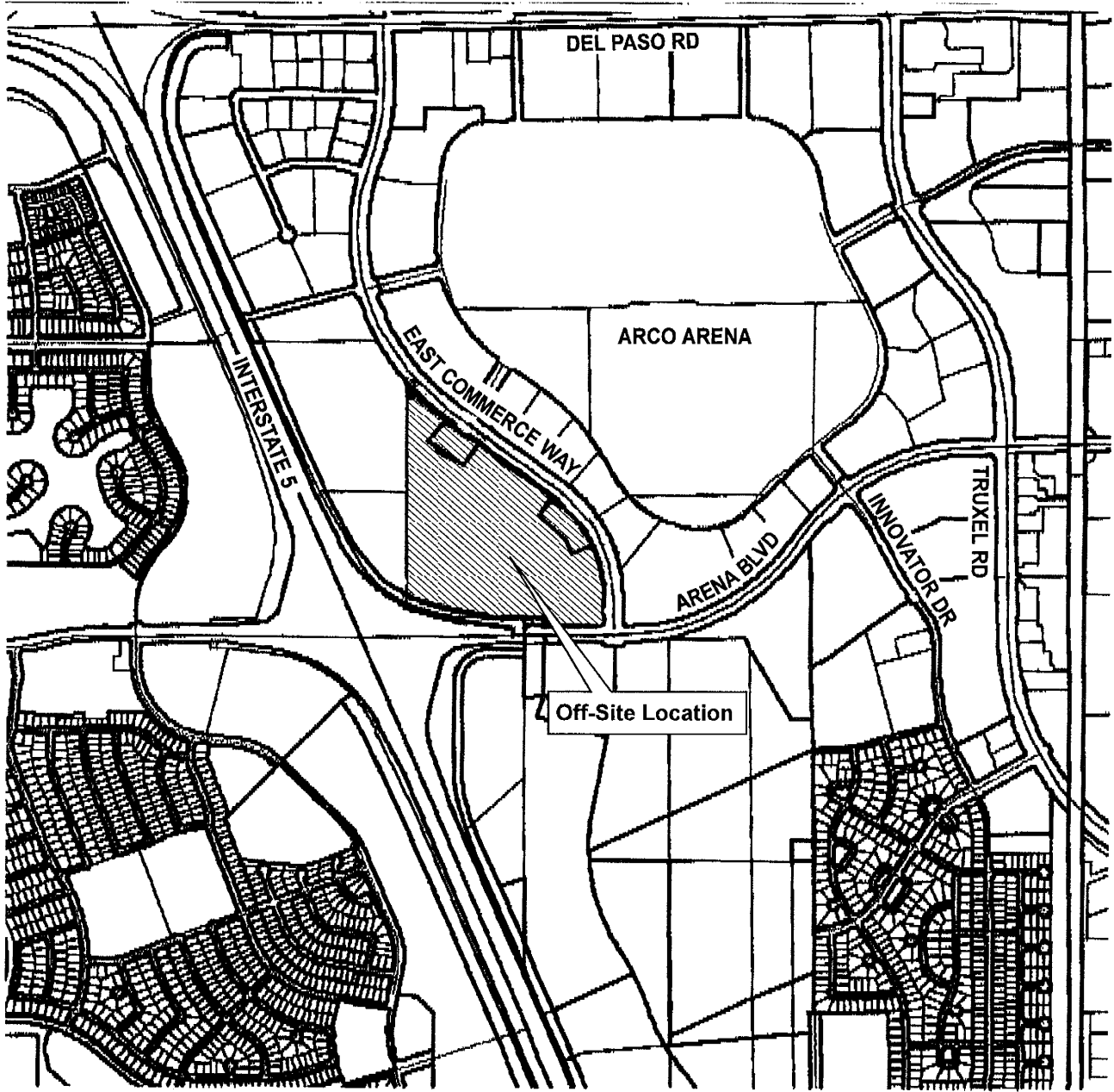


FIGURE 8-6
SMCS Off-Site Location Alternative

10828-02

Source: Development Services Department, GIS 2004

Sutter Medical Center, Sacramento



Table 8-6
SMCS Off-Site Alternative

	Off-Site Alternative	SMCS Project
Solid Waste	1,068 tons/year	1,162 tons/year
Water	127 AFY	230 AFY
Wastewater	0.15 mgd	0.15 mgd
Air Quality – Operation ¹		
ROG	112 lbs/day	122.03 lbs/day
NO _x	142 lbs/day	148.9 lbs/day

Notes:

1. Please refer to Section 6.2, Air Quality for a discussion on the construction emissions associated with the project.

Source: EIP Associates, 2005.

known or unknown subsurface resources that may exist on the site, the same as the SMCS project. No surface historic resources exist; therefore, this would not be an issue in this location. It is assumed the impact to any subsurface resources would be the same as the project.

The potential for the project in this location to contribute to impacts associated with the transport, handling or storage of hazardous materials is considered the same as what was analyzed under the SMCS project. However, because the project site is undeveloped a Phase 1 environmental site assessment (ESA) would need to be prepared to analyze any potential hazards that may be present on the site. The new hospital and medical office buildings would be required to comply with stringent federal and state requirements pertaining to the proposed handling, storage and disposal of any hazardous materials. In addition, because no buildings would need to be demolished there would not be any potential safety impacts to construction workers or the public. The WCC would also include a helistop, the same as the project, which would result in an increase in noise associated with helicopter operations. However, because the site is located adjacent to I-5 and not in close proximity to any residences it is not assumed that helicopter noise would create any significant, unmitigable impacts. The project site is not located within a floodplain; however, because it is located in an undeveloped area in the city existing storm drain, water and sewer infrastructure as well as roadways do not exist. Therefore, the project would require construction of on-site storm drain, water and sewer facilities as well as roads to accommodate the project. It is assumed the project would tie into the City's existing storm drain, water and sewer infrastructure located to the east of the project site in the newly developed area. There would be no impacts to the City's CSS because this site is not served by a combined system. However, there could be impacts associated with increased runoff and stormwater flows because a majority of the project site would be developed with impervious surface area. There is the potential that existing utility infrastructure would not be adequate to serve the demand of the project and would need to be replaced. However, that is not likely because the site is located in a portion of the City that has been planned for future development including sizing of necessary infrastructure.

As mentioned above, the project site is undeveloped and does not contain any roads or utility infrastructure. Access to the project site would be via the existing off-ramp from I-5 into Arena Boulevard. Access to the site could be via Arena Boulevard or East Commerce Way. It is assumed a similar number of vehicle trips would be generated under this alternative. Although the specific number of trips would depend on the mode choices made by employees, patients, and visitors to the site. It is assumed the additional traffic associated with the project would contribute a number of new trips along this section of I-5 and along Arena Boulevard. This

could contribute to additional impacts to the freeway and some of the surrounding streets and intersections. This area is newly developing and not much development exists in the area currently; therefore, it is assumed the increase in trips would not result in any significant and unavoidable impacts. However, without quantified data it is difficult to assess the extent of the impacts. Under this alternative it is assumed adequate parking could be provided to meet the needs of the hospital and medical office buildings through a combination of surface and structured parking. However, because this site is not as centrally located and near transit facilities it is assumed fewer people would have the ability to use alternate transportation modes and that more single occupant vehicle trips would be generated compared to the SMCS project.

Mitigation That Would No Longer Be Required

Under this alternative a majority of the mitigation identified for the project would still be required for this alternative. However, since this area is not located within the City's CSS there would be no impacts to the CSS. In addition, since no buildings would need to be demolished, mitigation measures identified in the hazards section would no longer be required. The same mitigation measures identified for air quality and noise associated with project construction and operation would still be required. It is assumed any mitigation required for parking would not be required under this alternative because adequate surface and structure parking would be provided to meet the needs of the hospital and medical office space.

Significant and Unavoidable Impacts That Would No Longer Occur

The project-specific and cumulative impacts identified under the SMCS project would be the same for this alternative. The short-term project-specific impact identified for the Children's Theatre associated with construction noise would not occur under this alternative because the Children's Theatre would not be constructed in this location.

Relationship of the SMCS Off-Site Alternative to the Project Objectives

Although the SMCS Off-Site Alternative would meet some of the project objectives because it would consolidate functions, it would not consolidate functions in a central location that would complement the midtown neighborhood. Relocation of the SMCS facilities to the Natomas area would eliminate the opportunity for the creation of compatible uses that would complement the cultural, business, residential, historic, and religious aspects of the surrounding neighborhood. In addition, by locating the medical complex in North Natomas there is no opportunity to create a unique partnership with the Children's Theatre of California to benefit patients and the community. Further, relocation of the SMCS facilities would substantially reduce the opportunities for increased use of alternative modes of transportation due to the presence of fewer transit and transportation options and increased distance from the center of the region. Therefore, although this alternative could meet some of the project applicant's internal programmatic objectives, it fails to meet all of the objectives; specifically, the primary objective of consolidating uses in a way to complement and support the midtown neighborhood.

SMCS Environmentally Superior Alternative

An EIR is required to identify the environmentally superior alternative from among the range of reasonable alternatives that are evaluated. Section 15126.6(e) of the CEQA Guidelines requires that an environmentally superior alternative be designated and states that "if the

environmentally superior alternative is the “no project” alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.”

For the SMCS project the environmentally superior alternative would be the No Project/No Action Alternative due to the limited environmental impacts associated with this alternative. However, the SMCS No Project/No Action Alternative does not achieve any of the project’s objectives. A SMCS No Project/No Action Alternative could be designed such that it reduces most of the unavoidable impacts of the project (except construction noise). According to the CEQA Guidelines, if the No Project alternative is the environmentally superior alternative the EIR shall also identify another environmentally superior alternative. The SMCS Reduced Size Alternative would be considered the next viable environmentally superior alternative because a majority of the impacts identified for the project would either be eliminated or reduced under this alternative because a smaller project would be developed. In addition, this alternative meets some of the project objectives identified for the project. Therefore, the SMCS Reduced Size Alternative would be considered the environmentally superior project alternative.

Trinity Cathedral Project Alternatives

Trinity No Project/No Development Alternative

Under CEQA, the Trinity No Project/No Development Alternative must consider the effects of foregoing the project. The purpose of analyzing the Trinity No Project Alternative is to allow decision makers to compare the impacts of the Proposed Project versus no project. The Trinity No Project Alternative describes the environmental conditions that exist at the time the Notice of Preparation (NOP) is published, or if no NOP is published, at the time environmental analysis commences, or well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services (CEQA Guidelines, Section 15126.6(e)(2)).

Under the Trinity No Project Alternative, the project site would remain, as it is currently, with no further modifications. The existing Trinity Cathedral building and the adjacent multi-purpose space would not be removed and the uses would stay as they are currently.

Comparative Environmental Effects

Under the Trinity No Project Alternative, the existing structures on the site would remain and would not be demolished and redeveloped. The Trinity No Project/No Development alternative would produce no changes on the project site, effectively eliminating the project impacts discussed in Chapter 7 of this EIR.

The existing visual character would not change and there would be no impacts associated with project construction or operation of the project. There would be no increase in air pollutants associated with project construction nor an increase in pollutants associated with more vehicles accessing the area. No buildings would be removed and no new buildings would be constructed under this alternative. Because there would be no new construction, including excavation activities, the potential disturbance to any unknown subsurface cultural resources would not be an issue because the site would not be disturbed. Any hazards associated with building demolition or use would not occur, nor would there be any changes to impervious surface area. Lastly, impacts to utilities would not occur under this alternative because the site would not be developed so there would be no need for additional sewer capacity or potable

water. Under this alternative, the number of vehicles accessing the site would not change; therefore, there would be no operational impacts to the surrounding roadway network or freeway interchanges.

Mitigation That Would No Longer Be Required

None of the mitigation measures identified in this EIR would be required under the Trinity No Project Alternative because there would be no construction or site disturbance.

Significant and Unavoidable Impacts That Would No Longer Occur

There were no long-term significant and unavoidable impacts identified for the Trinity Cathedral project. If the project were not developed there would be no change in the existing conditions of the area and there would be no additional impacts created.

Relationship of the No Project Alternative to the Project Objectives

The Trinity No Project Alternative would not meet the project applicant's project objectives because the site would remain as it is developed today. The existing facility would continue to be inadequate to accommodate the existing or future needs of the congregation, be inadequate to serve the midtown neighborhood and/or the greater Sacramento area during times of community crisis, and would not create a facility that could also serve as an arts venue to serve the region. Therefore, the Trinity No Project Alternative fails to meet the objectives of the project.

Smaller Cathedral Alternative

Under the Smaller Cathedral Alternative, the overall size of the Cathedral building would be reduced from the proposed 37,000 sf to 27,750 sf, a reduction of 25 percent. The adjacent multi-purpose space would also be reduced 25 percent from 30,750 sf to 23,062 sf. Generally, the same building footprint is assumed as the Trinity Cathedral project. The rest of the project would stay the same.

Comparative Environmental Effects

Under this alternative both the Cathedral building and the adjacent multipurpose space would be reduced in size 25 percent. Generally, the impacts identified under the proposed Trinity Cathedral project in Chapter 7 of this EIR would remain the same under the Smaller Cathedral Alternative. The visual character of the neighborhood would still change the same as the project, but it is anticipated the overall building height could be lower compared to the project. Since the existing structures would need to be demolished to accommodate the project the same impacts would occur associated with building demolition. The amount of pollutants associated with project construction would be similar to the project, but less severe because there would be less construction and a shorter construction schedule. The amount of noise associated with project construction would be similar, but is anticipated to result in a shorter duration because a smaller structure would be constructed. The same impacts would occur associated with the potential disturbance of any subsurface cultural resources because the same area would be disturbed. The same is true for hazardous materials and public safety, the

same impacts would result under this alternative as the project. There would be no significant impacts to hydrology or utility systems, the same as the project with the exception of contributions to the City's CSS.

This alternative would generate 7 fewer a.m. peak hour vehicle trips and 6 fewer p.m. peak hour vehicle trips. Similar to the project, impacts on intersections and the freeway system would be less than significant. In addition, impacts on pedestrian, transit and bicycles would be less than significant. The total number of employees is estimated to remain similar to the project and that 25 parking spaces would still be required. It is assumed, the same as the project, that the 25 spaces could be accommodated for in the Community Parking Structure. The parking impact would be considered less than significant.

Mitigation That Would No Longer Be Required

Under the Smaller Cathedral Alternative, the same mitigation measures would be required as those identified for the project because essentially the same project would be constructed except slightly smaller. Overall, the severity of the impacts identified for project construction would be reduced because smaller buildings would be constructed and the construction schedules would be shorter in duration.

Significant and Unavoidable Impacts That Would No Longer Occur

There are no long-term significant and unavoidable impacts identified under the proposed Trinity Cathedral project. The only significant and unavoidable impact identified is the short-term increase in noise associated with project construction. Under this alternative, there would be project construction that would result in a shorter construction schedule but would continue to contribute to a short-term increase in noise resulting in a short-term significant and unavoidable impact.

Relationship of the No Project Alternative to the Project Objectives

Implementation of the Smaller Cathedral Alternative would not meet a majority of the project objectives. This alternative would not enable the creation of a facility that could include space to accommodate the existing and future needs of the congregation, nor provide the space necessary to serve the larger northern California community during any times of local, national or international crisis. This alternative fails to meet some of the primary objectives of the project.

Trinity Off-Site Alternative

For the Trinity Off-Site Alternative, it is assumed that the Trinity Cathedral project would be developed at another location in the City of Sacramento in order to best meet the goals and objectives of the project. The project applicant has indicated that a site of between 15-20 acres would be required in order to construct a new 37,000 sf, 1,000 seat Cathedral building, 30,750 sf multi-purpose building and adequate surface parking. There is an undeveloped parcel of land that would meet the acreage requirements set forth by the applicant located along the south side of Capitol City Freeway between the UP railroad bridge west of the American River (see Figure 8-7). This site was identified as a viable off-site alternative location, as it is currently on the market for future development and is zoned M-2. The Trinity Cathedral project would only

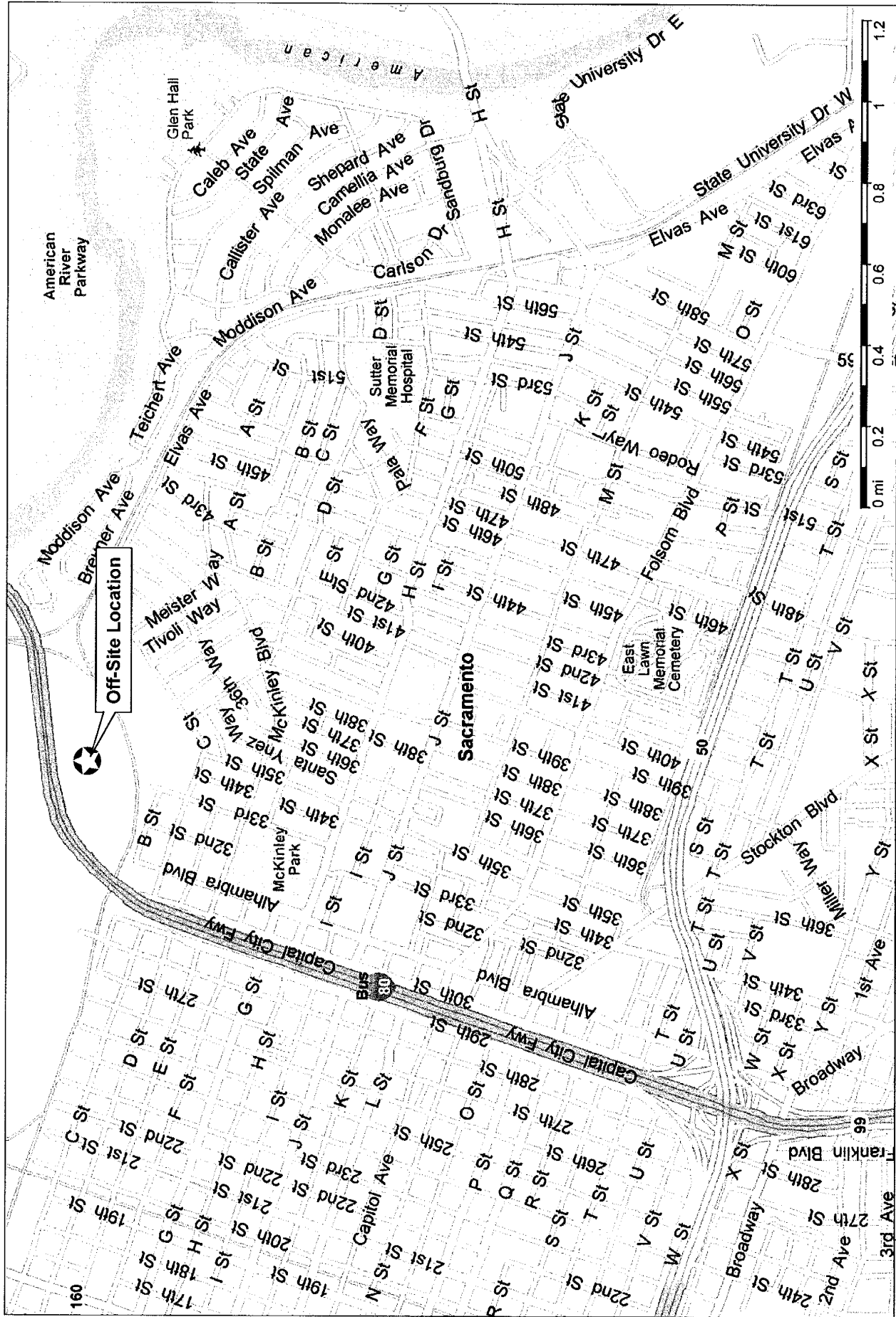


FIGURE 8-7

Trinity Cathedral Off-Site Location

occupy a 15-20 acre portion of this site. The project site contains a small orchard and grasslands and is currently undeveloped.

Because the same uses identified in the project description would be developed under the Trinity Off-Site Alternative, many of same impacts related to aesthetics, construction and operation emissions, noise, services and utilities, and transportation would still occur. However, the characteristics of the alternative location could potentially redirect or reduce the severity of some impacts. While development of the project on this site would generate the same trips as what was analyzed in Section 7.7 of this EIR, the distribution of those trips would be different due to this location.

