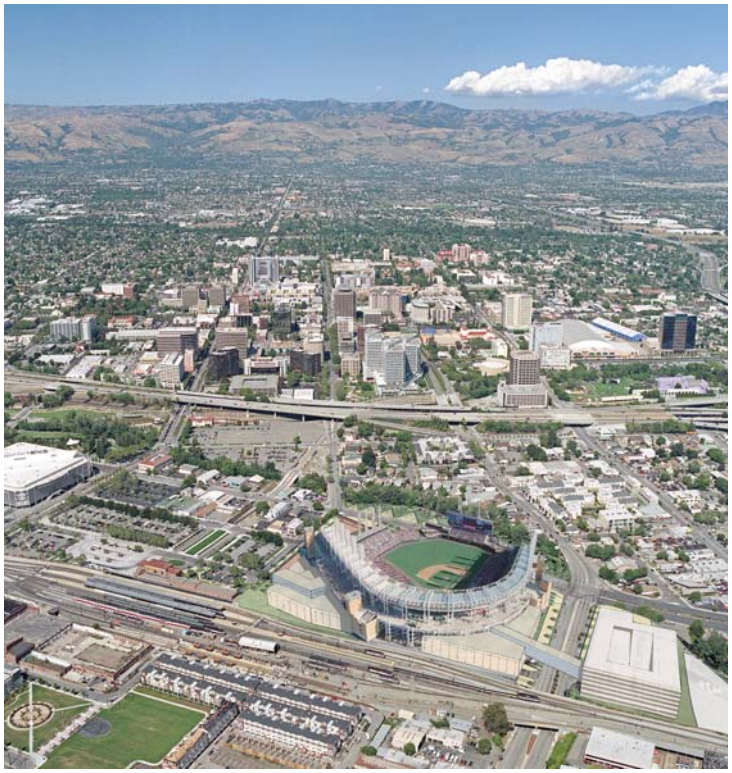
BASEBALL STADIUM IN THE DIRIDON/ARENA AREA

FINAL ENVIRONMENTAL IMPACT REPORT
VOLUME I



SCH # 2005112126

PROJECT # PP05-214

City of San Jose

March 2007

RESOLUTION NO. 07-009

RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF SAN JOSE FINDING A FINAL ENVIRONMENTAL IMPACT REPORT FOR A PROJECT DESCRIBED IN APPLICATION FILE NO. PP05-214 HAS BEEN COMPLETED IN COMPLIANCE WITH THE CALIFORNIA ENVIRONMENTAL QUALITY ACT.

WHEREAS, pursuant to Title 21 of the San Jose Municipal Code, **the Redevelopment Agency of the City of San Jose** hereinafter referred to as "Applicant", on November 9, 2005, filed applications for the preparation of an Environmental Impact Report (hereinafter called "EIR") as required for a proposed Major League Baseball Stadium, located on multiple properties bounded by West Santa Clara Street, South Autumn Street, the Union Pacific Railroad tracks and Los Gatos Creek, as described in the Environmental Impact Report (EIR) entitled Baseball Stadium in the Diridon/Arena Area and made a part hereof by reference as though fully set forth herein; and

WHEREAS, the Director of Planning, Building and Code Enforcement pursuant to and in accordance with said Title 21 has prepared and filed with this Commission a Final EIR, File No. PP05-214, relating to said subject property; and

WHEREAS, pursuant to and in accordance with said Title 21, the Director sent a copy of the Draft EIR to each public agency having jurisdiction by law of said proposed project, advising such agencies to review and submit written comments, if any, to this Commission in the time and manner specified in said Title 21; and

WHEREAS, pursuant to and in accordance with said Title 21, this Commission conducted a hearing on the Final EIR, notice of which was duly given; and

WHEREAS, at said hearing, this Commission gave all persons full opportunity to be heard and to present evidence and testimony respecting said final EIR; and

NOW, THEREFORE, BE IT RESOLVED BY THE PLANNING COMMISSION OF THE CITY OF SAN JOSE AS FOLLOWS:

SECTION 1. This Commission hereby finds, determines and declares the Final EIR for said project has been completed in compliance with the California Environmental Quality Act of 1970, as amended, and represents the independent judgment and analysis of the City of San Jose.

SECTION 2. The Director of Planning, Building and Code Enforcement shall transmit copies of the Final EIR to the Applicant and to the decision-making body.

ADOPTED and issued this 28th day of February, 2007, by the following vote:

AYES: CAMPOS, DHILLON, KALRA, PLATTEN.

NOES: KAMKAR, ZITO.

ABSENT: NONE

DISQUALIFIED: JENSEN.

Chairperson

ATTEST:

JOSEPH HORWEDEL
Secretary, Planning Commission

Deputy

Revised 5/06 JAC

BASEBALL STADIUM IN THE DIRIDON/ARENA AREA

FINAL ENVIRONMENTAL IMPACT REPORT
VOLUME I

SCH # 2005112126

PROJECT # PP05-214

Submitted to the:

Department of Planning,
Building, and Code Enforcement
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March 2007

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II. SUMMARY

A. PROJECT UNDER REVIEW

This EIR has been prepared to evaluate the environmental impacts of the Baseball Stadium in the Diridon/Arena Area Project. The proposed project consists of the development of an approximately 1.5 million square-foot major league baseball stadium, a parking structure, and a future commercial development site on approximately 23.1 acres in the City of San Jose. The proposed project would require City entitlement actions including demolition, construction, and development permits. A more detailed description of the proposed project is provided in Chapter III, Project Description.

B. SUMMARY OF IMPACTS AND MITIGATION MEASURES

This summary provides an overview of the analysis contained in Chapter V, Setting, Impacts, and Mitigation Measures. CEQA requires a summary to include discussion of: (1) potential areas of controversy; (2) significant impacts; (3) cumulative impacts; (4) significant irreversible and unavoidable impacts; and (5) alternatives to the proposed project.