Comparative Environmental Effects

Development of the Trinity Cathedral project on this parcel of land would result in impacts due to the loss of undeveloped land to developed uses. Biological impacts, which would not occur under the project, would be a potential factor for this site. Currently the project site is undeveloped and contains non-native grasslands, a small orchard, and potential wetland areas, as well as potential foraging habitat for raptors. In addition, the site is designated Prime Farmland on the State Farmland Mapping and Monitoring Program. Development of the project would result in the loss of Prime Farmland, which could be considered a significant project impact. The loss of the orchard could also be considered a potential loss of land in current agricultural production or a change in a significant visual resource. Development of the project on this site would contribute to a change in the existing visual character but it is anticipated the change in character would not result in a significant impact. The project site is located adjacent to a major freeway and is designated in the City's General Plan for development. Construction and operation of the Cathedral on this site would contribute to an increase in air emissions associated with grading and construction activities. It is assumed since the project site is undeveloped there would be more PM₁₀ emissions compared to the project. No paved roads currently exist on the site so it is assumed additional dust would be created due to construction equipment accessing the site. As with the project it is assumed emissions associated with the increase in NO_x could be reduced to less-than-significant levels. Emissions associated with project operation are assumed to be very similar to what was analyzed as part of the project. There would be no significant impacts associated with project operation. Because an undeveloped site would be disturbed it is assumed there could be adverse impacts to any known or unknown subsurface resources, the same as the project.

The potential for the project in this location to contribute to impacts associated with the transport, handling or storage of hazardous materials is considered the same as what was analyzed under the project. There are no new uses being introduced in this location that could result in new impacts associated with hazardous materials or public safety. In addition, because no buildings would need to be demolished there would not be any potential safety impacts to construction workers or the public. However, because the site is undeveloped a Phase 1 ESA would be required to determine if there are any potential hazards that would need to be mitigated. The project site is not located within a floodplain; therefore, there would be no impact associated with flooding. However, because the site is located in an undeveloped area in the city existing storm drain, water and sewer infrastructure does not exist. Therefore, the project would require construction of on-site storm drain, water and sewer facilities to accommodate the project. It is assumed the project would tie into the City' existing storm drain, water and sewer infrastructure located to the south of the project site in the existing neighborhoods. There would be no impacts to the City's CSS because this site is not served by a combined system. There is the potential that existing utility infrastructure would not be adequate to serve the demand of the project and would need to be replaced. It is not anticipated that construction noise would be an issue because the project site is located adjacent to a busy

freeway. The closest sensitive receptors are located further to the south. The adjacency to the freeway could contribute to potential noise impacts to the Cathedral itself.

As mentioned above, the project site is undeveloped and does not contain any roads or utility infrastructure. Considering the relatively low vehicular trip generation of the project, significant impacts to intersections and/or the freeway system are unlikely. However, this site has limited access at this time. Previous proposals to develop the entire site have included a new interchange with the Capital City Freeway. This could contribute to additional impacts on some of the surrounding streets and intersections.

Mitigation That Would No Longer Be Required

It is anticipated that a similar mitigation measure to Mitigation Measure 7.1-1 would be required to minimize light and potential glare from the project. The mitigation measures recommended to reduce emissions and noise associated with project construction would still be required (Mitigation Measures 7.2-3 through 7.2-5 and 7.6-1); however, Mitigation Measure 7.2-1 would no longer be required because no buildings would be demolished. Because land would be disturbed Mitigation Measure 7.3-1 would be required to address the potential for disturbing any unknown cultural resources. None of the mitigation measures required for hazards and public safety would be required because no buildings would be demolished. However, a Phase 1 ESA would be required to determine if there are any potential hazards on the site.

Significant and Unavoidable Impacts That Would No Longer Occur

There are no long-term significant and unavoidable impacts identified under the Trinity Cathedral project. However, development of the project in this location could contribute to an increase in impacts associated with potential adverse impacts to any existing biological resources present on the site including loss of wetlands, loss of foraging habitat, loss of trees, and loss of any protected plant species. Development of the project in this area would also result in the loss of Prime Farmland. This could result in a significant impact. In addition, there is the potential for impacts to occur to existing utility systems including water, sewer and storm drain, as well as to existing roadways and intersections associated with the increase in traffic.

Relationship of the No Project Alternative to the Project Objectives

Development of the Trinity Cathedral project in this location would not meet all of the applicant's objectives, including locating a facility in the midtown area of the City to serve the immediate midtown neighborhood. Locating the project outside of the midtown neighborhood would not meet the applicant's objective to provide an environment that includes an urban plaza and open space area for gathering and socializing for the midtown neighborhood and the congregation. Constructing the Cathedral in this location would fail to meet the applicant's desire to create a facility that is located in an area that is central and provides convenient access to all members of the community. The Trinity Off-Site Alternative does not meet the objectives for the project.

Trinity Environmentally Superior Alternative

An EIR is required to identify the environmentally superior alternative from among the range of reasonable alternatives that are evaluated. Section 15126.6(e) of the CEQA Guidelines requires that an environmentally superior alternative be designated and states that "if the

environmentally superior alternative is the “no project” alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.”

The environmentally superior alternative would be the Trinity No Project/No Development Alternative because none of the significant impacts would occur when compared to the Trinity Cathedral project. However, none of the project objectives would be met under this alternative. The Smaller Cathedral Alternative would be considered the next viable environmentally superior alternative because the impacts would be either equal to the project, or in some cases, less severe than the project. A majority of the project objectives would be met under this alternative; however, some of the primary objectives of the project would not be met under this alternative.

Chapter 9 CEQA Considerations

Chapter 9 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, and (4) growth-inducing impacts of the proposed project.

SIGNIFICANT ENVIRONMENTAL EFFECTS

Chapter 3 of this EIR, Summary of Environmental Effects, and Chapters 6 and 7 of this EIR provide a comprehensive identification of both the SMCS project and the Trinity Cathedral project environmental effects, including the level of significance both before and after mitigation.

SIGNIFICANT UNAVOIDABLE ENVIRONMENTAL EFFECTS

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 effects of the SMCS project and Trinity Cathedral's project on various aspects of the environment are discussed in detail in Chapters 6 and 7 of this EIR.

Significant and unavoidable project-specific and cumulative impacts identified for the SMCS project (including the Theatre) include:

SMCS Project-Specific Significant and Unavoidable Impacts

- Construction of the SMCS project would increase emissions of nitrogen oxide (NO_x) generated by construction on a short-term basis (6.2-3).
- Operation of the SMCS project would generate an increase in ROG and NO_x (criteria pollutants) (6.2-4).
- Construction activities of the SMCS project would intermittently generate noise levels above existing ambient levels in the project vicinity on a short-term basis (6.6-1).
- The SMCS project and Children's Theatre would increase traffic volumes on the freeway system (6.7-2).

- The SMCS project and Children's Theatre would increase demand for parking (6.7-6).
- The SMCS project would generate more than 500 tons of solid waste per year (6.8-11).

SMCS Project Cumulative Significant and Unavoidable Impacts

- The SMCS project, in combination with other projects in the Sacramento Valley Air Basin, could result in a cumulative impact on criteria pollutants associated with project operation (6.2-8).
- The SMCS project would increase traffic volumes on the freeway system under year 2025 conditions (6.7-9).
- The SMCS program and Trinity Cathedral project would increase traffic volumes at study intersections under year 2025 conditions (6.7-10).
- The SMCS program and Trinity Cathedral project would increase traffic volumes on the freeway system under year 2025 conditions (6.7-11)
- The SMCS project (with Two-Way Conversion) would increase traffic volumes at study intersections under year 2025 conditions (6.7-12).
- The SMCS program and Trinity Cathedral project (with Two-Way Conversion) would increase traffic volumes at study intersections under year 2025 conditions (6.7-14)
- The SMCS program and Trinity Cathedral project (with Two-Way Conversion) would increase traffic volumes on the freeway system under year 2025 conditions (6.7-15).

Significant and unavoidable project-specific and cumulative impacts identified for the Trinity Cathedral project include:

Trinity Project-Specific Significant and Unavoidable Impacts

- Construction of the Trinity project would intermittently generate noise levels above existing ambient levels in the project vicinity on a short-term basis (7.6-1).
- The Trinity Cathedral project would increase traffic volumes on the freeway system (7.7-2).
- The Trinity Cathedral project would increase demand for parking (7.7-6).

Trinity Project Cumulative Significant and Unavoidable Impacts

- The Trinity Cathedral project would increase traffic volumes on the freeway system under 2025 conditions (7.7-8).

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.

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 SMCS and Trinity projects would result in the continued commitment of the project area 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(s). While the project(s) would result in the use, transport, storage, and disposal of hazardous wastes, as described in the Hazardous Materials and Public Safety sections 6.4 and 7.4, all activities would comply with applicable State and federal laws related to the use, storage and transport of hazardous materials, which significantly reduces the likelihood and severity of accidents that could result in irreversible environmental damage.

Implementation of either the SMCS or Trinity project would result in the long-term commitment of resources to urban development. The most notable significant irreversible impacts are 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 Chapters 6 and 7 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 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 project development 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.

Both projects have been designed to comply with Title 24 of the California Code of Regulations (California's Energy Efficiency Standards for Residential and Nonresidential Buildings) requirements, which include lighting and other energy conservation measures, and include 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.

GROWTH-INDUCING IMPACTS

Introduction to Growth Inducement Issues

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 a 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 the new access to an area; a change in zoning or in the general plan); or economic expansion or growth 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 such effects 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 or regulatory obstacles to growth is considered a growth-inducing effect. The proposed SMCS and Trinity Cathedral projects would be developed in a built-out, highly urbanized area in midtown Sacramento; however, some physical constraints to growth currently exist in the vicinity of the project sites. The primary growth obstacles in the project area include:

- Limited capacity of the City's combined sewer and storm drain system (CSS) serving this portion of the City of Sacramento; and

Both the combined sewer and storm drain system serving the project area are at or beyond capacity during severe storm events. Although the SMCS project and the Trinity Cathedral project would both 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 either project is constructed.

Economic Effects

Increased Demand on Secondary Markets

In addition to the employment generated by the proposed SMCS and Trinity Cathedral projects, additional local employment can be generated through what is commonly referred to as 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 a project. For example, workers of the proposed SMCS and Trinity Cathedral projects 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 project area to include jobs created by the stream of goods and services necessary to support businesses within the project area. For example, when a manufacturer buys products or sells products, the employment associated with those inputs or outputs is considered *induced* employment.

For example, when an employee from either SMCS or Trinity goes out to lunch, the person who serves the project employee lunch holds a job that was *indirectly* caused by either 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 resident and 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.

While the proposed SMCS and Trinity Cathedral projects would contribute to direct, indirect, and induced growth in the area, they would contribute to enhancing the vitality of the Central City area, which is a goal of the City's General Plan and the Central City Community Plan.

Increased Pressure on Land Use Intensification

Unforeseen future development can be spurred by the construction of certain projects that have the effect of creating unique and currently unmet market demands, or by creating economic incentives for future projects by substantially increasing surrounding property values. These types of impacts are most often identified for projects developed in areas that are currently lacking a full spectrum of economic activity. For example, newly developing office areas may be lacking in a full range of support commercial uses; this support commercial demand can cause increased pressure for rezones or general plan amendments aimed at providing adequate land to accommodate businesses seeking to serve the unmet demand.

The SMCS project and Trinity Cathedral project are both located in a developed area of the city. Both of these uses currently support the existing community as well as a larger regional area. The development of these uses are not anticipated to increase the pressure for additional new growth in the city or in out lying areas.

Impacts of Induced Growth

While growth in the Central Business District area of the City is an intended consequence of the proposed SMCS and Trinity Cathedral projects, growth induced directly and indirectly by the projects could also affect the greater Sacramento area. However, neither of these projects would be considered growth-inducing because they do not introduce a new population or generate the need for new employees. Any new development would contribute to increased traffic congestion; air quality deterioration; 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 to house workers employed by the proposed SMCS or Trinity Cathedral project could cause 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. However, SMCS plans on relocating staff from Sutter Memorial Hospital to the new Women's and Children's Center and

the SMF Building so it is not anticipated that there would be the need for a significant number of new employees.

CUMULATIVE IMPACTS

CEQA requires that an EIR contain an assessment of the cumulative impacts that could be associated with project implementation. This assessment involves examining project-related effects on the environment in the context of similar effects that have been caused by past or existing projects, and the anticipated effects of future projects. Although project-related impacts may be individually minor, the cumulative effects of these impacts, in combination with the impacts of other projects, could be significant under CEQA and must be addressed [CEQA Guidelines, 15130(a)].

An EIR must discuss the “cumulative impacts” of a project when its incremental effect will be cumulatively considerable. This means that the incremental effects of the individual project would be considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects (section 15065(c)).

CEQA Guidelines section 15355 defines cumulative impacts as “two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.” This section states further that “individual effects may be changes resulting from a single project or a number of separate projects.” “The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.”

Section 15130(a)(3) states also that an EIR may determine that a project’s contribution to a significant cumulative impact will be rendered less than cumulatively considerable, and thus not significant, if a project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact.

Section 15130(b) indicates that the level of detail of the cumulative analysis need not be as great as for the project impact analyses, that it should reflect the severity of the impacts and their likelihood of occurrence, and that it should be focused, practical, and reasonable.

The basis of the cumulative analysis varies by technical area. Overall, the cumulative context includes buildout of the City’s General Plan through 2015. For example, traffic and traffic-related air emissions and noise analyses assume development that is planned and/or anticipated in the Midtown area that would contribute to traffic on local and regional roadways. Air quality impacts are evaluated against conditions in the Sacramento Valley Air Basin. Other cumulative analyses, such as cultural resources, consider the potential loss of resources in a broader, more regional context.

Cumulative impacts for each impact area are identified at the end of each section in Chapters 6 and 7. A summary of the project-specific and cumulative impacts for each project is included in Chapter 3, Summary of Environmental Effects.

Chapter 10 References

Chapter 10 References

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Chapter 11 Report Preparation

Chapter 11 Report Preparation

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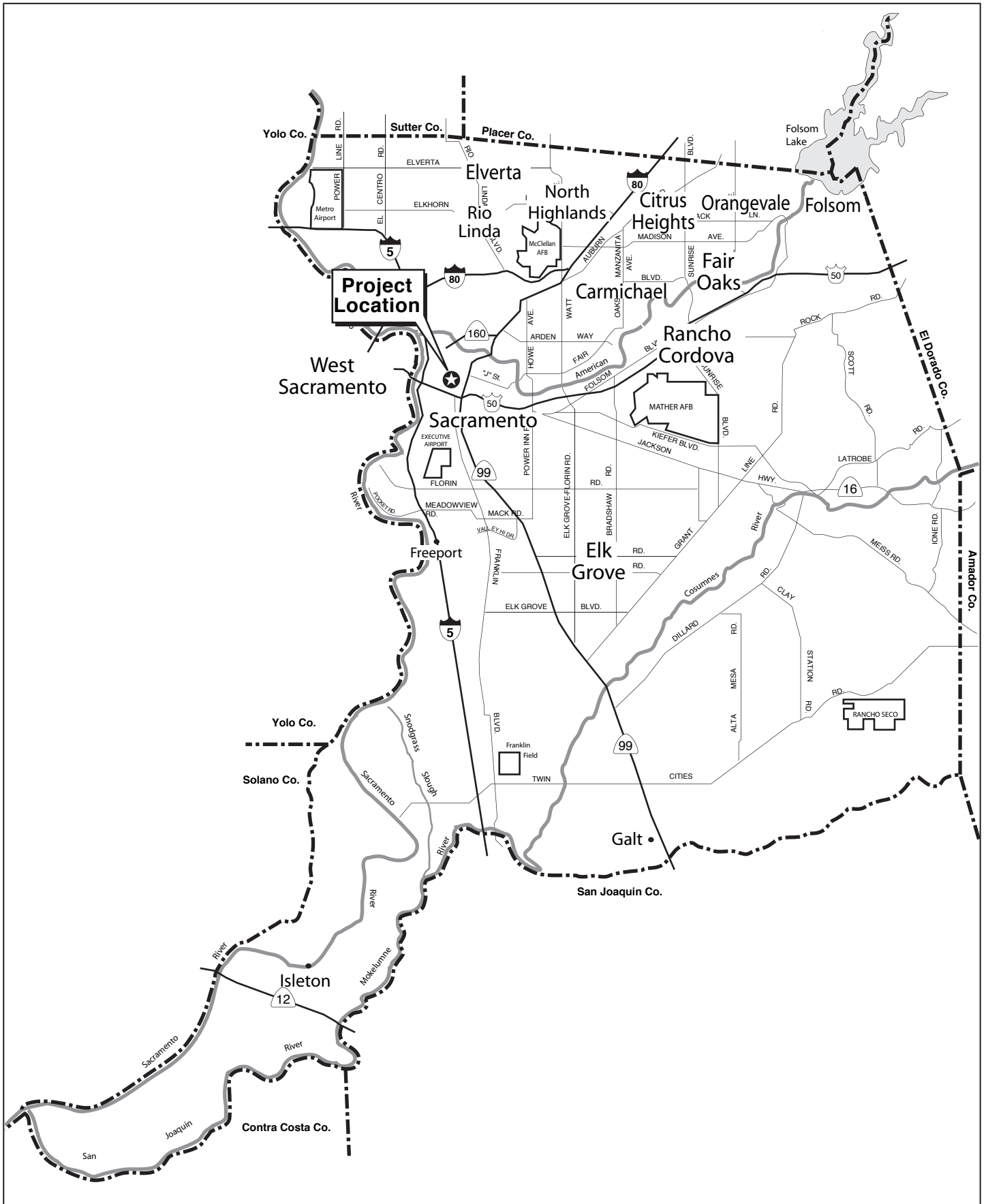
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Jim Brennan