1. Potential Areas of Controversy

Letters received as comments on the Notice of Preparation (NOP) raised a number of topics that the writers wanted addressed in the EIR, including: traffic, air quality, noise, the project site's proximity to the Norman Y. Mineta San Jose International Airport, loss of planned parkland, and impacts to cultural resources. In addition, some of the comments offered in the NOP comment letters address the merits of the project itself and not the potential adverse environmental impacts that are the subject of this EIR. Verbal comments offered by those in attendance at the CEQA Scoping Session, held on December 15, 2005, included many of those offered in writing as comments on the NOP.

2. Significant Impacts

Under CEQA, a significant impact 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."[1] Implementation of the proposed project has the potential to result in adverse environmental impacts in several environmental areas. Impacts in the following areas would be significant without the implementation of mitigation measures, but would be reduced to a less-than-significant level if the mitigation measures noted in this report are implemented:

- land use
- transportation, circulation and parking
- air quality

[1] Remy, Thomas, Moose, and Manley, *Guide to the California Environmental Quality Act*, 1999, p.158; Public Resources Code 15382; Public Resources Code 21068.

- noise
- biological resources
- geology, soils and seismicity
- hydrology and water quality
- hazards and hazardous materials
- cultural and paleontological resources
- visual and aesthetic resources
- shade/shadow and light/glare
- utilities

3. Alternatives to the Proposed Project

The seven alternatives to the proposed project are analyzed in Chapter VII of this EIR are discussed below.

The **No Development** alternative would involve the multi-parcel site remaining physically as it presently is. The multiple-block site would maintain its commercial, light industrial, transportation, utility and office uses. The fire training center south of Park Avenue would continue to operate in its current location. Autumn Street would maintain its current alignment, and Otterson and Montgomery Streets would not be vacated.

The **Existing Plan** alternative would involve the development of the site in accordance with the development outlined in the Diridon/Arena Strategic Development Plan, the Midtown Specific Plan and the Burbank/Del Monte Neighborhood Improvement Plan. The project site north of Park Avenue would be developed with transit oriented mixed use development. The project site south of Park Avenue would be developed with a public park.

The **Submerged Stadium** alternative would involve the excavation of the site by 24 to 28 feet to submerge the stadium and achieve a consequent reduction in overall height by the same 24 to 28 feet. The parking garage would also be submerged to a similar level. Pedestrian access to the interior of the stadium facilities would vary from the proposed (at-grade) concept, but this alternative assumes that the remainder of the project's characteristics would not change.

Over the past several years the City of San Jose has considered many locations for a baseball stadium. **Alternate Locations Considered and Rejected** summarizes locations that have been considered by the City, but which do not meet the basic size requirements or other critical project objectives, or which have other fatal flaws.

In order to most clearly distinguish the trade-off in potential impacts—both *beneficial* and *adverse*—several alternate locations for the project have been selected.

The **FMC/Coleman Avenue Location** alternative evaluates the same development program as the proposed project, but at another location within the City of San Jose. The FMC/Coleman Avenue Location alternative is an approximately 92.5-acre site bounded by Coleman Avenue to the northeast, Newhall Street to the southeast, Southern Pacifica Railroad lines to the southwest and the jurisdictional boundary of the City of Santa Clara to the northwest. This site was analyzed (for another type

of development project) in the EIR prepared for the FMC/Coleman Avenue Planned Development Rezoning (July 2003).

The **Del Monte Location** alternative evaluates the same development program as the proposed project, but at another location within the City of San Jose. The Del Monte Location alternative is an approximately 17.5-acre site at 801 Auzerais Street, generally south of W. San Carlos Street, west of Los Gatos Creek, north of W. Home Street and east of Sunol Street and the Vasona LRT line. This site was analyzed (for another type of development project) in the EIR prepared for the KB Home Monte Vista Residential Planned Development Zoning Project (March 2005).

The **Berryessa Flea Market Location** alternative evaluates the same development program as the proposed project, but at another location within the City of San Jose. The Berryessa Flea Market Location alternative is an approximately 120-acre site at 1590 Berryessa Road, generally south of Chessington Drive and Bellemade Street, north of Maybury Street, west of Caltrain tracks and east of Coyote Creek. This site was analyzed (for another type of development project) in the EIR prepared for the San Jose Flea Market General Plan Amendment (November 2002).

The **Reed and Graham Location** alternative evaluates the same development program as the proposed project, but at another location within the City of San Jose. The Reed and Graham Location alternative is an approximately 16-acre site at 854 Savaker Avenue, generally bounded by Los Gatos Creek to the west, I-280 to the south, railroad lines to the west and Savaker Avenue to the north. This site was analyzed as an alternative in the EIR prepared for the KB Home Monte Vista Residential Planned Development Zoning Project (March 2005).

Each alternative is compared to the proposed project, and discussed in terms of its various mitigating or adverse effects on the environment. Analysis of the alternatives follows the same topical order as for the proposed Project in Chapter V, and focuses on those topics for which significant adverse impacts would result from the proposed project.

4. Cumulative Impacts

The project in conjunction with other foreseeable projects would also result in significant unavoidable cumulative impacts to transportation and circulation, air quality, noise, cultural resources, light and glare, and visual resources.

5. Significant Unavoidable Impacts

As discussed in Chapter VIII of this EIR, implementation of the proposed project would result in the following significant unavoidable adverse impacts:

- State Route 87 would experience a significant impact from project traffic along two of the analyzed segments; I-280 would experience a significant impact from project traffic along two of the analyzed segments.
- Long-term project-related regional emissions would exceed the BAAQMD thresholds of significance for ozone precursors.
- Traffic noise levels along W. San Fernando Street would exceed the City's short-range noise quality standards.

- Stadium events would increase the ambient noise level resulting in impacts to nearby residential land uses.
- Construction activities would result in short-term increases in noise.
- Temporary fireworks displays would result in isolated increases in noise.
- A structure listed on the *City of San Jose Historic Resources Inventory* as Structures of Merit, which also appears to be both a candidate City Landmark and eligible for the California Register would be demolished.
- The San Jose Diridon Station, a City landmark listed in the National Register, would sustain indirect impacts due to demolition of adjacent buildings and direct impacts due to the alteration of the character of the Station's setting.
- Nighttime operation of the stadium would increase light and glare in the area and present a nuisance to surrounding land uses.

C. SUMMARY TABLE

Information in Table II-1, Summary of Impacts and Mitigation Measures, has been organized to correspond with environmental issues discussed in Chapter V. The table is arranged in four columns: (1) impacts; (2) level of significance prior to mitigation; (3) mitigation measures; and (4) level of significance after mitigation. Levels of significance are categorized as follows: SU = Significant and Unavoidable; S = Significant; and LTS = Less Than Significant. A series of mitigation measures is noted where more than one mitigation measure is required to achieve a less-than-significant impact, and alternative mitigation measures are identified when available. For a complete description of potential impacts and recommended mitigation measures, please refer to the specific discussions in Chapter V.

Table II-1: Summary of Impacts and Mitigation Measures

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
A. LAND USE			
LU-1: Fireworks displays occurring during stadium events could present a hazard to the safe operation of the San Jose International Airport.	S	LU-1: In addition to obtaining the required City permit, fireworks sponsors shall coordinate events in advance with airport staff, the air traffic control tower, and the FAA (if requested by FAA) to ensure that the activity (timing, height, and materials) does not pose a hazard to the safe operation of the San Jose International Airport.	LTS
B. POPULATION, EMPLOYMENT AND HOUSING			
There are no significant population, employment and housing impacts.			
C. TRANSPORTATION, CIRCULATION AND PARKING			
TRANS-1: The level of service at Delmas Avenue and Park Avenue would degrade from the already unacceptable LOS F under background conditions. This condition constitutes a significant impact by City of San Jose standards.	S	TRANS-1: The impact at this intersection could be mitigated by adding a second southbound through lane on Delmas Avenue. The recommended lane addition would require widening the curb-to-curb roadway width by approximately 2 feet. This could be accomplished by acquiring additional right-of-way (ROW) along the east side of Delmas Avenue, or, if additional ROW cannot be acquired, by removing on-street parking on the east side of Delmas Avenue. It should be noted that the same improvement was identified as a mitigation measure for the San Jose Water Project. Based on the City's standards, the recommended improvements would satisfactorily mitigate the project impact.	LTS
TRANS-2: The level of service at Delmas Avenue and W. San Fernando Street would degrade from the already unacceptable LOS F under background conditions. This condition constitutes a significant impact by City of San Jose standards.	S	TRANS-2: The impact at this intersection could be mitigated by adding a second southbound through lane on Delmas Avenue. The recommended lane addition would require widening Delmas north of San Fernando by approximately 12 feet and south of San Fernando by two feet. It should be noted that the same improvement was identified as a mitigation measure for the San Jose Water Project, from which ROW dedication would be required. With the recommended improvement, the average vehicular delays at this intersection would be reduced to the LOS C range during the analysis period. Based on the City's standards, the recommended improvements would satisfactorily mitigate the project impact.	LTS
TRANS-3: State Route 87 would experience a significant impact from project traffic along two of the analyzed segments; I-280 would experience a significant impact from project traffic along two of the analyzed segments.	S	TRANS-3: Improvements to mitigate significant project impacts on freeway segments are infeasible due to right-of-way constraints and the land use impacts associated with acquiring additional right-of-way. These impacts are therefore considered significant and unavoidable.	SU

Table II-1 *continued*

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
D. AIR QUALITY			
AIR-1: Construction period activities could generate significant dust, exhaust, and organic emissions.	S	AIR-1: Implementation of the following steps would reduce the construction period air quality impacts to a less-than-significant level. (a) The following multi-part mitigation shall be incorporated into the construction plans and implemented for the proposed project. The City shall review the construction plans to ensure these measures have been incorporated: • Water all active construction areas at least twice daily and more often during windy periods to prevent visible dust from leaving the site; active areas adjacent to windy periods; active areas adjacent to existing land uses shall be kept damp at all times, or shall be treated with non-toxic stabilizers or dust palliatives; • Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least 2 feet of freeboard; • Pave, apply water at least three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites; • Sweep daily (or more often if necessary) to prevent visible dust from leaving the site (preferably with water sweepers) all paved access roads, parking areas, and staging areas at construction sites; water sweepers shall vacuum up excess water to avoid runoff-related impacts to water quality; • Sweep streets daily, or more often if necessary (preferably with water sweepers) if visible soil material is carried onto adjacent public streets; • Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (previously graded areas inactive for ten days or more); • Enclose, cover, water at least twice daily, or apply not-toxic soil binders to exposed stockpiles (dirt, sand, etc,) to prevent visible dust from leaving the site; • Limit traffic speed on unpaved roads to 15 mph; • Install sandbags or other erosion control measures to prevent silt runoff to public roadways;	LTS

Table II-1 *continued*

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
AIR-1 *continued*		• Replant vegetation in disturbed areas as quickly as possible; • Install wheel washers for all existing trucks, or wash off the tires or tracks of all trucks and equipment leaving the site; • Install wind breaks, or plant trees/vegetative wind breaks at windward side(s) of construction areas; • Suspend excavation and grading activities when winds instantaneous gusts exceed 25 mph; and • Limit the area subject to excavation grading, and other construction activity at any one time. (b) Any temporary haul roads to soils stockpiles areas used during construction of projects shall be routed away from existing neighboring land uses. Any temporary haul roads shall be surfaced with gravel and regularly watered to control dust or treated with an appropriate dust suppressant. (c) Water sprays shall be utilized to control dust when material is being added or removed from soils stockpiles. If a soils stockpile is undisturbed for more than one week, it shall be treated with a dust suppressant or crusting agent to eliminate wind-blown dust generation. (d) All neighboring properties located within 1,000 feet of property lines of a construction site shall be provided with the name and phone number of a designated construction dust control coordinator who will respond to complaints within 24 hours by suspending dust-producing activities or providing additional personnel or equipment for dust control as deemed necessary. The phone number of the BAAQMD pollution complaints contact shall also be provided. The dust control coordinator shall be on-call during construction hours. The coordinator shall keep a log of complaints received and remedial actions taken in response. This log shall be made available to City staff upon its request.	