10828-02

FIGURE 1-1
Regional Location Map

Source: EIP Associates 2004

Not to Scale





FIGURE 1-2
SMCS Project Area

10828-02

Source: GEOCON Consultants, Inc. 2005

Sutter Medical Center, Sacramento



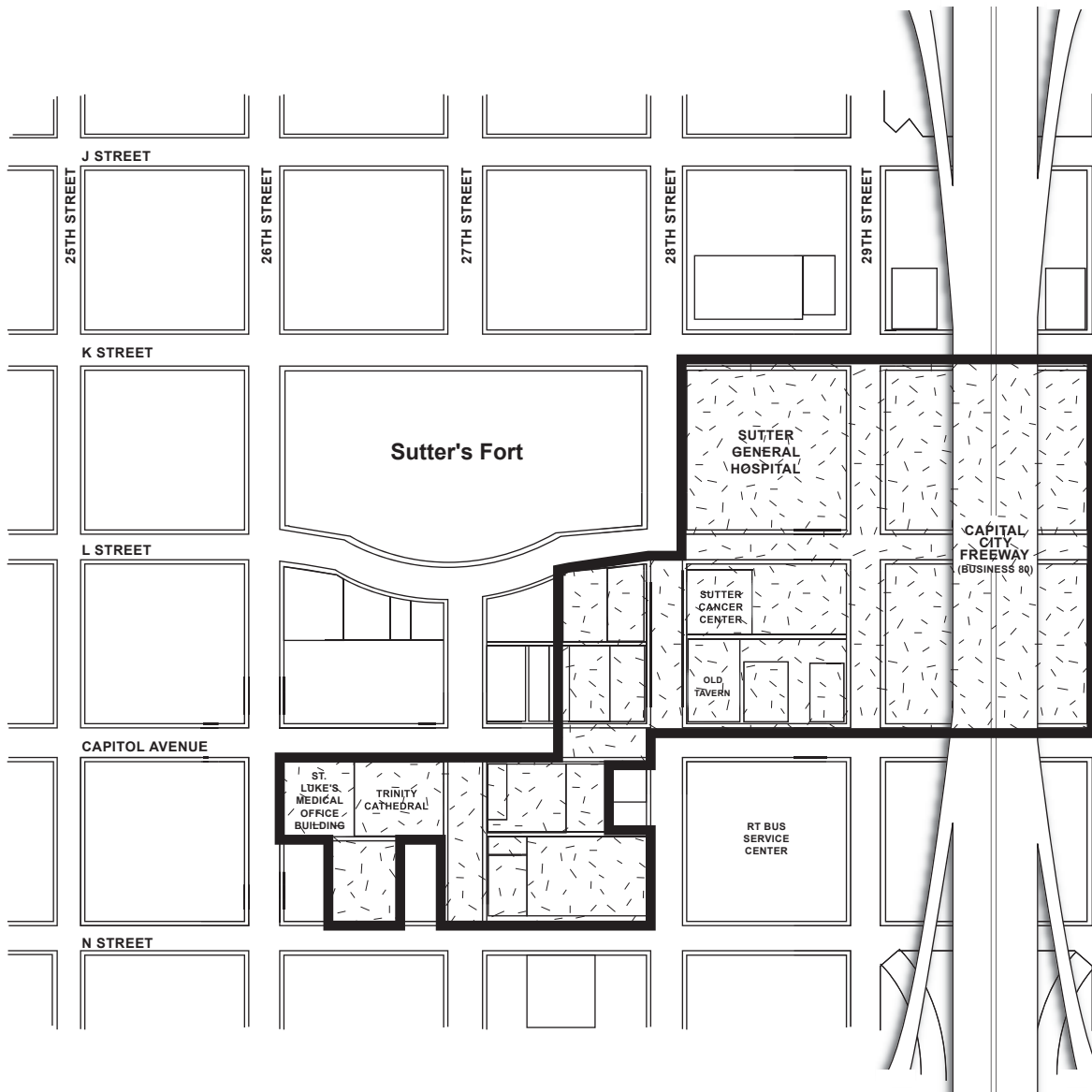


FIGURE 2-1
SMCS Project Area Boundaries

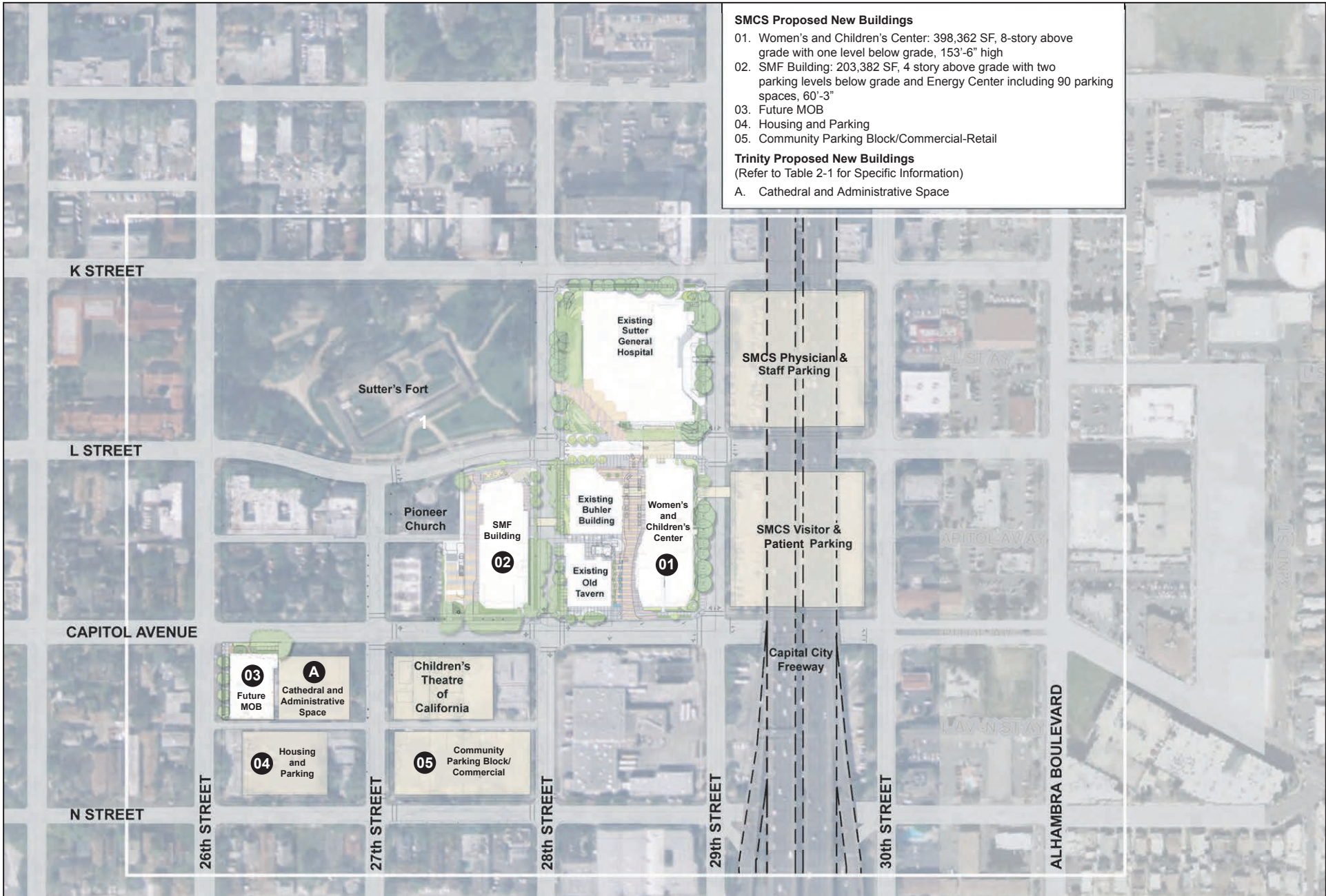
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Source: EIP Associates 2004

Sutter Medical Center, Sacramento

Not to Scale





- SMCS Proposed New Buildings**
- 01. Women's and Children's Center: 398,362 SF, 8-story above grade with one level below grade, 153'-6" high
 - 02. SMF Building: 203,382 SF, 4 story above grade with two parking levels below grade and Energy Center including 90 parking spaces, 60'-3"
 - 03. Future MOB
 - 04. Housing and Parking
 - 05. Community Parking Block/Commercial-Retail
- Trinity Proposed New Buildings**
(Refer to Table 2-1 for Specific Information)
- A. Cathedral and Administrative Space

FIGURE 2-2
SMCS Site Plan

Not to Scale



10828-02

Source: KMD Architects 2005

Sutter Medical Center, Sacramento



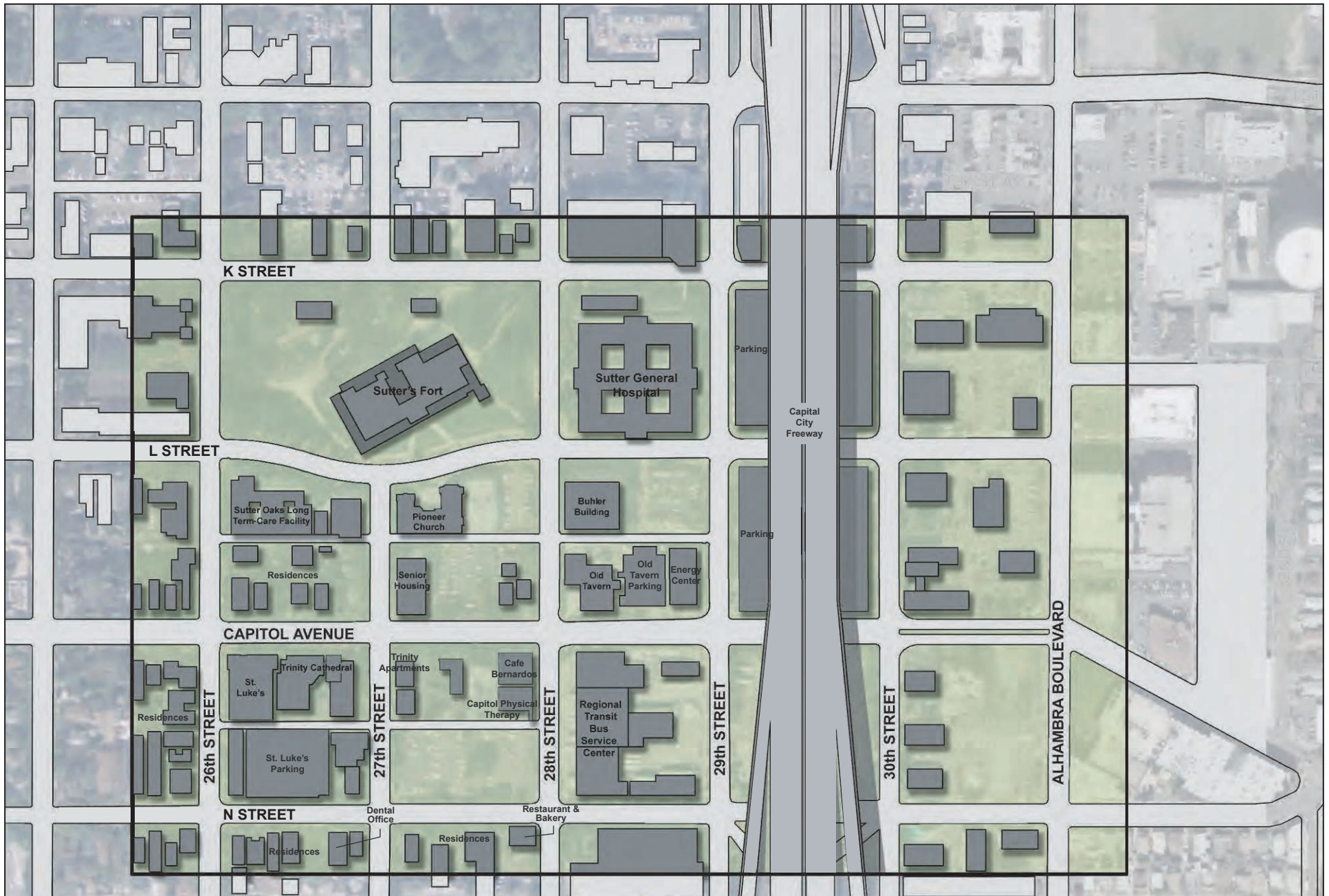


FIGURE 2-3
Existing Adjacent Uses



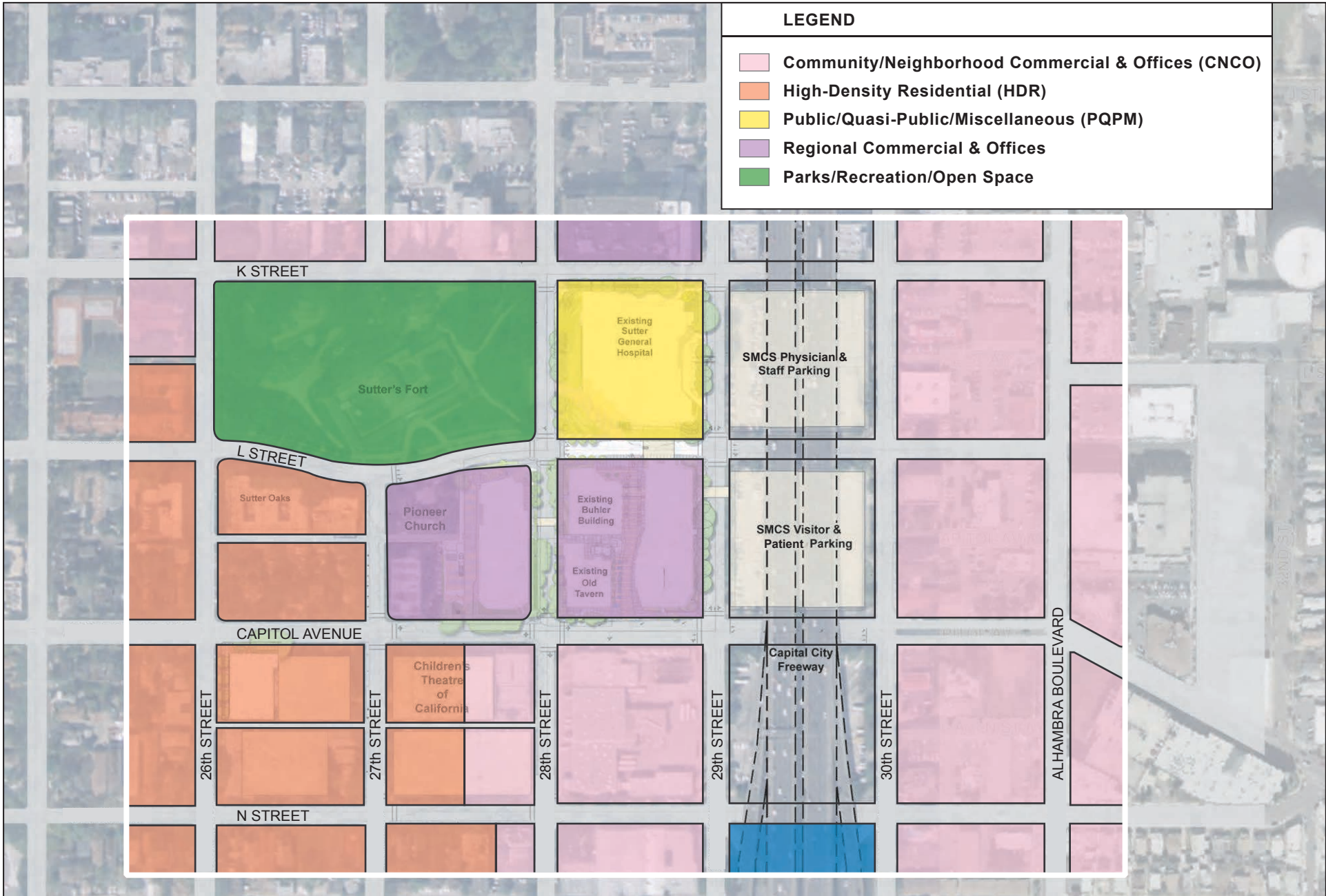
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Source: KMD Architects 2005

Not to Scale



Sutter Medical Center, Sacramento



LEGEND	
	Community/Neighborhood Commercial & Offices (CNCO)
	High-Density Residential (HDR)
	Public/Quasi-Public/Miscellaneous (PQPM)
	Regional Commercial & Offices
	Parks/Recreation/Open Space