Table II-1 *continued*

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
AIR-1 *continued*		(e) In order to address particulate emissions from diesel-powered equipment and vehicles, the following measures shall be implemented: (i) properly maintain vehicle and equipment engines; (ii) minimize the idling time of diesel powered construction equipment; (iii) consider requiring construction equipment that is fueled by alternative energy sources; and (iv) consider requiring add-on control devices such as particulate traps.	
AIR-2: Regional emissions of criteria air pollutants from new development would exceed BAAQMD thresholds.	S	AIR-2: The *BAAQMD CEQA Guidelines* document identifies potential mitigation measures for various types of projects. The following are considered to be feasible and effective in further reducing vehicle trip generation and resulting emissions from the Downtown Stadium project: • Maximize the use of existing transit facilities and incorporate additional facilities (e.g., bus bulbs/turnouts, benches, shelters) into the project's design. • Provide bicycle lanes and/or paths, connected to community-wide network. • Provide sidewalks and/or paths, connected to adjacent land uses, transit stops, and/or community-wide network. • Provide secure and conveniently located bicycle storage. • Implement feasible transportation demand management (TDM) measures including a ride-matching program, coordination with regional ridesharing organizations and provision of transit information. The implementation of an aggressive trip reduction program with the appropriate incentives for non-auto travel can reduce project impacts by approximately 10 to 15 percent. A reduction of this magnitude would provide a reduction in emissions, however project emissions would still exceed the significance threshold. There is no mitigation available with currently feasible technology to reduce the project's regional air quality impact by an additional 75 percent to a less-than-significant level. Therefore, the project's regional air quality impacts would remain significant and unavoidable.	SU

Table II-1 *continued*

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
AIR-3: Fireworks displays may cause spikes in air pollution.	S	AIR-3: The City shall require that the point of launch and the fallout area for fireworks be located so as to ensure the safety of the public from the discharge of pyrotechnic devices, exposure to toxic air pollutants or any other hazard from fireworks displays.	LTS
E NOISE			
NOISE-1: Increases in traffic noise to surrounding roadways would be significant.	S	NOISE-1: With affected property owner's consent, prior to opening day of the stadium, measures taken to reduce significant noise impacts associated with increased traffic for residences located along W. San Fernando Street from Autumn Street to Delmas Avenue or Autumn Street from W. San Fernando Street to W. Santa Clara Street may include, but are not limited to installation of dual-pane windows, mechanical air conditioning and improved ceiling and wall insulation.	SU
NOISE-2: Baseball game events could result in noise impacts on adjacent residential uses.	S	NOISE-2a: The stadium public address system shall be comprised of a distributed speaker system on-site, which would locate speakers around each section of the park to minimize the need for extra-loud and high-mounted units. NOISE-2b: Prior to the first ballpark event, a detailed acoustic study shall be conducted by the City of San Jose to confirm the predictions of the long-term noise levels at noise sensitive uses within the 60 dBA L_{eq} contour line shown in Figure V.E-2 of the ballpark, which have been made in this EIR. The study shall be used to determine noise attenuation measures to achieve a 45 dBA L_{eq} interior noise level at nearby residences. Attenuation measures at the stadium shall include, but not be limited to, distributed speakers for the public address system and limitations placed on sound levels associated with various activities. Measures taken with affected property owner's consent, at receptor locations may include, but are not limited to installation of dual-pane windows, mechanical air conditioning, sound walls and improved ceiling and wall insulation. Necessary remedial measures shall be implemented, or otherwise assured to be implemented within one year to the satisfaction of the City Manager. Implementation of mitigation measures NOISE-1a and NOISE-1b would reduce impacts associated with baseball games. However, impacts would remain significant and unavoidable.	SU

Table II-1 *continued*

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
NOISE-3: Proposed on-site concert events could result in noise impacts on adjacent residential uses.	S	NOISE-3: A maximum sound level of 95 dB L_{eq} shall be maintained at the sound board for concerts. Implementation of the multipart mitigation measures NOISE-1 and NOISE-2 would reduce impacts from concert noise. However, noise impacts would be significant and unavoidable.	SU
NOISE-4: Explosions associated with fireworks displays at the proposed project would create significant peak noise impacts.	S	Implementation Mitigation Measure NOISE-2b would reduce impacts from firework displays for residences located adjacent to the proposed stadium. Implementation of the Mitigation Measure NOISE-2b would help to minimize this impact but not reduce it to a less-than-significant level.	SU
NOISE-5: Construction period activities could create significant short-term noise impacts.	S	NOISE-5a: The following measures shall be implemented during construction of the proposed project: • All construction vehicles or equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers. • City will develop a Construction Impact Mitigation Plan with input from neighbors to determine a construction activity schedule including construction days and hours of construction. • Unnecessary idling of internal combustion engines will be prohibited. • All stationary noise generating construction equipment, such as air compressors and portable power generators, will be located as far as practical from existing residences.	SU
		NOISE-5b: In the event that pile-driving and/or other extreme noise generating construction vehicles or equipment are required, a set of site-specific noise attenuation measures shall be completed under the supervision of a qualified acoustical consultant. These attenuation measures shall include as many of the following control strategies as feasible and shall be implemented prior to any pile-driving or extreme noise generating activities: • Implement "quiet" pile-driving technology, where feasible, in consideration of geotechnical and structural requirements and conditions; • Utilize noise control blankets on the building structure as it is erected to reduce noise emission from the site;	

Table II-1 *continued*

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
NOISE-5 *continued*		• Evaluate the feasibility of noise control at the receptor(s) by temporarily improving the noise reduction capability of those buildings; and • Monitor the effectiveness of noise attenuation measures by taking noise measurements once the measures are in place. • Residents within 1,000 feet of the pile-driving activity will be notified of the schedule for their use while they are in use. Portable acoustical barriers will be installed around pile driving equipment. • A name, address, and phone number of a contact person will be posted on the site to handle noise complaints. Implementing the basic measures required by Mitigation Measure NOISE-5a would reduce potential impacts from construction activities. In addition, Mitigation Measure NOISE-5b will further reduce the potential impacts from pile driving activities and other extreme noise generating construction activities in the vicinity of the construction site. However, even with the implementation of these mitigation measures, noise associated with the construction of the proposed project would be considered significant and unavoidable.	
F. BIOLOGICAL RESOURCES			
BIO-1: Construction of the proposed project would result in the removal of 45 ordinance-size trees.	S	BIO-1: Loss of ordinance size trees will be mitigated by implementation of landscaping plans approved by the City of San Jose, in conformance with the City of San Jose Landscape and Irrigation Guidelines and City of San Jose Planning Department specifications. For private projects, the City of San Jose requires tree replacement for those trees greater than 18 inches in diameter with 24-inch box trees at a ratio of 4:1 (trees planted to trees removed). Trees planted within the riparian corridor shall be native trees grown from Los Gatos Creek watershed stock. As a City proposed project, the City would commit to meeting the tree replacement ratio, but given the footprint of redevelopment on the site, replacement trees may be planted beyond the project site in the project area.	LTS

Table II-1 *continued*

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
BIO-2: Construction activities adjacent to the Los Gatos Creek riparian corridor may disturb nesting Cooper's hawks and other raptors.	S	BIO-2: Surveys to determine the presence of active raptor nests on or adjacent to (i.e., along Los Gatos Creek) to the construction area shall be conducted by a qualified biologist no more than 30 days prior to the initiation of construction-related activities, including removal of existing vegetation or facilities. If raptors are observed nesting on or near the site, exclusion zones will be established around all active nests. The size of the exclusion zone will be determined based on consultation with the CDFG, which typically requires a zone of 100 to 300 feet around the nest. No activity will be allowed inside the exclusion zone until a qualified biologist has determined that the young have successfully fledged from the nest or that the nest is no longer active.	LTS
G. GEOLOGY, SOILS AND SEISMICITY			
GEO-1: Seismically-induced ground shaking at the project could result in damage to life and/or property.	S	GEO-1: Prior to the issuance of any site-specific grading or building permits, a design-level geotechnical investigation shall be prepared by a licensed professional and submitted to the City of San Jose Public Works Department for review and confirmation that the proposed development fully complies with the California Building Code (Seismic Zone 4). The report shall determine the project site's geotechnical conditions and address potential seismic hazards such as liquefaction. The report shall identify building techniques appropriate to minimize seismic damage. In addition, the following requirement for the geotechnical and soils report shall be met: • Analysis presented in the geotechnical report shall conform with the California Division of Mines and Geology recommendations presented in the *Guidelines for Evaluating Seismic Hazards in California*. All mitigation measures, design criteria, and specifications set forth in the geotechnical and soils report shall be followed.	LTS

Table II-1 *continued*

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
GEO-2: Structures or property at the project could be adversely affected by expansive soils or by settlement of project site soils.	S	GEO-2: In locations underlain by expansive soils and/or non-engineered fill, the designers of stadium foundation and other improvements (including the electrical substation, sidewalks, roads, and underground utilities) shall consider these conditions. The design-level geotechnical investigation to be prepared by a licensed professional and approved by the City of San Jose Public Works Department (required in Mitigation Measure GEO-1), shall include measures to minimize potential damage related to expansive soils and non-uniformly compacted fill. Mitigation options may range from removal of the problematic soils and replacement, as needed, with properly conditioned and compacted fill to design and construction of improvements to withstand the forces exerted during the expected shrink-swell cycles and settlement. All mitigation measures, design criteria, and specifications set forth in the geotechnical and soils report shall be followed to reduce impacts associated with shrink-swell soils to a less-than-significant level.	LTS
GEO-3: Differential settlement at the project site could result in damage to project buildings and other improvements.	S	GEO-3: Prior to issuance of a grading permit, a site-specific grading plan shall be prepared by a licensed professional and submitted to the City of San Jose Public Works Department (see Mitigation Measure GEO-1). The plan shall include specific recommendations for mitigating potential settlement associated with fill placement and areas of different fill thickness.	LTS
GEO-4: Liquefaction at the project site could result in damage to buildings and other improvements.	S	GEO-4: Project design shall be in accordance with the recommendations contained in a site-specific geotechnical report prepared by a licensed professional and reviewed and approved by City of San Jose Public Works Department. (see Mitigation Measure GEO-1). The San Jose Public Works Department shall approve all final design and engineering plans. Project design and construction shall be in conformance with current best standards for earthquake resistant construction in accordance with the California Building Code (Seismic Zone 4), applicable local codes, and the generally-accepted standard of geotechnical practice for seismic design in Northern California. The design-level geotechnical investigation shall include measures to minimize that potential damage related to liquefaction.	LTS