FIGURE 2-4
General Plan Land Use Designations

Not to Scale



10828-02

Source: City of Sacramento, GIS, 2003



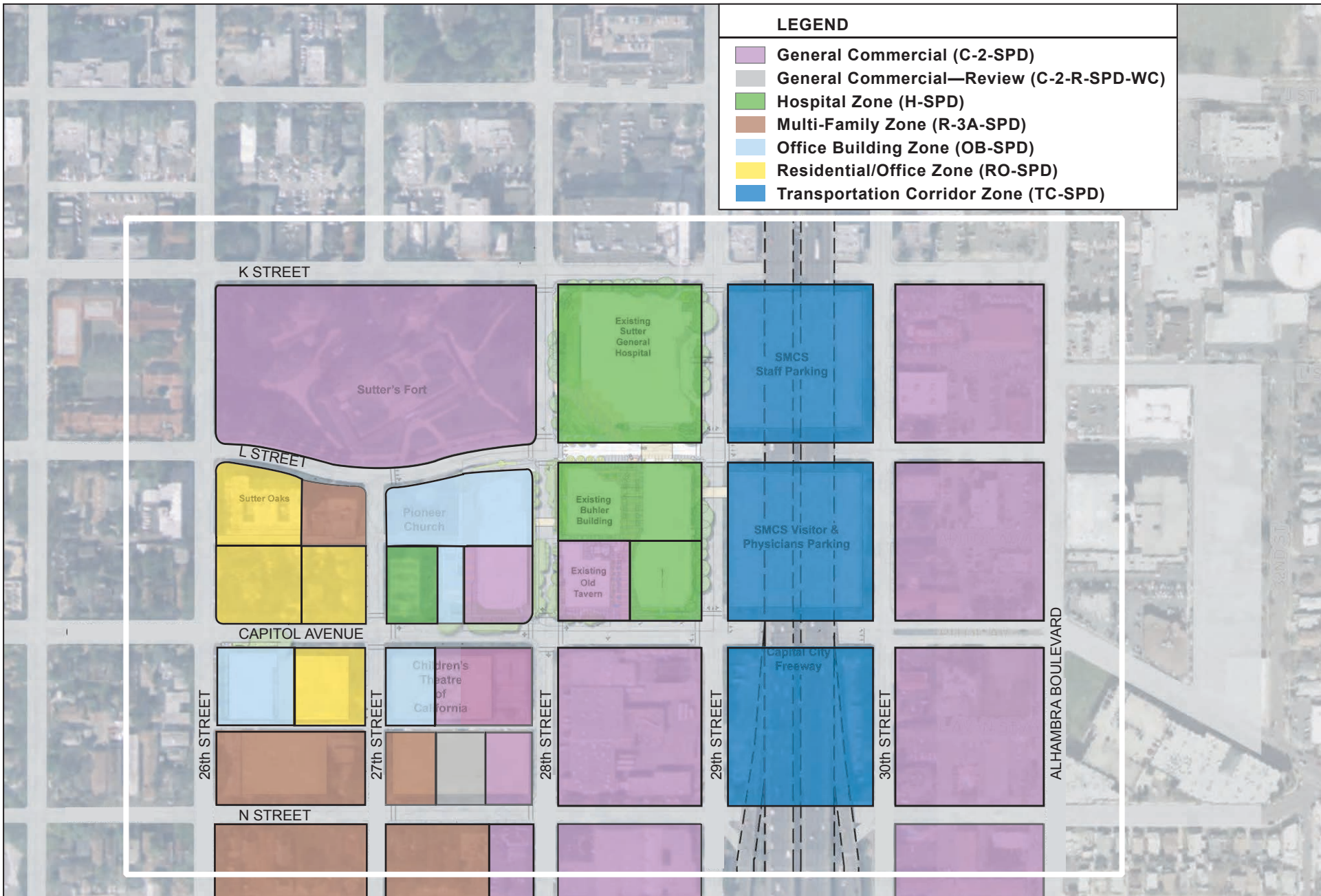


FIGURE 2-5
Zoning Designations

Not to Scale



10828-02

Source: City of Sacramento, GIS, 2003



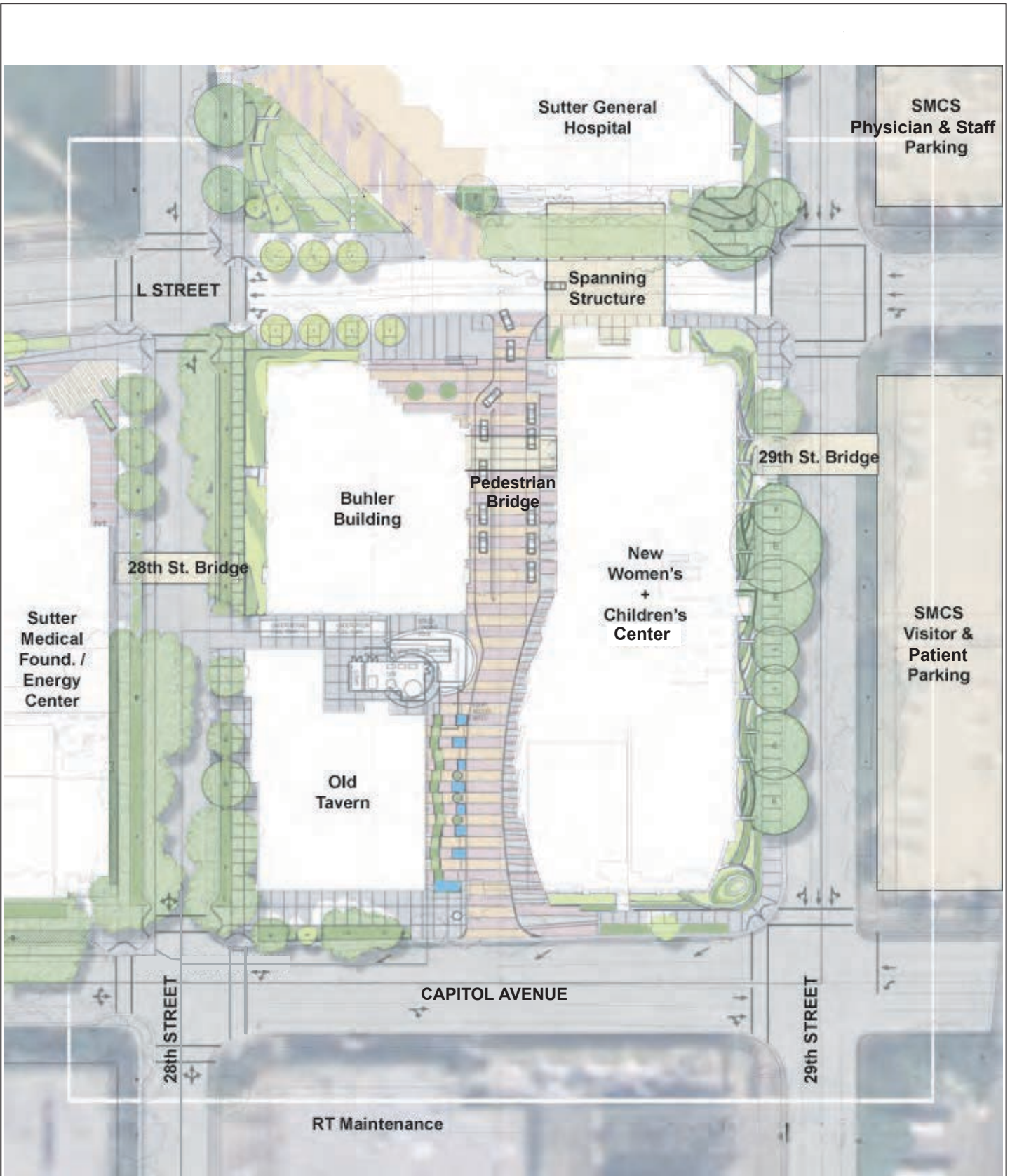


FIGURE 2-6
Women's and Children's Center Site Plan

Source: KMD Architects 2004

Not to Scale





FIGURE 2-7
Women's and Children's Center, East Elevation

10828-02

Source: KMD Architects 2005

Sutter Medical Center, Sacramento

EIP
ASSOCIATES



FIGURE 2-8
Women's and Children's Center, West Elevation

Not to Scale

10828-02

Source: KMD Architects 2005

Sutter Medical Center, Sacramento

EIP
ASSOCIATES

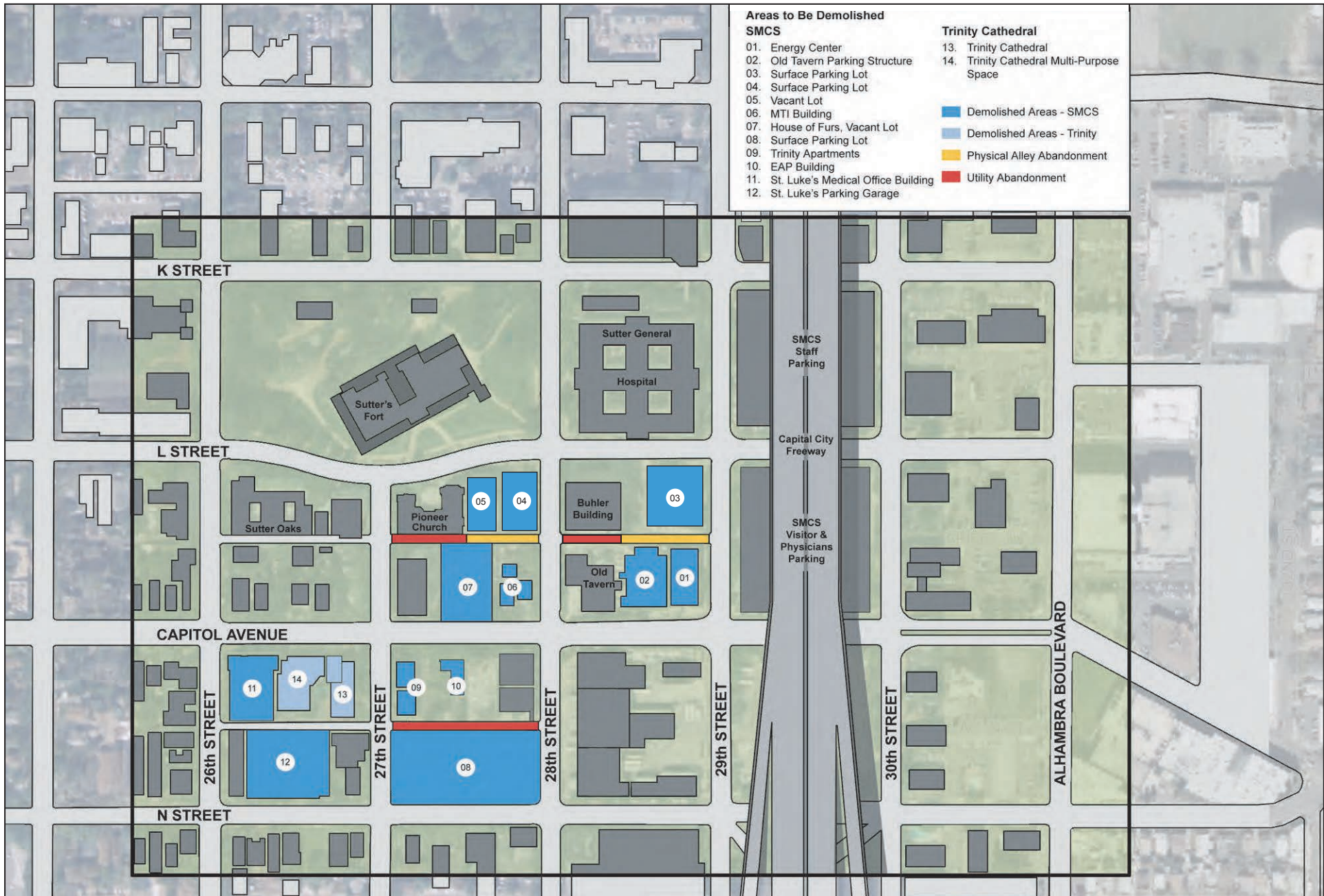


FIGURE 2-10
Buildings to be Demolished

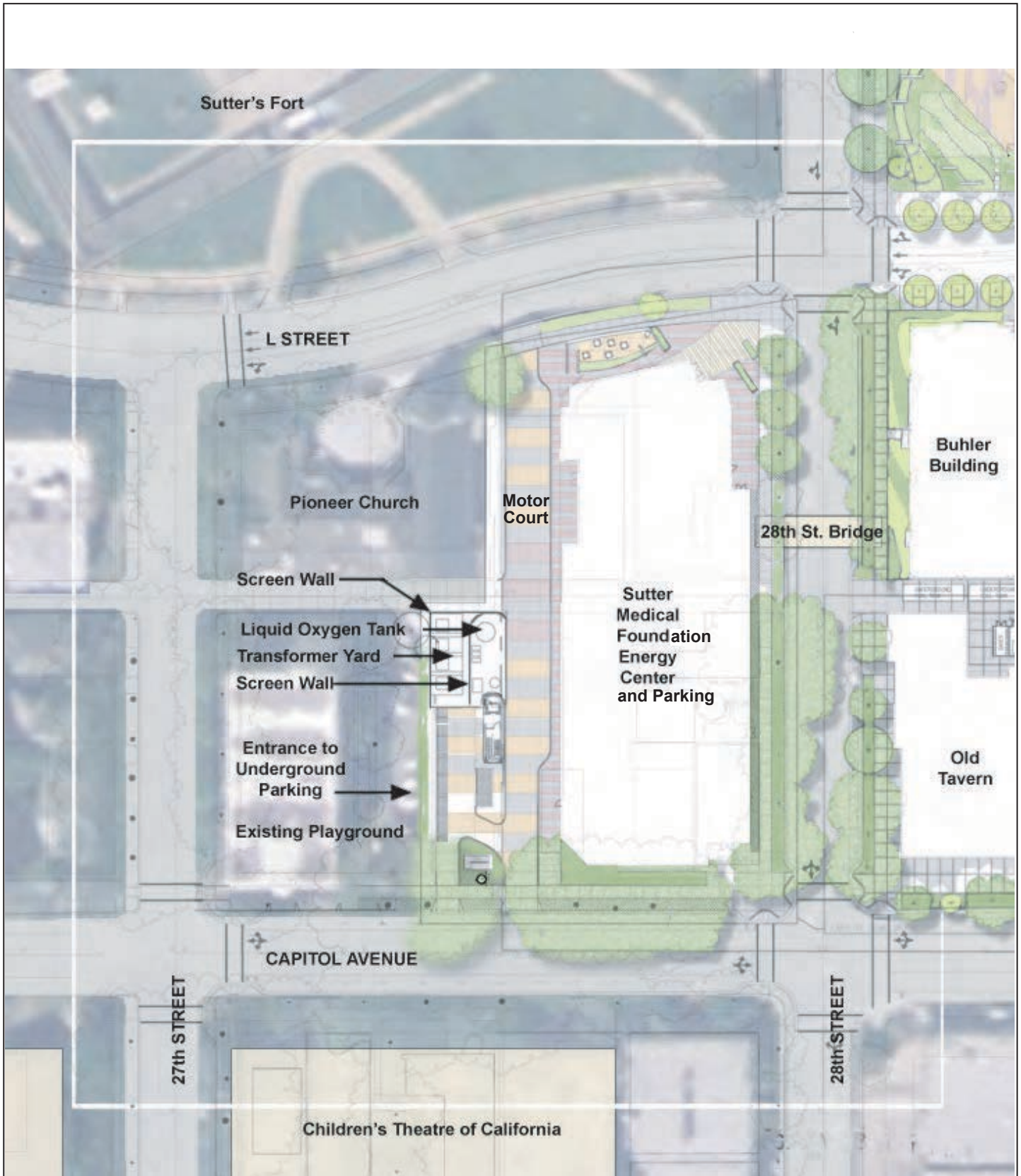


10828-02

Source: KMD Architects 2005

Sutter Medical Center, Sacramento





10828-02

FIGURE 2-11
SMF Building Site Plan

Source: KMD Architects 2005

Not to Scale



Sutter Medical Center, Sacramento



FIGURE 2-12
SMF Building, North Elevation

10828-02 **Source:** KMD Architects 2005

Sutter Medical Center, Sacramento





FIGURE 2-13
SMF Building, South Elevation

10828-02 **Source:** KMD Architects 2005

Sutter Medical Center, Sacramento



- Relocation of Energy Center to SMF Basement (SOUTH)
- 2 Levels of Parking

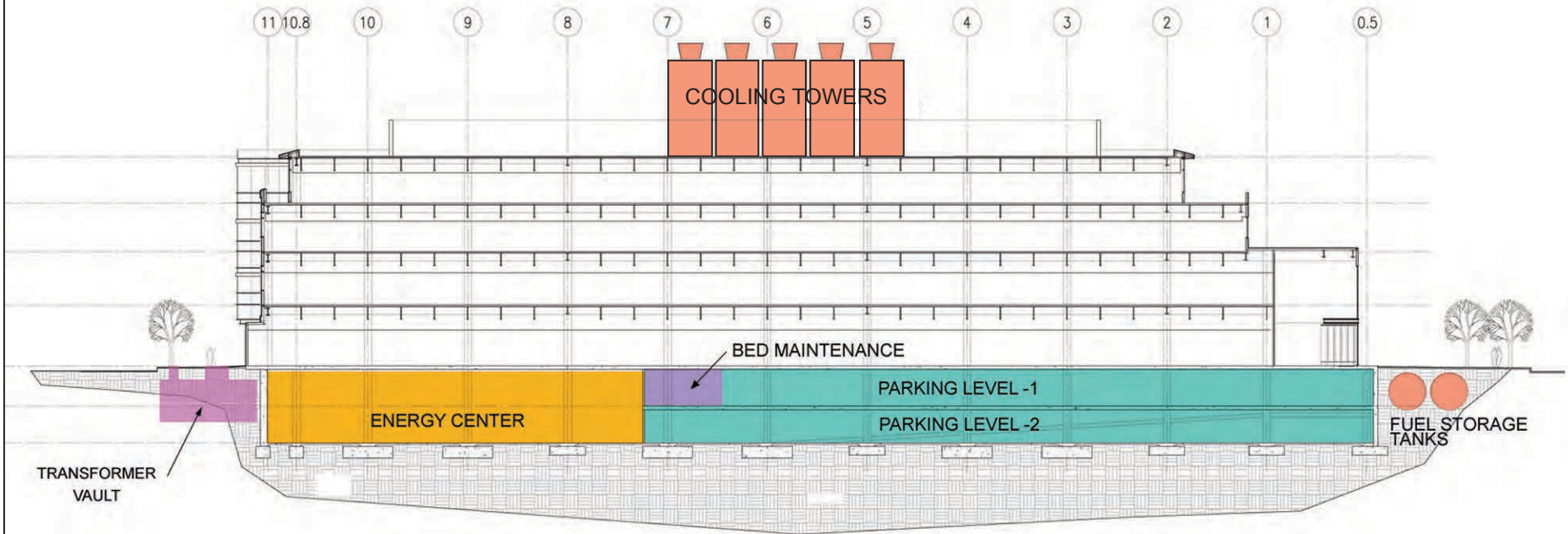
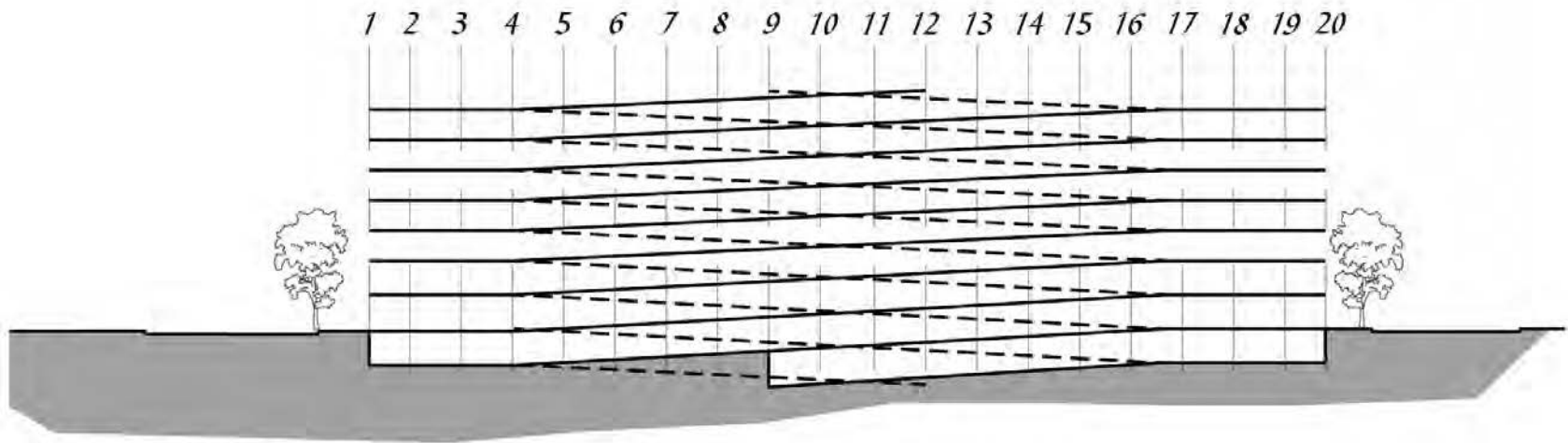
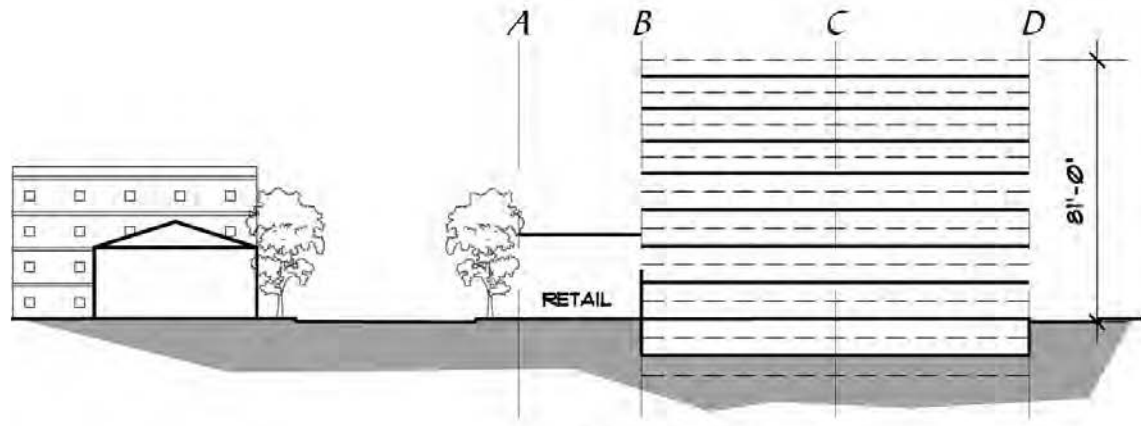


FIGURE 2-14
Cross Section of the SMF Building and Energy Center



LONGITUDINAL SECTION
SCALE: 1" = 50'-0"



CROSS SECTION
SCALE: 1" = 50'-0"

FIGURE 2-15
Community Parking Structure, Building Cross Section

Scale 1" = 50'-0"