Table II-1 *continued*

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
H. HYDROLOGY AND WATER QUALITY			
HYD-1: Alteration of the local drainage patterns could potentially result in exceedance of the capacity of downstream stormwater conveyance structures, resulting in localized flooding.	S	HYD-1: As a condition of approval of the final grading and drainage plans for the project, it shall be demonstrated through detailed hydraulic analysis that implementation of the proposed drainage plans would include drainage components that are designed in compliance with City of San Jose standards. The grading and drainage plans shall be reviewed for compliance with these requirements by the City of San Jose Department of Public Works. Any improvements deemed necessary by the City shall be made a part of the conditions of approval. Implementation of this mitigation measure would reduce potential impacts associated with increased peak runoff volumes to a less-than-significant level.	LTS
HYD-2: Construction activities and post-construction site uses could result in degradation of water quality in the receiving waters by reducing the quality of stormwater runoff.	S	HYD-2a: **Construction-Period Impact Mitigation.** The project proponent shall comply with the City of San Jose's Post-Construction Urban Runoff Management Policy (Policy Number 6-29), which requires: *... all new and redevelopment projects to implement Post-Construction Best Management Practices (BMPs) and Treatment Control Measures (TCMs) to the maximum extent practicable. This Policy also establishes specified design standards for Post-Construction TCMs for Major Projects and minimum Post-Construction BMPs for all Land Uses of Concern, including Expansion Projects. This Policy further establishes the criteria for determining the situations in which it is impracticable to comply with the Major Project design standards, including the criteria for evaluating the equivalency of Alternative Compliance Measure(s)* In addition, the project proponent shall prepare a SWPPP designed to reduce potential impacts to surface water quality through the construction period of the project. The SWPPP must be maintained on-site and made available to City inspectors and/or RWQCB staff upon request. The SWPPP shall include specific and detailed BMPs	LTS

Table II-1 *continued*

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
HYD-2 *continued*		designed to mitigate construction-related pollutants. At minimum, BMPs shall include practices to minimize the contact of construction materials, equipment, and maintenance supplies (e.g., fuels, lubricants, paints, solvents, adhesives) with stormwater. The SWPPP shall specify properly designed centralized storage areas that keep these materials out of the rain. An important component of the stormwater quality protection effort is the knowledge of the site supervisors and workers. To educate on-site personnel and maintain awareness of the importance of stormwater quality protection, site supervisors shall conduct regular tailgate meetings to discuss pollution prevention. The frequency of the meetings and required personnel attendance list shall be specified in the SWPPP. The SWPPP shall specify a monitoring program to be implemented by the construction site supervisor, which must include both dry and wet weather inspections. In addition, in accordance with State Water Resources Control Board Resolution No. 2001-046, monitoring would be required during the construction period for pollutants that may be present in the runoff that are "not visually detectable in runoff." BMPs designed to reduce erosion of exposed soil may include, but are not limited to: soil stabilization controls, watering for dust control, perimeter silt fences, placement of hay bales, and sediment basins. The potential for erosion is generally increased if grading is performed during the rainy season as disturbed soil can be exposed to rainfall and storm runoff. If grading must be conducted during the rainy season, the primary BMPs selected shall focus on erosion control (i.e., keeping sediment on the site). End-of-pipe sediment control measures (e.g., basins and traps) shall be used only as secondary measures. Entry and egress from the construction site shall be carefully controlled to minimize off-site tracking of sediment. Vehicle and equipment wash-down facilities shall be designed to be accessible and functional during both dry and wet conditions.	

Table II-1 *continued*

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
HYD-2 *continued*		HYD-2b: **Operation-Period Impact Mitigation.** The design-level storm water control plan shall demonstrate through detailed hydraulic analysis that implementation of the proposed drainage plan would result in treatment of the appropriate percentage of the runoff from the site (in compliance with the County NPDES permit). The amount of runoff that is typically required to be treated is about 85 percent of the total average annual runoff from the site. The qualified professionals (a professional engineer with experience in the design of stormwater BMPs that is acceptable to the City) preparing the design-level storm water control plan shall consider additional measures designed to mitigate water quality degradation of runoff from all portions of the completed development. In general, passive, low-maintenance BMPs (e.g., grassy swales, porous pavements) are preferred. The City shall ensure that the project design includes features and operational BMPs to reduce potential impacts to surface water quality associated with operation of the project to the maximum extent practicable. These features shall be included in the storm water control plan and final development drawings. The final design team for the development project shall review and incorporate as many concepts as practicable from Start at the Source, Design Guidance Manual for Stormwater Quality Protection and the California Stormwater Quality Association's Stormwater Best Management Practice Handbook, Development and Redevelopment The final design team should also consider installing "end-of-pipe" treatment systems, including, but not limited to, baffle boxes, catch basins, and hydrodynamic vortex-type separators. Any use of end-of-pipe treatment systems must be accompanied by a viable maintenance program. Specifically: • Drainage from the stadium playing surface and seating areas should be treated prior to discharge to Los Gatos Creek. • The enclosed parking areas shall not be drained to the stormwater conveyance system. The garages should be dry-swept or, if washdown water is used the effluent should be discharged to the sanitary sewer system under permit from the San Jose/Santa Clara Water Pollution Control Plant.	

Table II-1 *continued*

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
HYD-2 *continued*		The City of San Jose Department of Public Works shall review and approve the SWPPP and drainage plan prior to approval of the grading plan. City staff may require more stringent stormwater treatment measures, at their discretion. Implementation of this mitigation would reduce the level of significance of this impact to a less-than-significant level.	
HYD-3: Dewatering may contain contaminants and if not properly managed could cause impacts to construction workers and the environment.	S	HYD-3: The SWPPP shall include provisions for the proper management of construction-period dewatering activities. At minimum, all dewatering shall be contained prior to discharge to allow the sediment to settle out, and filtered, if necessary to ensure that only clear water is discharged to the storm or sanitary sewer system, as appropriate. In areas of suspected groundwater contamination (i.e., underlain by fill or near sites where chemical releases are known or suspected to have occurred), groundwater shall be analyzed by a State-certified laboratory for the suspected pollutants prior to discharge. Based on the results of the analytical testing, the project proponent shall acquire the appropriate permit(s) prior to discharge of the dewatering effluent. Discharge of the dewatering effluent would require a permit from the RWQCB (for discharge to the storm sewer system) and/or the San Jose/Santa Clara Water Pollution Control Plant (for discharge to the sanitary sewer system). Proper implementation of the mitigation measure described above would reduce this impact to a less-than-significant level.	LTS
I. HAZARD AND HAZARDOUS MATERIALS			
HAZ-1: Development of the project could expose construction workers and/or the public to hazardous materials from contaminants in soil and groundwater during and following construction activities.	S	HAZ-1a: As a condition of approval for any permit for demolition, grading, or construction at any parcel at the project site, a Phase I Environmental Site Assessment shall be conducted by a qualified professional (e.g., a California-registered environmental assessor) to identify current or historical land uses that have or may have included the storage or generation of hazardous materials and the potential for releases of hazardous materials to have occurred that might impact the site. The assessments shall be performed in conformance with the	LTS