FIGURE 2-16
Community Parking Structure – Visual Simulation

10828-02 **Source:** McCarthy Construction to SMCS 2005

Sutter Medical Center, Sacramento



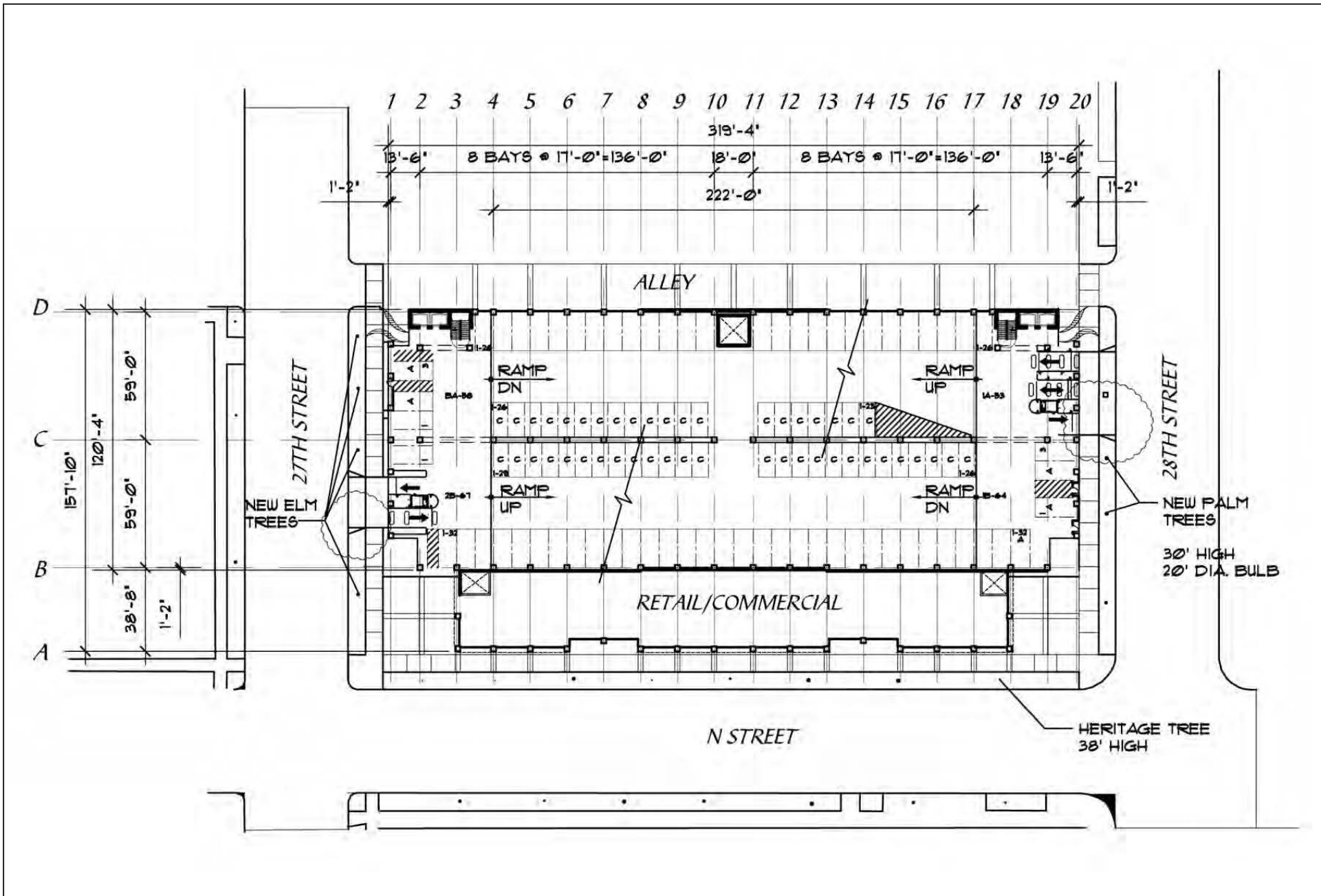


FIGURE 2-17
Community Parking Structure-Site Plan



10828-02

Source: Choate Parking Consultants 2005

Not to Scale



Sutter Medical Center, Sacramento



FIGURE 2-18
Proposed Residential on N Street-Cross Section

Not to Scale



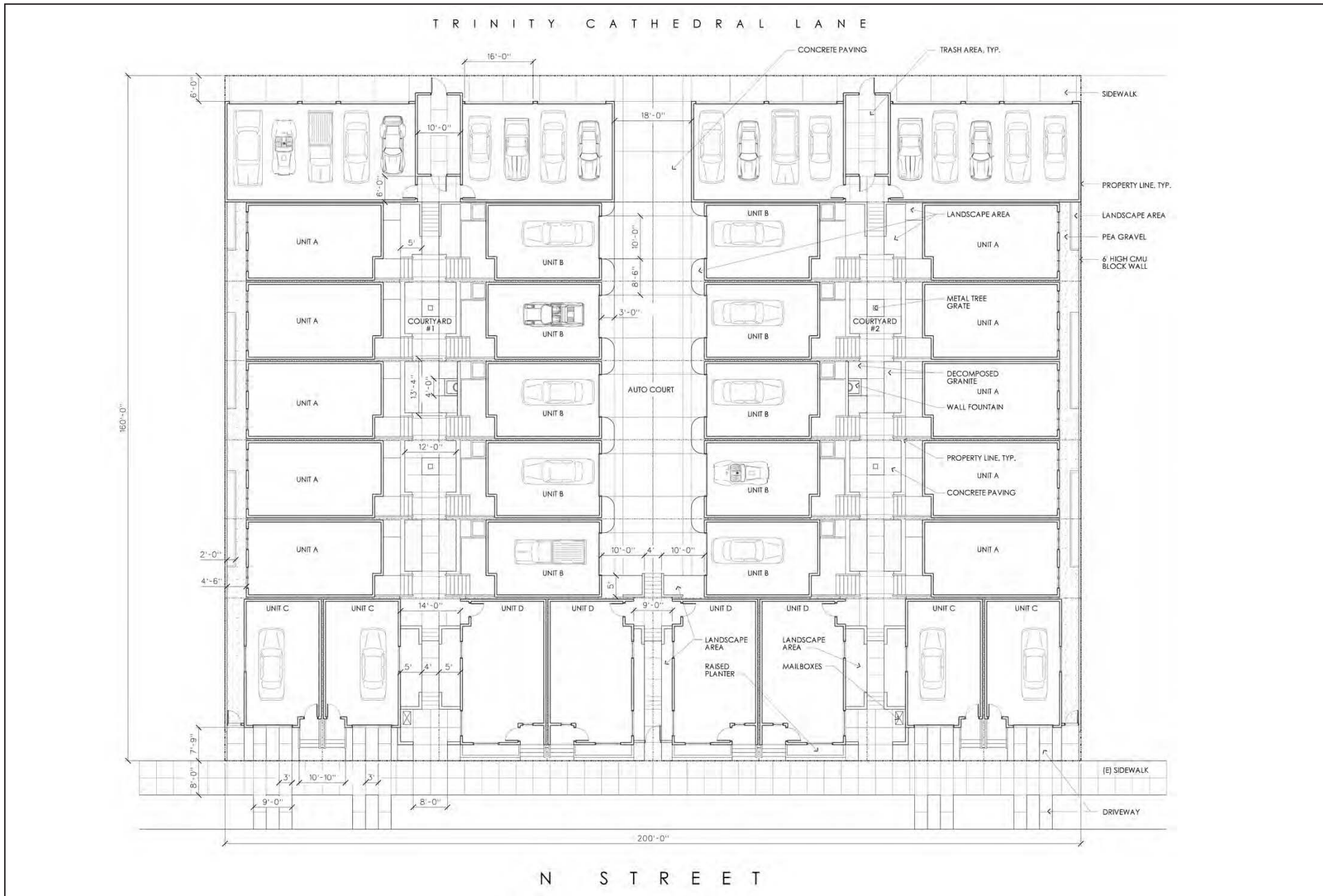


FIGURE 2-19
Residential Site Plan

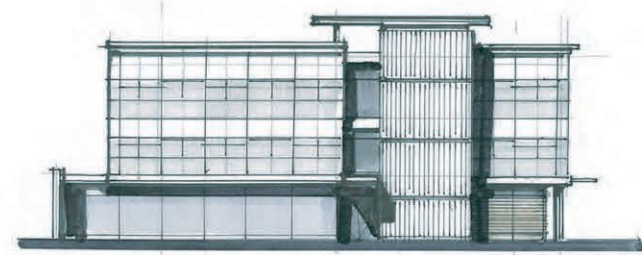
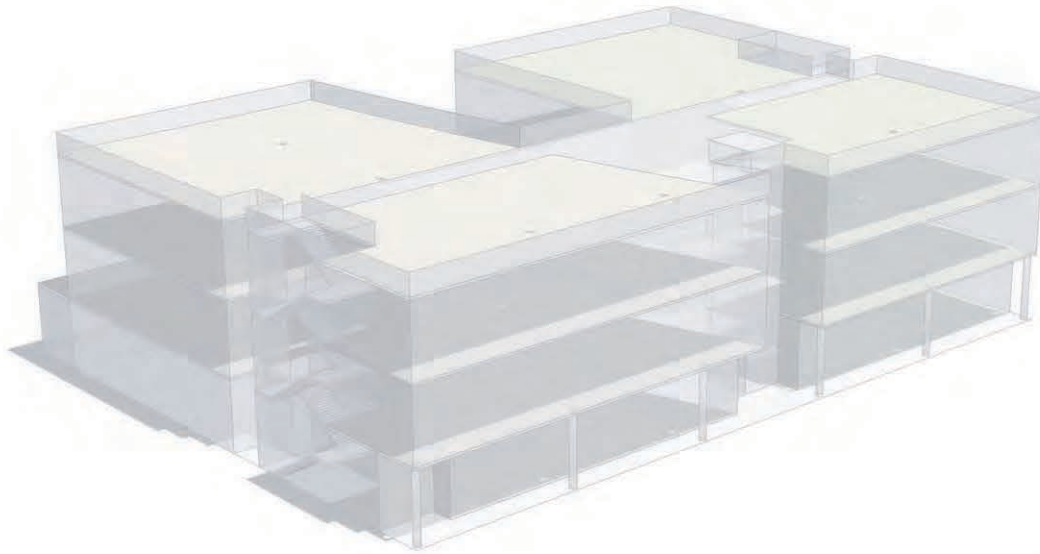
10828-02

Source: LPA Sacramento, Inc. 2005

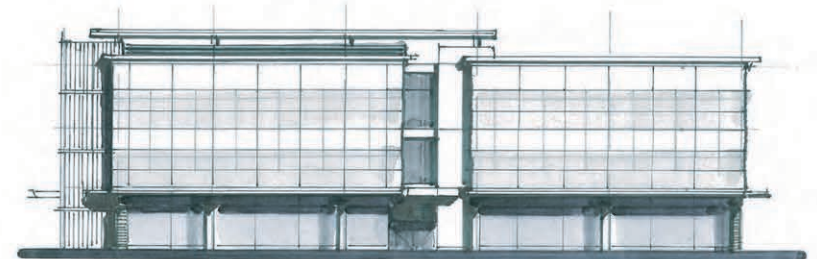
Not to Scale



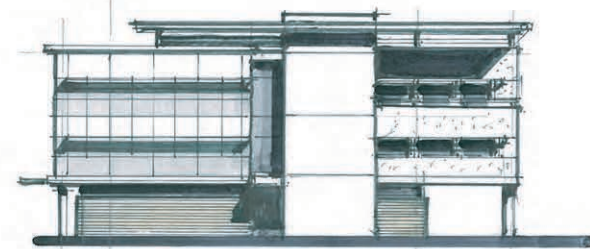
Sutter Medical Center, Sacramento



CAPITOL AVENUE



26TH STREET

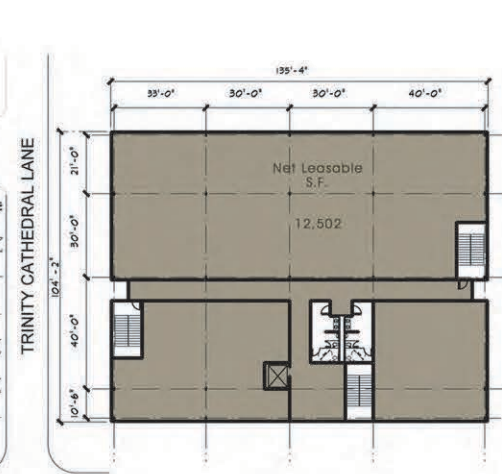


TRINITY CATHEDRAL LANE



26TH STREET
First Floor

Gross S.F. 11,636



Second Floor

Gross S.F. 14,007

FIGURE 2-20

Future Medical Office Building-Site Plan

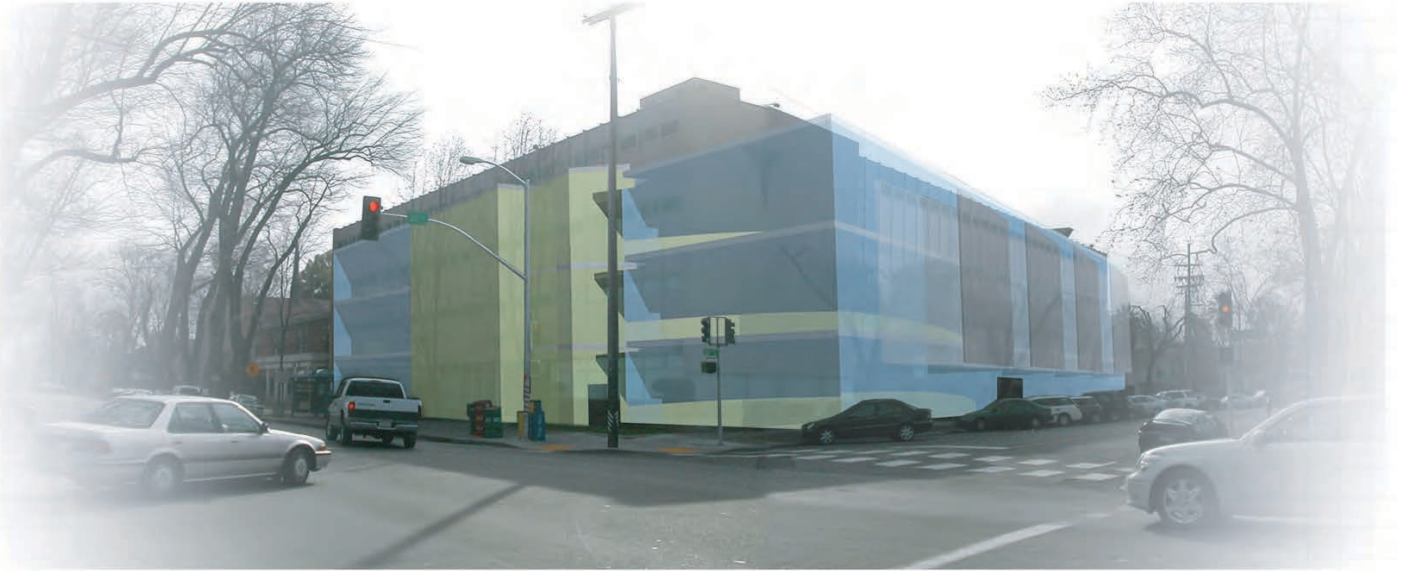
10828-02

Source: Lionakis Beaumont Design Group Inc. 2005

Not to Scale



Sutter Medical Center, Sacramento



3D Massing Concept



Site Context Photos

FIGURE 2-21
Future Medical Office Building, Conceptual Building Massing

Not to Scale

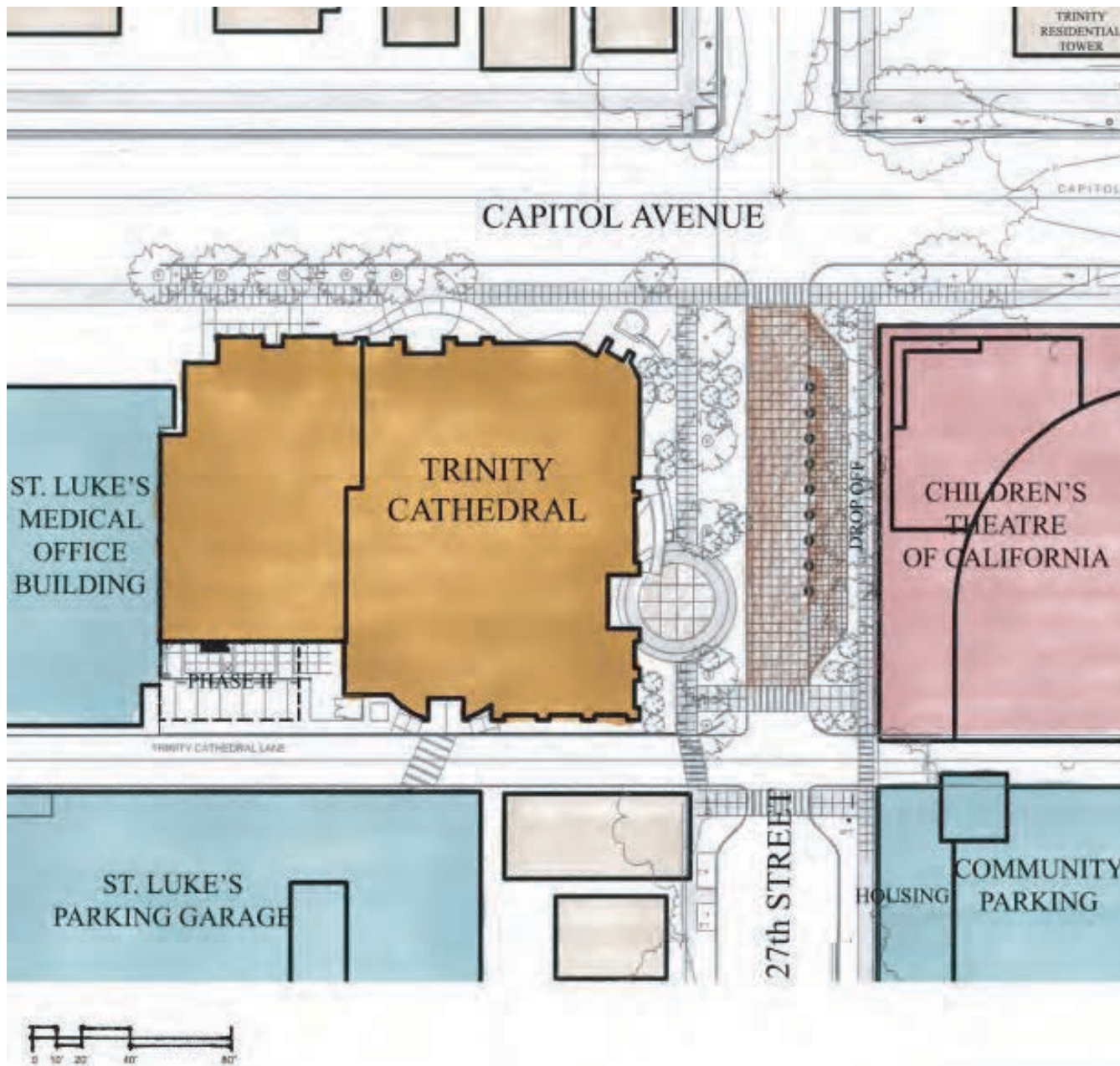


FIGURE 2-24
Proposed Trinity Cathedral and 27th Street Site Plan

+152'-0" T.O. CROSS

+120'-0" T.O. TOWER

+84'-0" T.O. WALLS

+75'-0" T.O. ROOF

+52'-0" T.O. WALL

+0'-0" 1 ST FLOOR LEVEL

PROPOSED BUILDING PHASE I

PROPOSED BUILDING PHASE II

T.O. WALL +60'-0"

NORTH ELEVATION PHASE II



FIGURE 2-25

Trinity Cathedral, North Elevation Showing New Administrative Space

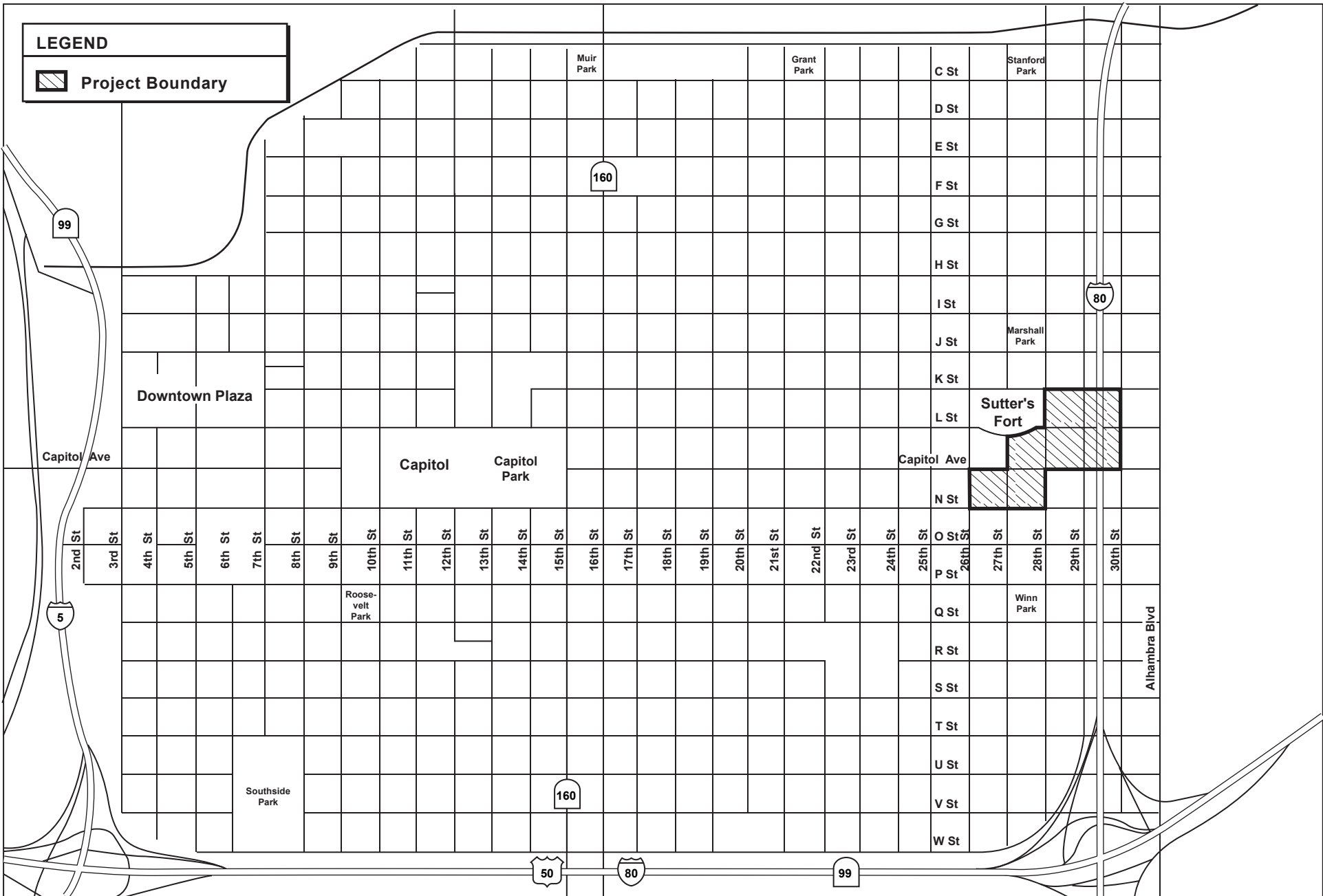


FIGURE 4-1
Project Site Boundaries

Not to Scale



10828-02

Source: EIP Associates 2003

Sutter Medical Center, Sacramento



- 01. Sutter General Hospital
- 02. Buhler Building (Sutter Cancer Center)
- 03. Surface Parking Lot
- 04. Energy Center
- 05. Old Tavern Parking
- 06. (Former)RAS Building
- 07. Old Tavern Building
- 08. Vacant Lot
- 09. Vacant Lot
- 10. MTI Office Building C
- 11. MTI Office Building B
- 12. MTI Office Building A
- 13. House of Furs Building
- 14. Medical Office Building
- 15. Surface Parking Lot
- 16. Vacant Lot
- 17. Trinity Apartments
- 18. Surface Parking
- 19. EAP Building
- 20. Vacant Lot
- 21. Surface Parking (includes 7 lots)
- 22. St. Luke's Medical Office Building
- 23. St. Luke's Parking Structure
- 24. North Parking Lot
- 25. South Parking Lot
- 26. Trinity Cathedral