Table II-1 *continued*

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
HAZ-1 *continued*		current standard of care established by ASTM and EPA for Phase I Environmental Assessments and shall be submitted to the City Environmental Services Department (ESD) Environmental Compliance Officer for review and approval. The Phase I ESA assessments shall identify the potential presence of any environmental impacts to the subject site related to any historic and/or present uses of hazardous materials at the subject site and/or at any sites in the vicinity of the subject site, and present recommendations for further investigation of the parcel, if warranted. Recommendations for investigation shall be implemented in Phase II investigations at the project site. The Phase II(s) shall include sampling of site soils and groundwater in areas of suspected contamination, based on the findings of the Phase I assessments. Additional groundwater samples shall be collected to establish baseline groundwater quality at the site and determine if previously unreported off-site contamination has migrated and affected the project site. The Phase II investigations shall also characterize the chemical quality of undocumented fill materials at the project site. Soil and groundwater sampling results shall be compared to RWQCB Environmental Screening Levels (ESLs) for commercial/industrial land uses for shallow soils for sites underlain by a potential drinking water source. The Phase II investigations shall be submitted to the ESD Environmental Compliance Officer for review and approval. If hazardous materials are identified in site soils or groundwater in excess of RWQCB ESLs for commercial/industrial land uses, a Human Health Risk Assessment (HHRA) shall be performed by a qualified environmental professional. The HHRA shall describe measures that must be implemented to ensure that any potential added health risks to construction workers, maintenance and utility workers, site users, and the general public as a result of hazardous materials are reduced to a cumulative risk of less than 1×10^{-6} (one in one million) for carcinogens and a cumulative hazard index of 1.0 for non-carcinogens, or as required by a regulatory oversight agency. The HHRA would be subject to review and/or approval by the City ESD Environmental Compliance Officer and/or regulatory oversight agencies.	

Table II-1 *continued*

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
HAZ-1 *continued*		The potential risks to human health in excess of these goals would be reduced either by remediation of the contaminated soils or groundwater (e.g., excavation and off-site disposal and/or extraction/treatment of groundwater) and/or implementation of institutional controls and engineering controls (IC/EC). IC/EC may include the use of hardscape (buildings and pavements), importation of clean soil in landscaped areas to eliminate exposure pathways, and deed restrictions. If IC/EC are implemented, an Operations and Maintenance Program must be prepared and implemented to ensure that the measures adopted are maintained throughout the life of the project. If IC/EC are implemented, the Operations and Maintenance Program would be subject to review and approval by the City ESD Environmental Compliance Officer and/or regulatory oversight agencies.	
		HAZ-1b: Prior to approval for any demolition, grading, or construction permits at the project site, a Construction Risk Management Plan (CRMP) shall be prepared with provisions to protect construction workers, the nearby public, and future workers and nearby residents from health risks from residual contaminants in site soils and groundwater during project construction and subsequent maintenance activities. The CRMP shall summarize previous environmental investigations and health risk assessments conducted for the project site (Mitigation Measure HAZ-1a). The CRMP shall include provisions for protection of human health both for the construction phase of the development as well as for the operational phase. In accordance with State and federal laws and regulations, the CRMP shall describe required worker health and safety provisions for all workers potentially exposed to contaminated soil and groundwater. The CRMP shall include all necessary controls to mitigate short-term risks from releases of constituents of concern to the environment in the form of dust, vapors, and/or water runoff during construction activities. Real-time air monitoring for contaminants of concern shall be required during all activities with the potential to disturb contaminated materials at the site. Action levels for contaminants of concern shall be established, with detailed descriptions of corrective actions to be taken in the event that the action levels are reached during monitoring.	

Table II-1 *continued*

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
HAZ-1 *continued*		The CRMP shall also provide procedures to be undertaken in the event that previously unreported contamination or subsurface hazards are discovered during construction; incorporate construction safety measures for excavation and other construction activities; establish detailed procedures for the safe storage, stockpiling, use, and disposal of contaminated soils and groundwater and other hazardous materials at the project site; provide emergency response procedures; and designate personnel responsible for implementation of the CRMP during the construction and operational phases of the project. The CRMP shall also include an Operations and Maintenance Plan component, to ensure that health and safety measures required for future construction, utility trenching, and maintenance at the project site shall be enforced in perpetuity. The CRMP shall be submitted to the City ESD Environmental Compliance Officer for review and approval. If regulatory oversight is required for site remediation, the CRMP would also be subject to review and approval by regulatory oversight agencies. Implementation of this two-part measure would reduce this impact to a less-than-significant level.	
HAZ-2: Improper use or transport of hazardous materials during construction activities could result in releases affecting construction workers and the general public.	S	HAZ-2: The CRMP for the project site shall include emergency procedures and the management and disposal of contaminated soils and groundwater (see Mitigation Measure HAZ-1b). Use, storage, disposal, and transport of hazardous materials during construction activities shall be performed in accordance with existing local, State, and federal hazardous materials regulations. Implementation of this measure would reduce this impact to a less-than-significant level.	LTS
HAZ-3: Demolition of any structures containing lead-based paint, asbestos-containing building materials, or other hazardous materials could release airborne particles of hazardous materials, which may affect construction workers and the public.	S	HAZ-3: As a condition of approval for any demolition permit for a structure at the project site, a lead-based paint and asbestos-containing material survey shall be performed at the structure by a qualified environmental professional. Based on the findings of the survey, identified asbestos hazards shall be abated by a certified asbestos abatement contractor in accordance with the regulations and notification requirements of the BAAQMD. Federal and State construction worker health and safety regulations shall be required during renovation or demolition activities, and any required worker health and safety procedures shall be incorporated into the project	LTS