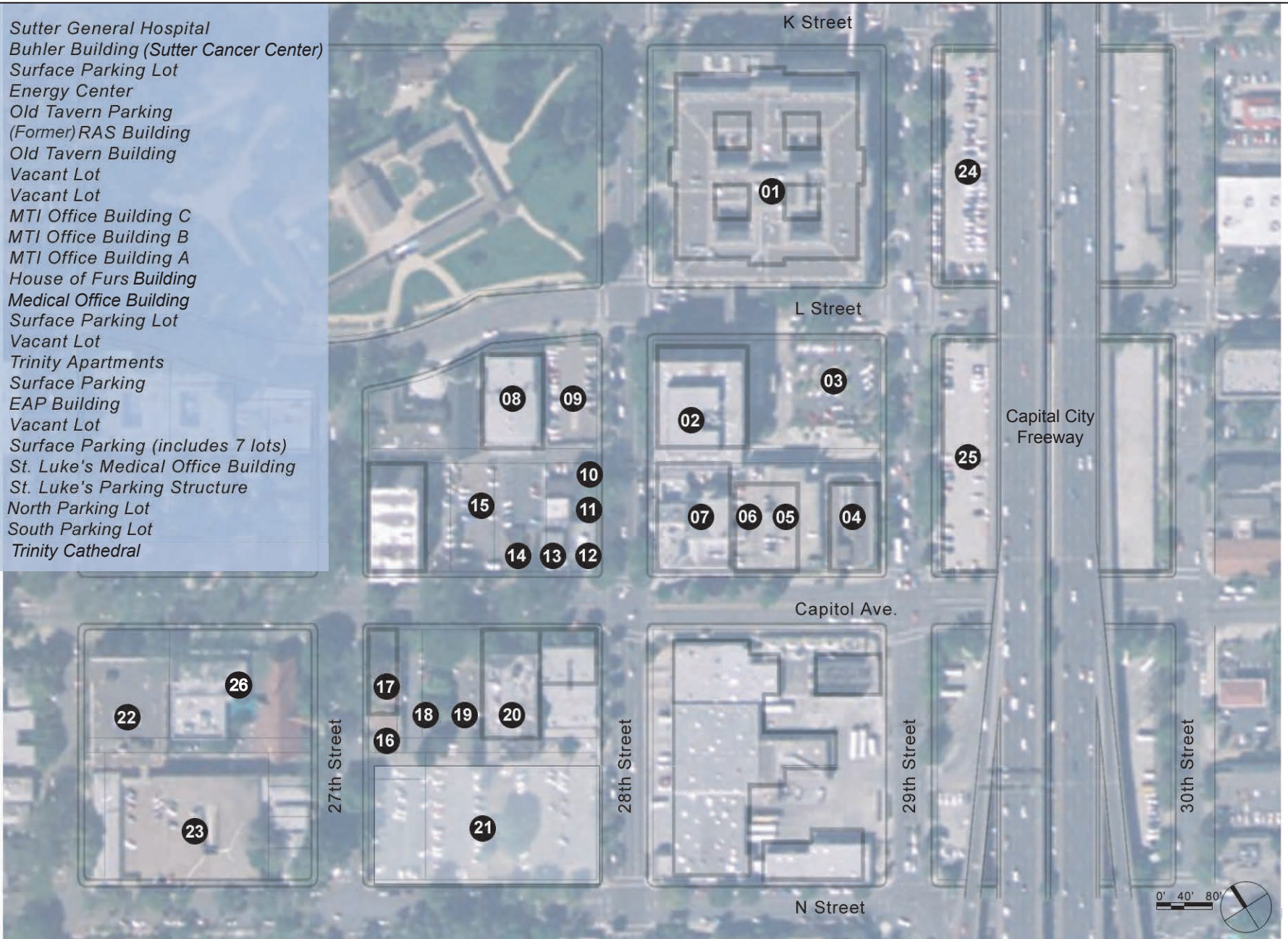


FIGURE 4-2
Existing Building Uses

10828-02

Source: KMD Architects 2004

Not to Scale



Sutter Medical Center, Sacramento

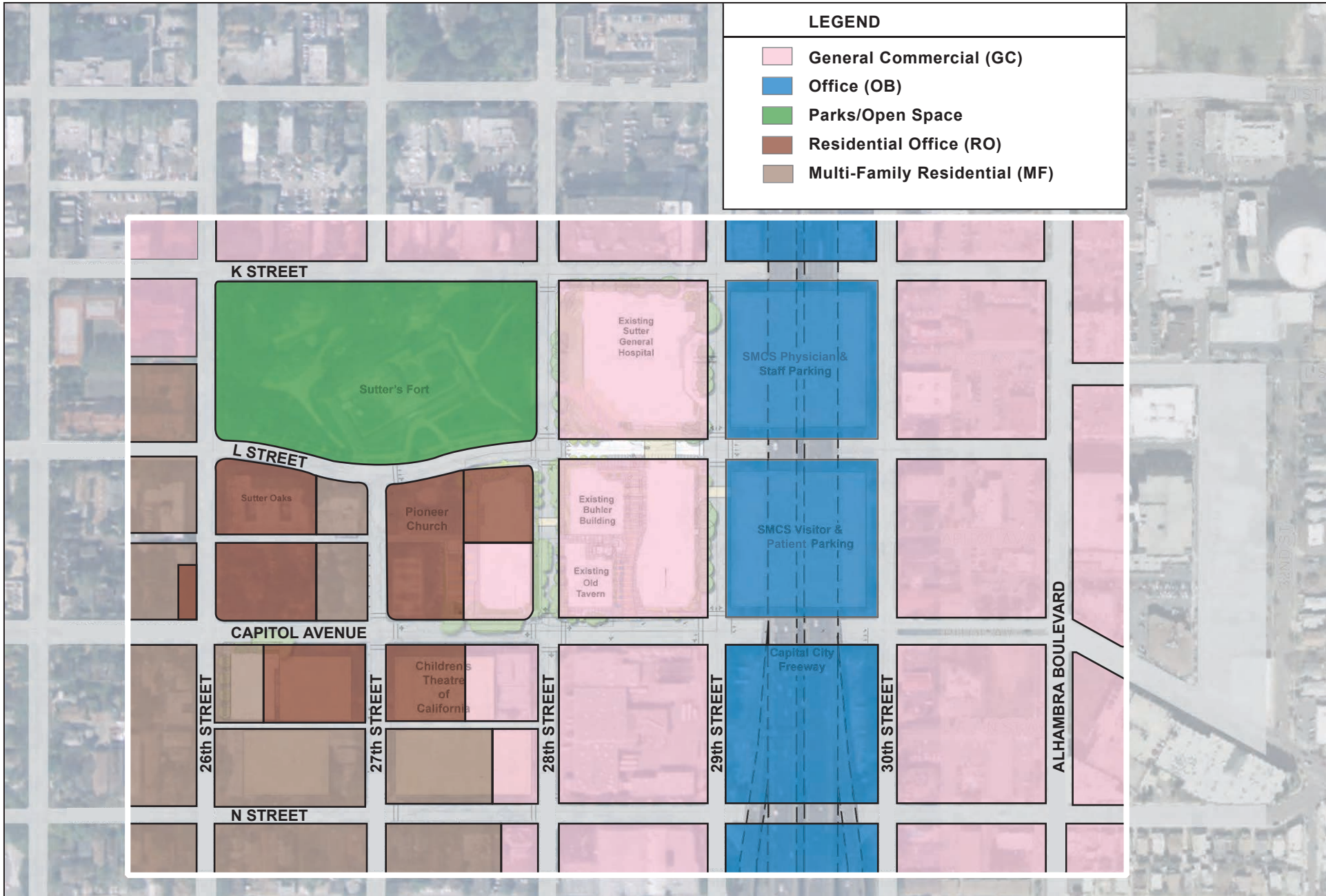


FIGURE 4-3
Central City Community Plan Land Use Designations

Not to Scale



10828-02

Source: City of Sacramento, GIS, 2005



Existing Adjacent Uses

- 01. Sutter's Fort
- 02. Old Tavern
- 03. Pioneer Church
- 04. Senior Housing
- 05. Cafe Bernardo
- 06. Monkey Bar
- 07. Capitol Physical Therapy
- 08. Regional Transit Bus Service Center
- 09. Trinity Cathedral
- 10. Residences

LEGEND

Building Names

View Points

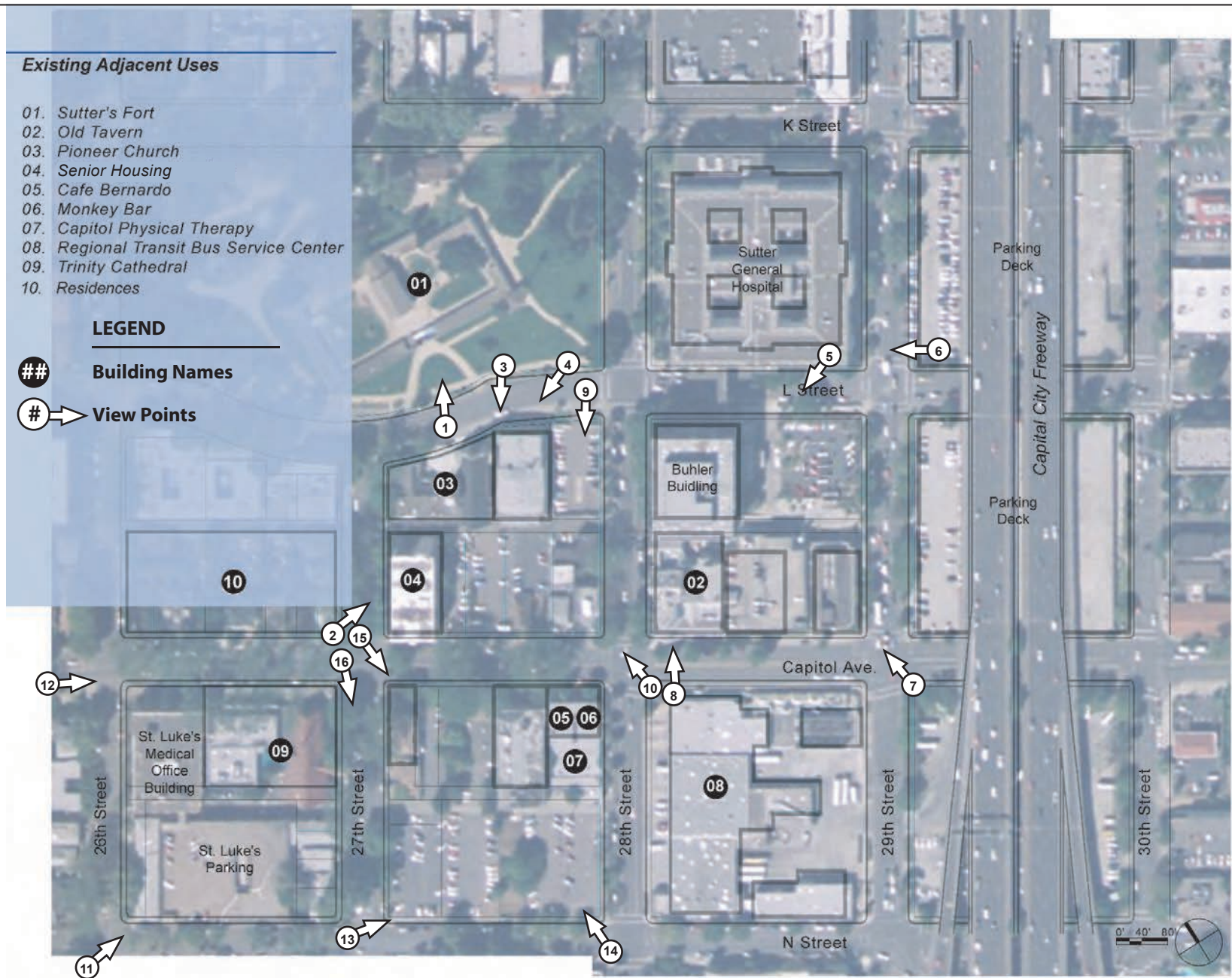


FIGURE 6.1-1
Viewpoint Map



10828-02

Source: KMD Architects 2004

Not to Scale



Sutter Medical Center, Sacramento



View 1: Sutter's Fort Main Entrance on L Street



View 2: Senior Housing at Capitol Avenue and 27th Street

FIGURE 6.1-2
Photo Views 1 and 2



View 3: Pioneer Church on L Street



View 4: East side of Pioneer Church and Adjacent Parking

FIGURE 6.1-3
Photo Views 3 and 4



View 5: East side of Buhler Building on L Street



View 6: South Side of Sutter General Hospital from L and 29th Streets

FIGURE 6.1-4
Photo Views 5 and 6



View 7: Sutter Energy Center, Old Tavern Parking Structure, (former) RAS Office, and Old Tavern from Capitol Avenue and 29th Street



View 8: Old Tavern Building on Capitol Avenue

FIGURE 6.1-5
Photo Views 7 and 8



View 9: Surface Parking at L and 28th Streets (Formerly the Tuesday Club)



View 10: Private Medical office building, House of Furs building, MTI office buildings, and Senior Housing from Capitol Avenue and 28th Street

FIGURE 6.1-6
Photo Views 9 and 10



View 11: Existing Residential and St. Luke's Parking from N and 26th Streets



View 12: West side of St. Luke's Medical Office Building from 26th Street

FIGURE 6.1-7
Photo Views 11 and 12



View 13: Existing Parking Lot from 27th and N Streets



View 14: Existing Parking Lot from 28th and N Streets

FIGURE 6.1-8
Photo Views 13 and 14



View 15: Existing Uses on Capitol Avenue at 27th Street EAP Building and Trinity Apartments



View 16: Existing Uses on 27th Street from Capitol Avenue Trinity Apartments

FIGURE 6.1-9
Photo Views 15 and 16

Source: EIP Associates 2004

Sutter Health Master Plan EIR



FIGURE 6.1-10
Women's and Children's Center, East Elevation

10828-02

Source: KMD Architects 2005

Sutter Medical Center, Sacramento

EIP
ASSOCIATES



FIGURE 6.1-11
Spanning Structure Across L Street

10828-02 **Source:** KMD Architects 2005

Sutter Medical Center, Sacramento





FIGURE 6.1-12
WCC Building, Entryway, and Motor Court adjacent to Old Tavern Building

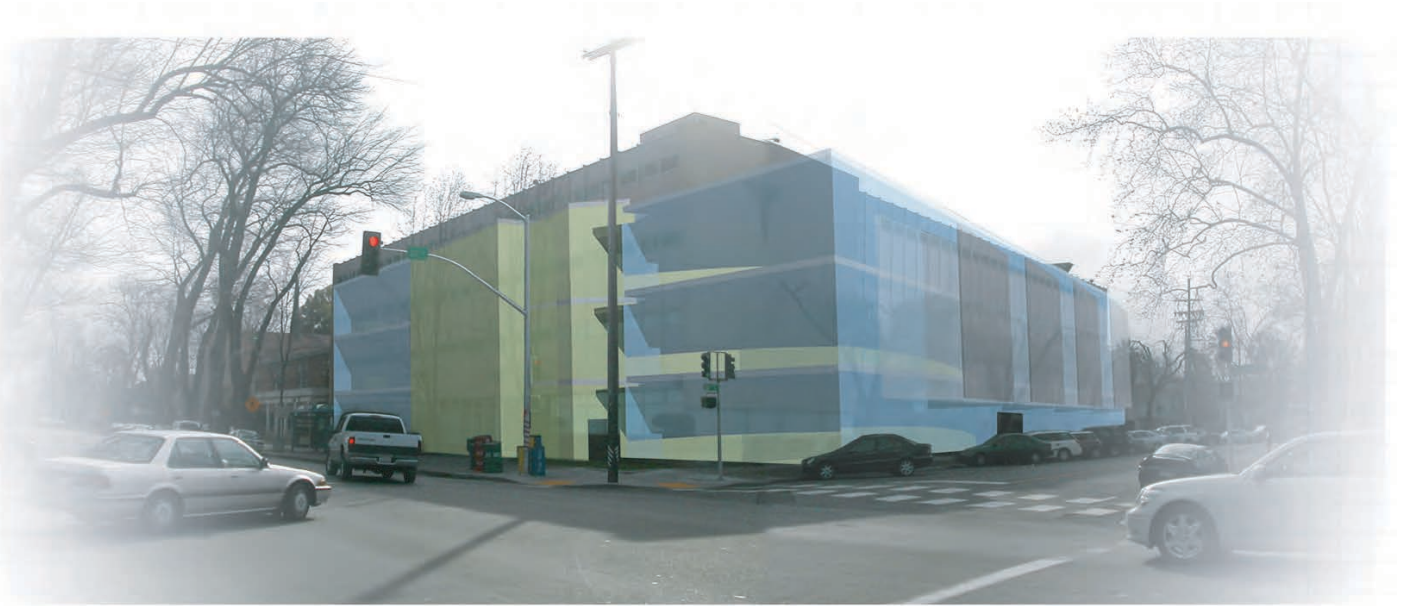


FIGURE 6.1-13
SMF Building, North Elevation

10828-02 Source: KMD Architects 2005

Sutter Medical Center, Sacramento





3D Massing Concept



Site Context Photos

FIGURE 6.1-14
Future Medical Office Building

Not to Scale



FIGURE 6.1-15
Community Parking Structure – Visual Simulation

10828-02 **Source:** McCarthy Construction to SMCS 2005

Sutter Medical Center, Sacramento





FIGURE 6.1-16
Sutter Residential, Cross Section Along N Street

LAND USE CATEGORY	COMMUNITY NOISE EXPOSURE L _{dn} OR CNEL db					
	55	60	65	70	75	80
Residential	////////////////////					
			////////////////////)))))))))	+++++	
Transient Lodging – Motels, Hotels	////////////////////					
			////////////////////)))))))))	+++++	
Schools, Libraries, Churches, Hospitals, Nursing Homes	////////////////////					
			////////////////////)))))))))	+++++	
Auditoriums, Concert Halls, amphitheatres	////////////////////					
				+++++		
Sports Arena, Outdoor Spectator Sports	////////////////////					
					+++++	
Playgrounds, Neighborhood Parks	////////////////////					
)))))))))	+++++	
Golf Courses, Riding Stables, Water Recreation, Cemeteries	////////////////////					
)))))))))	+++++	
Office Buildings, business Commercial and Professional	////////////////////					
			////////////////////)))))))))	
Industrial Manufacturing, Utilities Agriculture	////////////////////					
				////////////////////)))))))))	

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 should be discouraged. If new construction or development 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.	

FIGURE 6.6-2a
Land Use Compatibility for Community Noise Environments

Applicable Area

Noise Source	Land Use	Interior	Exterior	Statement Requirements	Noise Element Requirements
Traffic or fixed source (Industrial, plants, etc.)	Single Family	X	X	None	$L_{dn} < 45 \text{ dB}^2$
	Single Family		X	None	$L_{dn} \leq 60 \text{ dB}$ in backyards
	Multi-Family ¹	X		$L_{dn} < 45 \text{ dB}$	$L_{dn} < 45 \text{ dB}$
	Multi-Family		X	None	$L_{dn} \leq 60 \text{ dB}$ in common outdoor use areas
	Schools	X		None	Noisiest hourly $L_{ea} \leq 40 \text{ dB}$ during school day
	Schools		X	None	$L_{dn} \leq 60 \text{ dB}$
	Libraries	X		None	Noisiest hour $L_{eq} \leq 45 \text{ dB}$
	Libraries		X	None	None
Aircraft	Single-Family	X		None	$L_{dn} \leq 45 \text{ dB}$ and maximum instantaneous levels of $\leq 50 \text{ dBA}$ in bedrooms and $\leq 55 \text{ dBA}$ in other habitable rooms ²
	Single-Family		X	CNEL $\leq 65 \text{ dB}$ (State Aeronautics Noise Standards) requirement does not apply to Mather and McClellan's AFB's	CNEL $\leq 60 \text{ dB}$ for Metro Airport CNEL $\leq 65 \text{ dB}$ for all others
	Multi-Family	X		$L_{dn} \leq 45 \text{ dB}$	$L_{dn} \leq 45 \text{ dB}$ and maximum instantaneous levels of $\leq 50 \text{ dBA}$ in bedrooms and $\leq 55 \text{ dBA}$ in other habitable rooms ²
	Multi-Family		X	CNEL $\leq 65 \text{ dB}$ (State Aeronautics Noise Standards) requirement does not apply to Mather and McClellan's AFB's	CNEL $\leq 60 \text{ dB}$ for Metro Airport CNEL $\leq 65 \text{ dB}$ for all others
	Schools	X		None	Noisiest hourly $L_{eq} \leq 40 \text{ dB}$ during school day
	Schools		X	CNEL $\leq 65 \text{ dB}$ (State Aeronautics Noise Standards) requirement does not apply to Mather and McClellan's AFB's	CNEL $\leq 60 \text{ dB}$ for Metro Airport CNEL $\leq 65 \text{ dB}$ for all others
	Libraries	X		None	Noisiest hour $L_{eq} \leq 45 \text{ dB}$
	Libraries		X	None	None
Rail Traffic	Single-Family	X		None	$L_{dn} \leq 45 \text{ dB}$ and maximum instantaneous levels of $\leq 50 \text{ dBA}$ in bedrooms and $\leq 55 \text{ dBA}$ in other habitable rooms ²
	Single-Family		X	None	$L_{dn} \leq 60 \text{ dB}$
	Multi-Family	X		$L_{dn} \leq 45 \text{ dB}$ unless there are less than 4 trains per day between 7:00 a.m. and 10:00 p.m. and there are no trains between 10:00 p.m. and 7:00 a.m.	$L_{dn} \leq 45 \text{ dB}$ and maximum instantaneous levels of $\leq 50 \text{ dBA}$ in bedrooms and $\leq 55 \text{ dBA}$ in other habitable rooms ²
	Multi-Family		X	None	$L_{dn} \leq 60 \text{ dB}$
	Schools	X		None	Noisiest hourly $L_{eq} \leq 40 \text{ dB}$ during school day
	Schools		X	None	Maximum instantaneous levels $\leq 85 \text{ dBA}$
	Libraries	X		None	Noisiest hour $L_{eq} \leq 45 \text{ dB}$
	Libraries		X	None	None

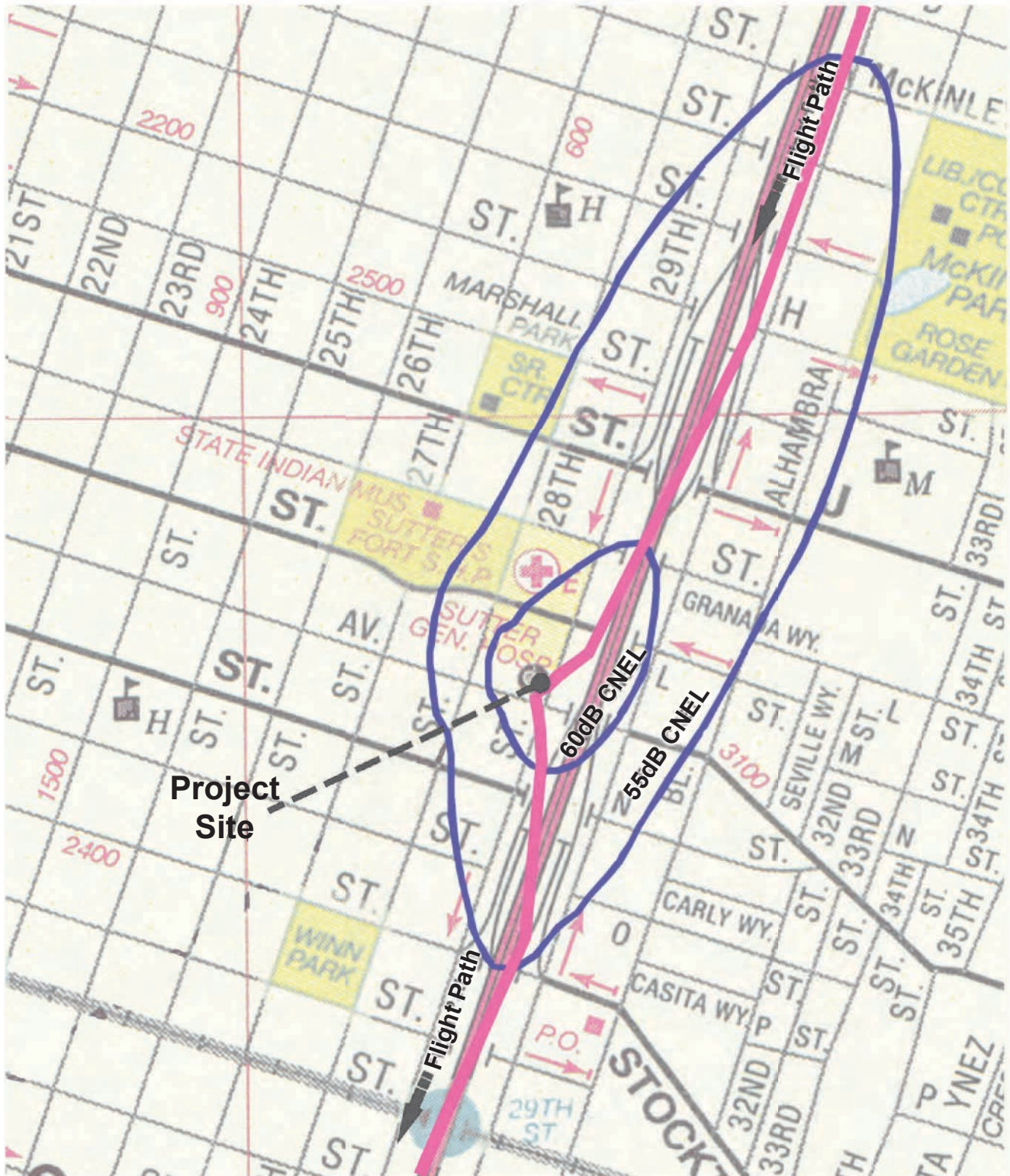
1 Multi-family includes hotel, motel, apartment houses, and dwellings other than detached single-family dwellings as defined by title 24, Part 2, California Administrative Code.

2 The requirement for interior noise exposure is triggered when the exterior L_{dn} exceeds 60 dB.

3 Projects for which U.S. Department of HUD financing is requested are subject to HUD noise requirements. The noise element requirements listed in this table are at least as stringent as the HUD requirements.

FIGURE 6.6-2b

Maximum Acceptable Interior and Exterior Noise Levels for New Development without Mitigation



Project Site

60dB CNEL

55dB CNEL

Flight Path

Flight Path



FIGURE 6.6-3
Approach from North/South Departure Helicopter CNEL Contours

Not to Scale

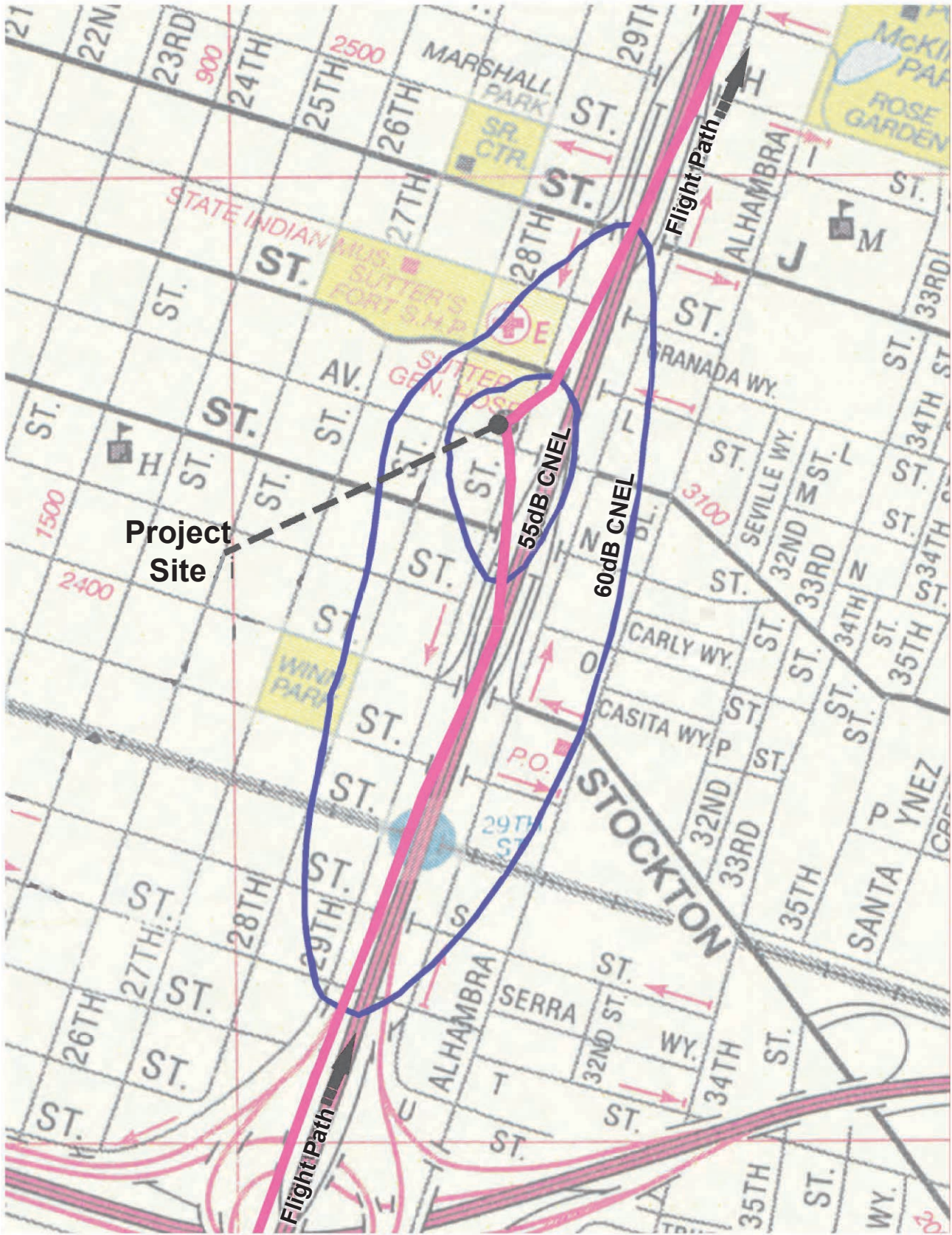


FIGURE 6.6-4
Approach from South/North Departure Helicopter CNEl Contours

Not to Scale



10828-02

Source: Bollard and Brennan Noise, Inc., 2004

Sutter Medical Center, Sacramento



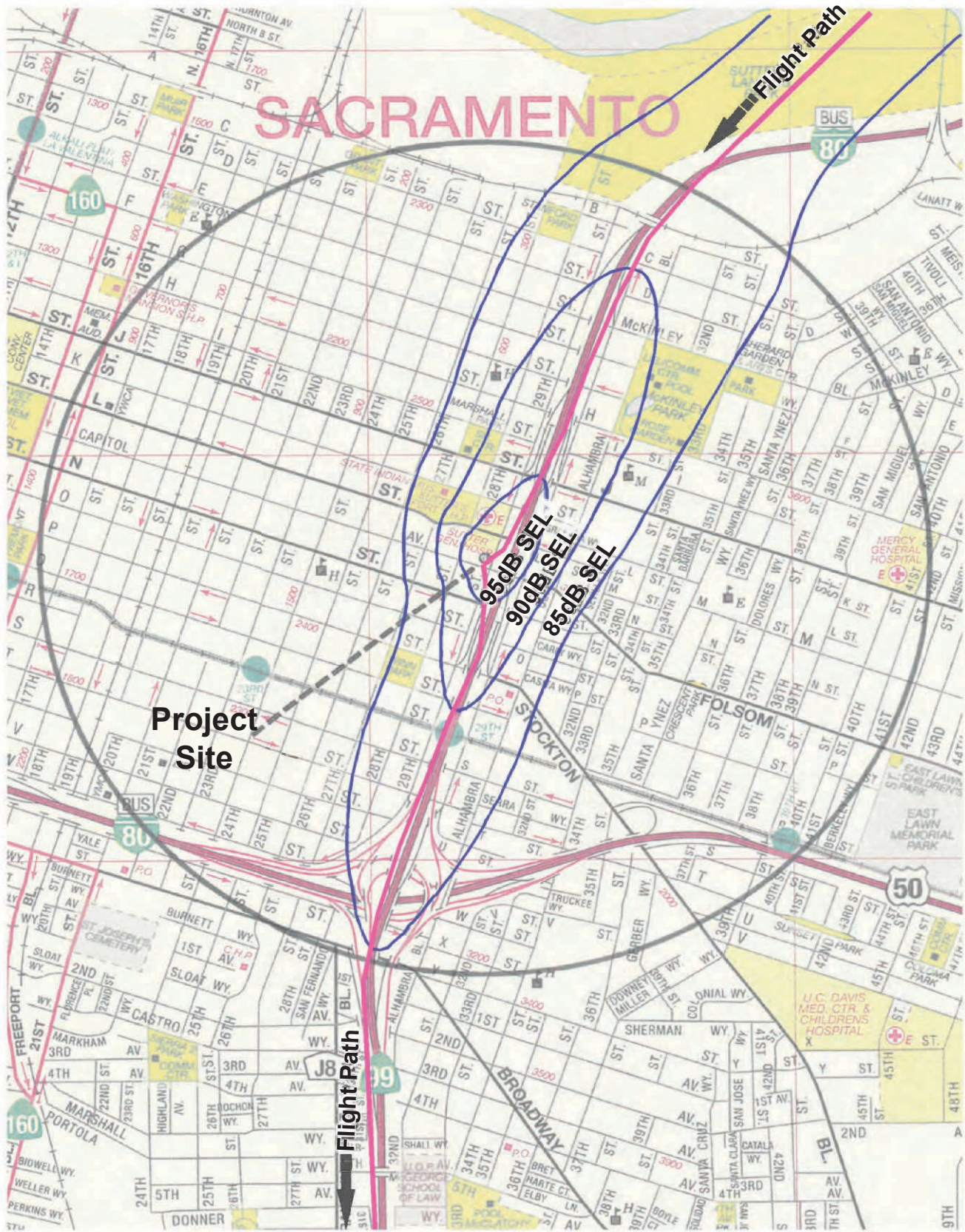
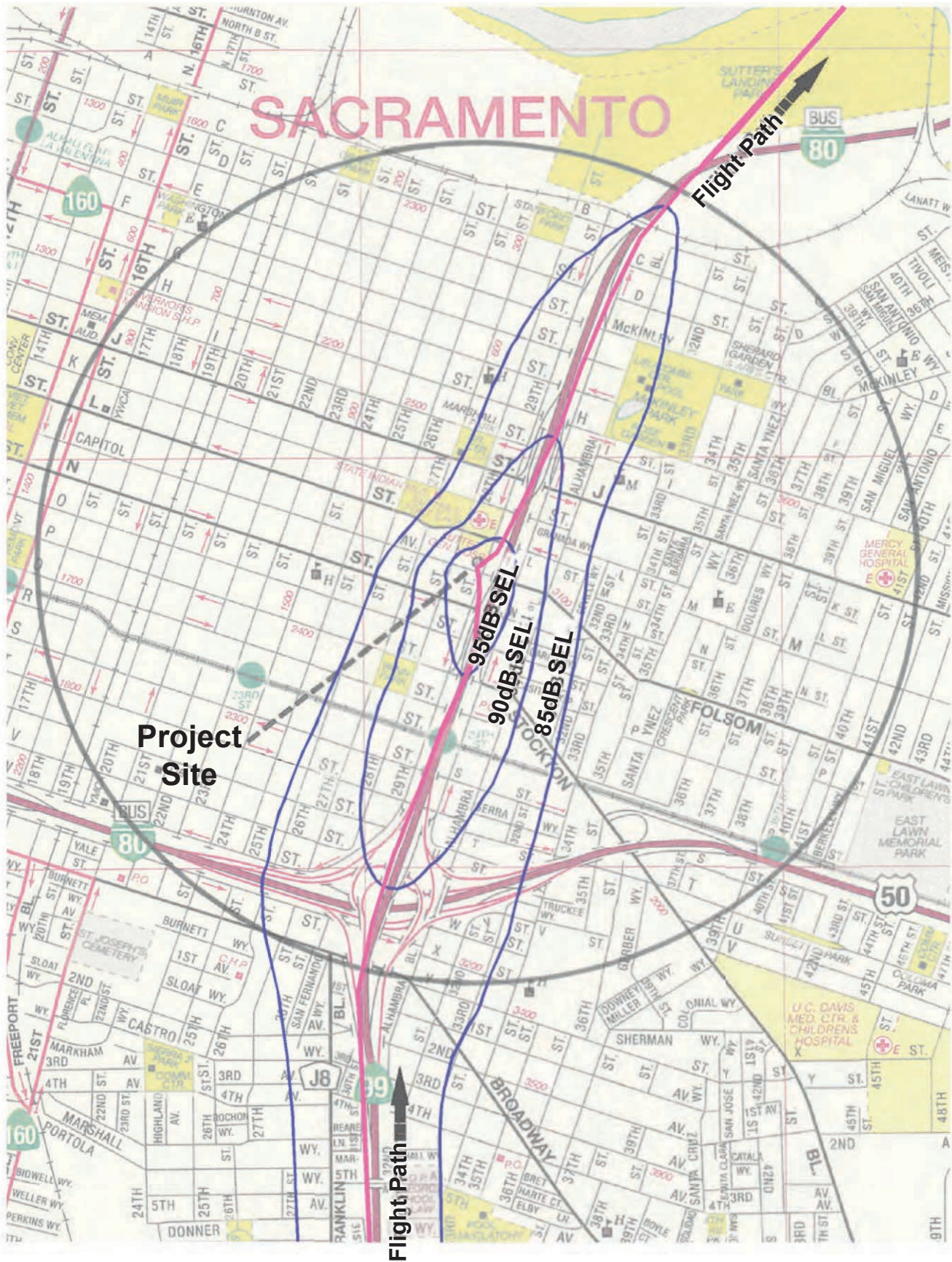


FIGURE 6.6-5
Approach from North/Depart to South Helicopter SEL Contours

Not to Scale



Project Site

Flight Path

Flight Path

95dB SEL

90dB SEL

85dB SEL



FIGURE 6.6-6
Approach from South/Depart to North Helicopter SEL Contours

Not to Scale

Existing Adjacent Uses

- 01. Sutter's Fort
- 02. Old Tavern
- 03. Pioneer Church
- 04. Senior Housing
- 05. Cafe Bernardo
- 06. Monkey Bar
- 07. Capitol Physical Therapy
- 08. Regional Transit Bus Service Center
- 09. Trinity Cathedral
- 10. Trinity Cathedral Administrative Annex Building

LEGEND

Building Names

View Points

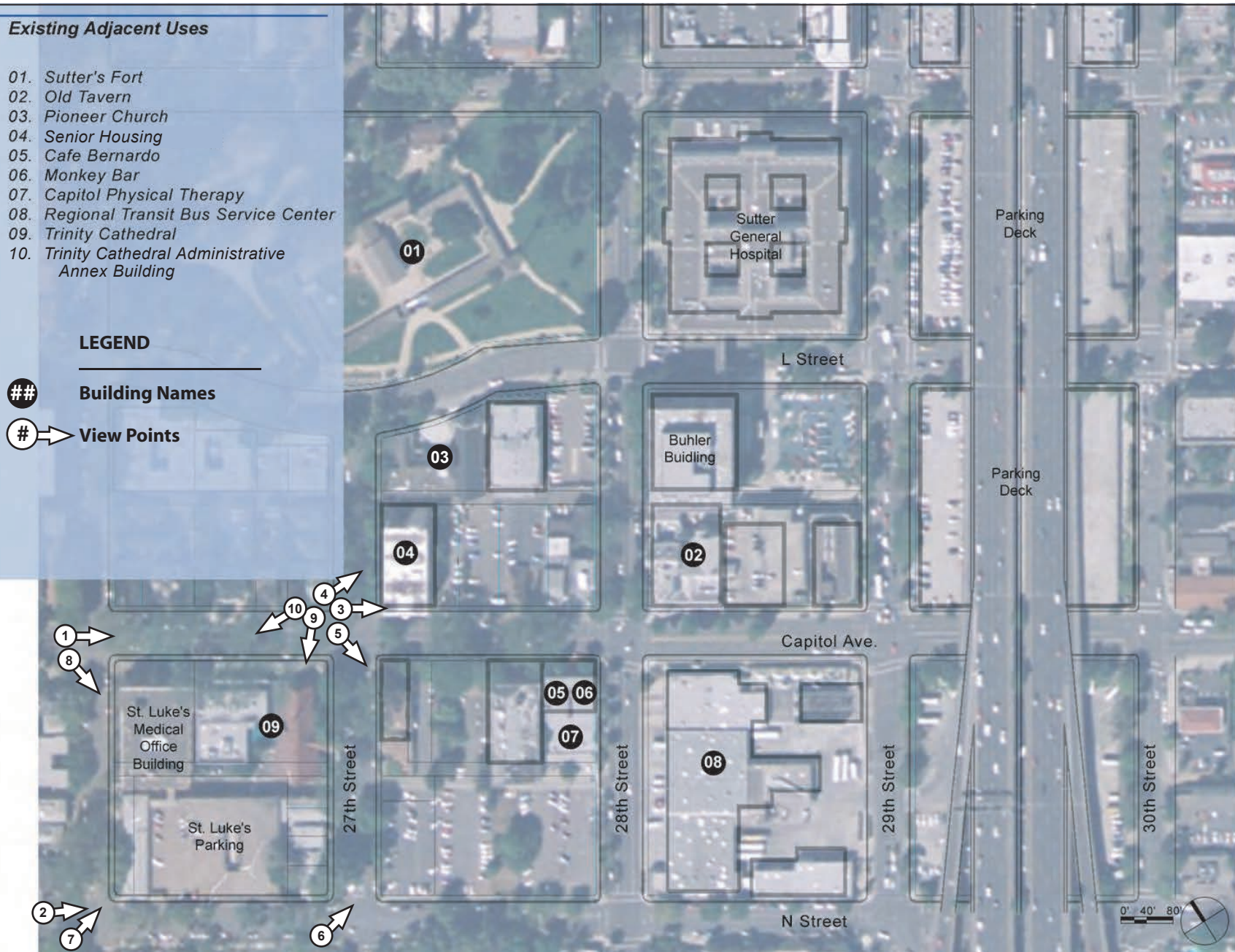


FIGURE 7.1-1
Viewpoint Map

10828-02

Source: KMD 2004



View 1: Capitol Avenue, Looking East from 26th Street



View 2: N Street, Looking East from 26th Street

FIGURE 7.1-2
Photo Views 1 and 2



View 3: Capitol Avenue, Looking East from 27th Street



View 4: Senior Housing at Capitol Avenue & 27th Street



10828-02

FIGURE 7.1-3
Photo Views 3 and 4

Source: EIP Associates 2004

Sutter Medical Center, Sacramento





View 5: 27th Street, Looking South from Capitol Avenue



View 6: Surface Parking Lot, Looking Northeast at N and 27th Streets

FIGURE 7.1-4
Photo Views 5 and 6



View 7: Existing Residential and St. Luke's Parking from N and 26th Streets



View 8: West side of St. Luke's Medical Office Building from 26th Street

FIGURE 7.1-5
Photo Views 7 and 8



View 9: Trinity Cathedral, Looking south from Capitol Avenue and 27th Street



View 10: Trinity Cathedral Administrative Annex Building and St. Luke's Medical Office Building looking west on Capitol Avenue

FIGURE 7.1-6
Photo Views 9 and 10

Source: EIP Associates 2004

Sutter Medical Center, Sacramento



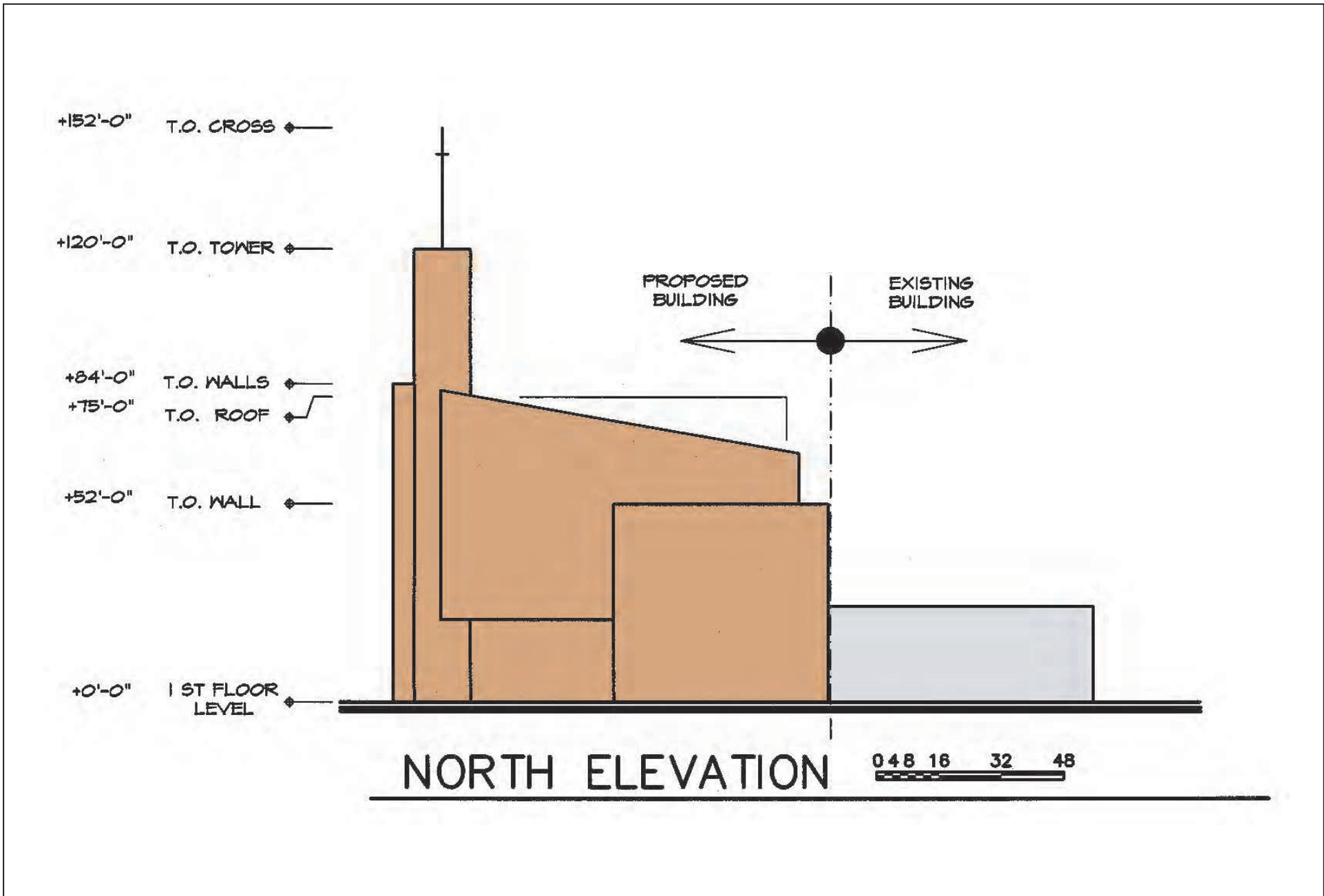


FIGURE 7.1-7
Trinity Cathedral, North Elevation

+152'-0" T.O. CROSS

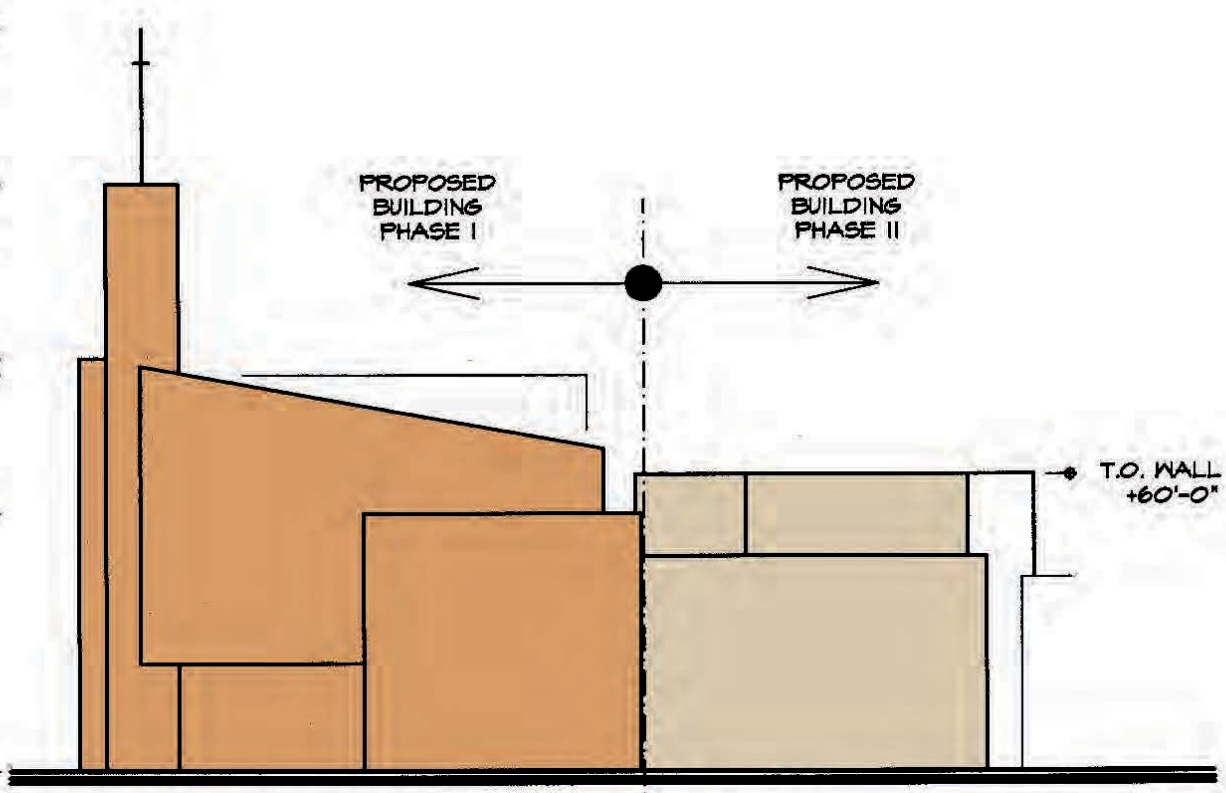
+120'-0" T.O. TOWER

+84'-0" T.O. WALLS

+75'-0" T.O. ROOF

+52'-0" T.O. WALL

+0'-0" 1 ST FLOOR LEVEL



T.O. WALL +60'-0"

NORTH ELEVATION PHASE II

0 48 16 32 48

FIGURE 7.1-8
Trinity Cathedral, North Elevation Showing New Administrative Space

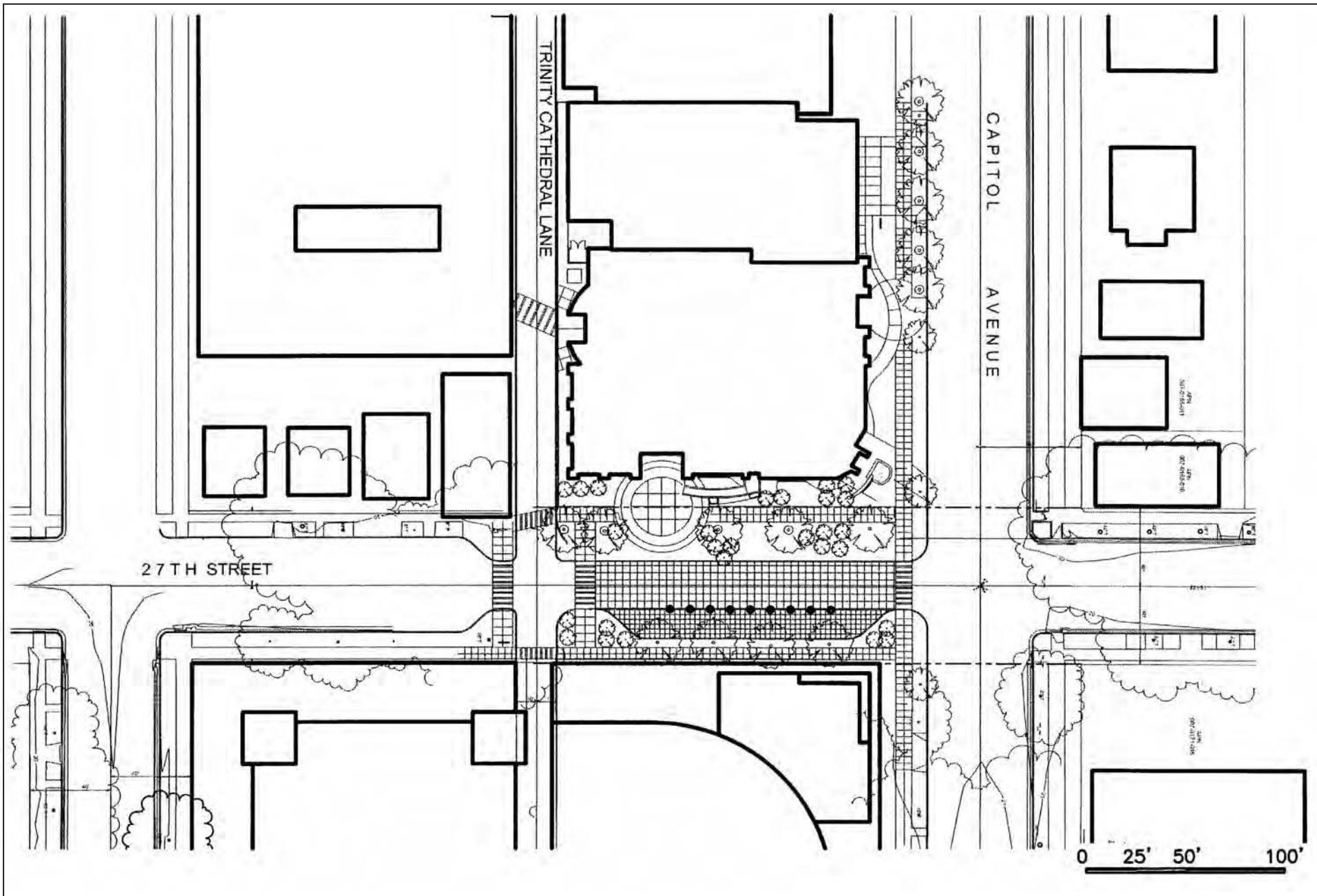


FIGURE 7.1-9
Conceptual Site Plan for 27th Street

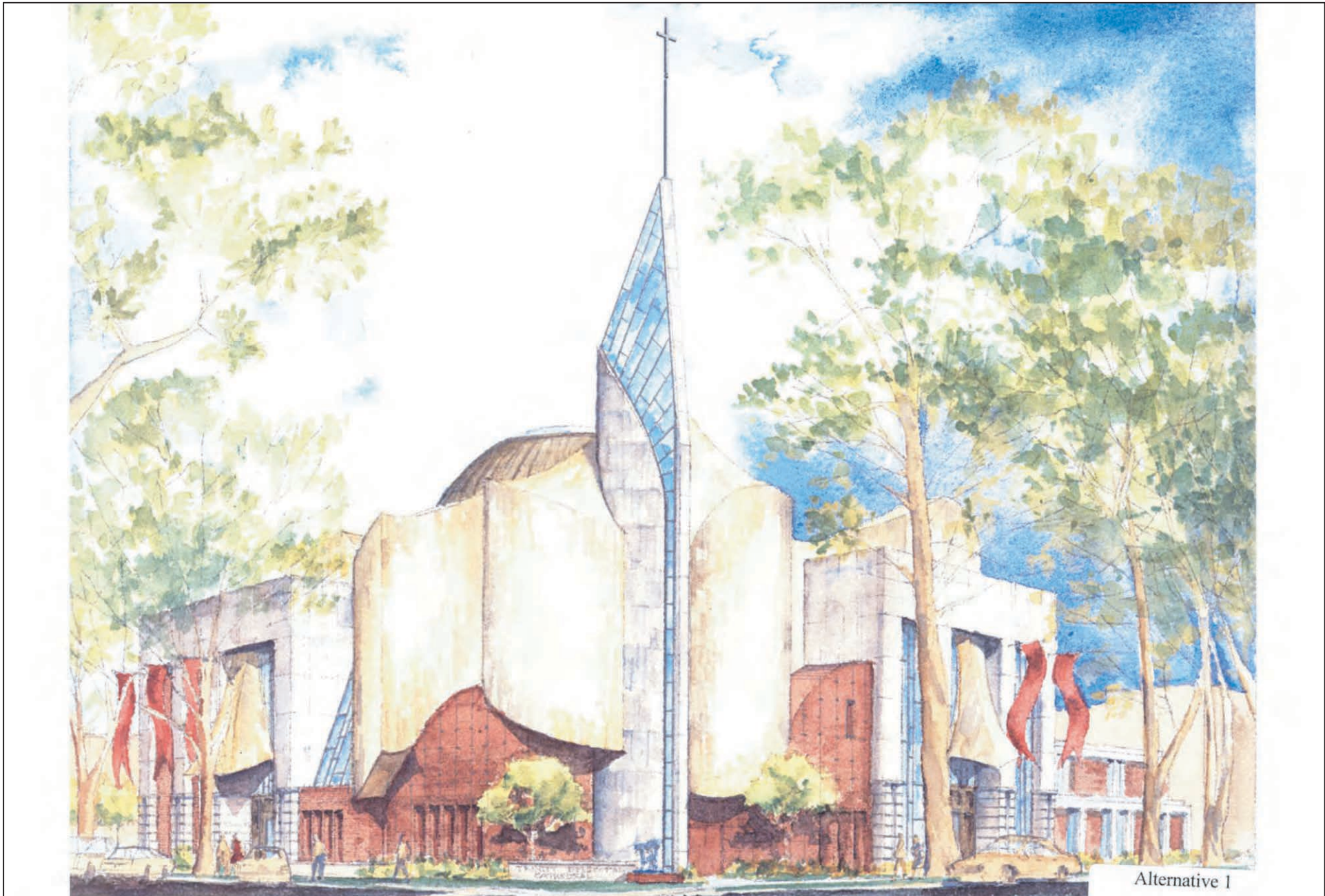


10828-02

Source: WMG Architects 2005

Sutter Medical Center, Sacramento





Alternative I

FIGURE 8-1
Original Design Concept

10828-02 Source: WMB Architecture, 2005

Sutter Medical Center, Sacramento

EIP
ASSOCIATES



FIGURE 8-2
Curved Wall Design Concept

10828-02 **Source:** WMB Architecture, 2005

Sutter Medical Center, Sacramento





FIGURE 8-3
Large Existing Design Concept

10828-02 Source: WMB Architecture, 2005

Sutter Medical Center, Sacramento



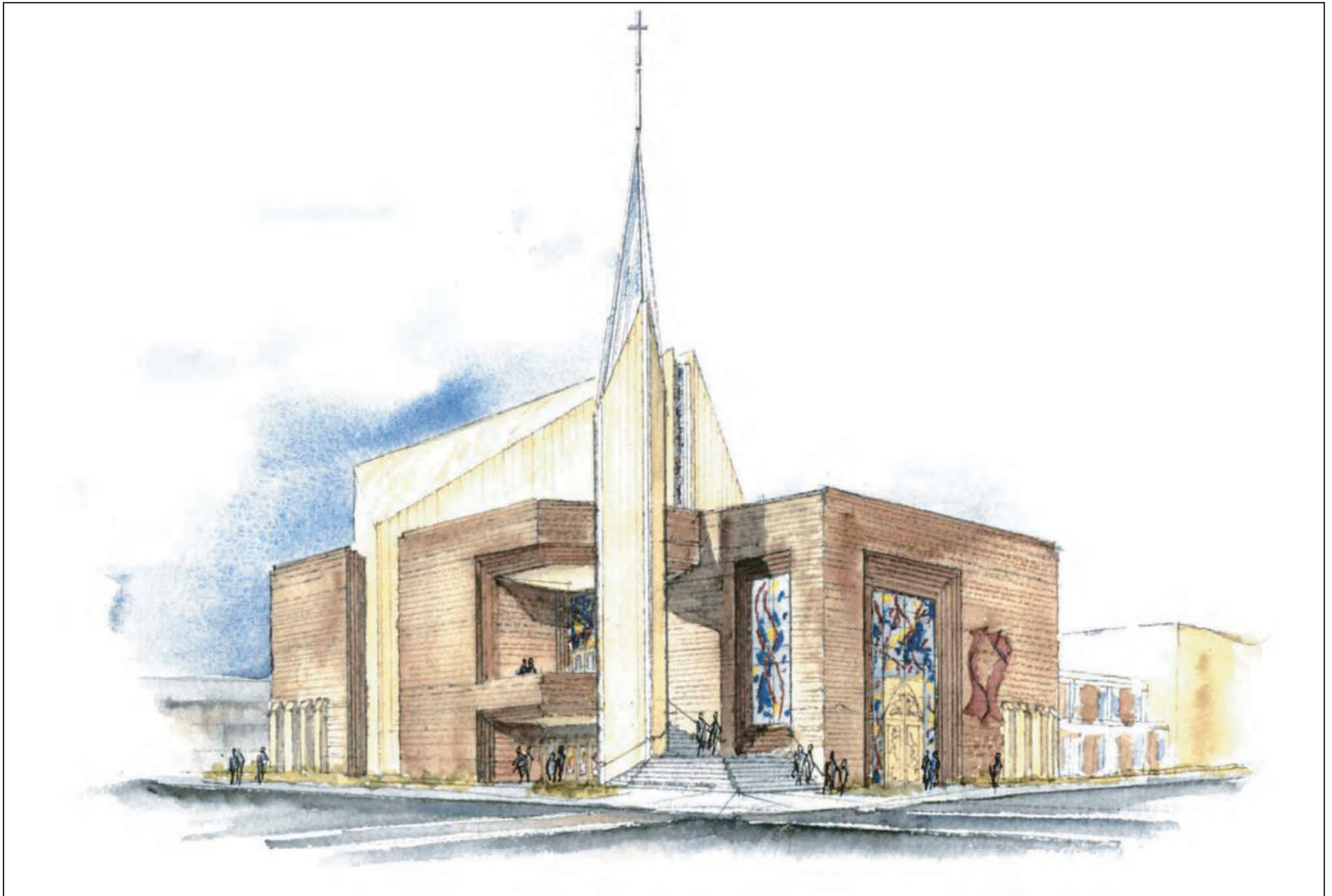


FIGURE 8-4
Exterior Staircase Design Concept

10828-02 Source: WMB Architecture, 2005

Sutter Medical Center, Sacramento

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ASSOCIATES