Table II-1 *continued*

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
HAZ-3 *continued*		CRMP (per Mitigation Measure HAZ-1b). If loose or peeling lead-based paint are identified, they shall be removed by a qualified lead abatement contractor and disposed of in accordance with existing hazardous waste regulations. Other hazardous wastes generated during demolition activities, such as fluorescent light tubes, mercury switches, and computer displays, shall be managed and disposed of in accordance with existing hazardous waste regulations. Implementation of this measure would reduce this impact to a less-than-significant level.	
HAZ-4: Future land uses at the project site may potentially create a significant hazard to the public or the environment as a result of routine transport, use, production, upset, or disposal of hazardous materials.	S	HAZ-4: Compliance with existing hazardous materials plans, programs, and permits would serve to mitigate potential hazardous materials impacts related to proposed future land uses.	LTS
J. CULTURAL AND PALEONTOLOGICAL RESOURCES			
CULT-1: The KNTV Broadcast Facility, 645 Park Avenue, appears eligible for listing in the California Register and as Candidate for City Landmark (CCL) and would sustain direct impacts due to the proposed project.	S	CULT-1a: **Documentation.** The building shall be documented to Historic American Buildings Survey (HABS) Level 3 standards, according to the Outline Format described in the *Historic American Buildings Survey Guidelines for Preparing Written Historical Descriptive Data*. Photographic documentation shall follow the *Photographic Specifications – Historic American Building Survey*, including 15-20 archival quality large-format photographs of the exterior and interior of the building and its architectural elements. Construction techniques and architectural details shall be documented, especially noting the measurements of structural members, hardware, and other features that tie the architectural elements to a specific date. A copy of the documentation, with original photo negatives and prints, shall be placed in a historical archive or history collection accessible to the general public. Five copies of the documentation with archival photographs shall be produced for distribution to local and regional repositories. One copy shall be provided to the Northwest Information Center of the California Historical Resources Information System, Sonoma State University, Rohnert Park, California. A brochure shall also be prepared that includes a brief historical overview and photographs of the buildings and is made available for distribution to local libraries, museums, and schools. If only documentation were undertaken for mitigation, impacts to this resource would be significant unavoidable.	SU

Table II-1 *continued*

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
CULT-1 *continued*		CULT-1b: **Incorporation.** If preservation or relocation is not possible, the building, or portions thereof, shall be incorporated into the ballpark to the extent feasible, following the Secretary of the Interior's Standards to ensure that the building retains its integrity and historical significance.	LTS
		CULT-1c: **Relocation.** If feasible, the building shall be stabilized and relocated to another nearby site appropriate to its historic character. After relocation, preservation, rehabilitation, and restoration, as appropriate, shall follow the Secretary of the Interior's Standards to ensure that the building retains its integrity and historical significance.	LTS
		CULT-1d: **Salvage.** If relocation, preservation, or incorporation are not possible, the building shall be offered to an appropriate agency or museum, such as History San Jose, for salvage of its architectural elements.	SU

Table II-1 *continued*

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
Impact CULT-2: The Sunlite Baking Company building, 145 South Montgomery, appears eligible for listing in the National and California registers and as a Candidate City Landmark and would sustain direct impacts due to the proposed project.	S	CULT-2a: **Documentation.** The building shall be documented to Historic American Buildings Survey (HABS) Level 3 standards, according to the Outline Format described in the *Historic American Buildings Survey Guidelines for Preparing Written Historical Descriptive Data*.[2] Photographic documentation shall follow the *Photographic Specifications – Historic American Building Survey*, including 15-20 archival quality large-format photographs of the exterior and interior of the building and its architectural elements. Construction techniques and architectural details shall be documented, especially noting the measurements of structural members, hardware, and other features that tie the architectural elements to a specific date. A copy of the documentation, with original photo negatives and prints, shall be placed in a historical archive or history collection accessible to the general public. Five copies of the documentation with archival photographs shall be produced for distribution to local and regional repositories. One copy shall be provided to the Northwest Information Center of the California Historical Resources Information System, Sonoma State University, Rohnert Park, California. A brochure shall also be prepared that includes a brief historical overview and photographs of the buildings and is made available for distribution to local libraries, museums, and schools. If only documentation were undertaken for mitigation, impacts to this resource would be significant unavoidable.	SU
		CULT-2b: **Relocation.** If feasible, the building shall be stabilized and relocated to another nearby site appropriate to its historic character. After relocation, preservation, rehabilitation, and restoration, as appropriate, shall follow the Secretary of the Interior's Standards to ensure that the building retains its integrity and historical significance.	LTS
		CULT-2c: **Salvage.** If relocation is not possible, the building shall be offered to an appropriate agency or museum, such as History San Jose, for salvage of its architectural elements.	SU

[2] Pacific Coast Basin Regional Office, U.S. National Park Service 1993.

Table II-1 *continued*

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
CULT-3: The project area may contain buried archaeological resources.	S	CULT-3: Due to high sensitivity for both prehistoric and historical archaeological resources, a qualified archaeologist shall monitor all ground-disturbing activities within the project area for historical and prehistoric archaeological resources. Monitoring should continue until, in the archaeologist's judgment, cultural resources are not likely to be encountered. A cultural resources monitoring plan shall be prepared prior to the issuance of a grading or building permit. The monitoring plan shall describe how project construction will be monitored to reduce impacts to cultural resources which may be identified within the project site. The monitoring plan shall also include a review of Sanborn fire insurance maps, historical photographs, and other appropriate historical materials to identify potentially archaeologically sensitive areas for monitoring. Limited subsurface testing may be appropriate prior to construction to identify archaeological deposits. If deposits of prehistoric or historical archaeological materials are encountered during project activities, all work within 25 feet of the discovery shall be redirected until the archaeological monitor can review the finds and make recommendations. Monitoring shall continue until, in the archaeologist's judgment, archaeological resources are no longer likely to be encountered. It is recommended that such deposits be avoided by project activities. If such deposits cannot be avoided, they shall be evaluated for their California Register eligibility. Archaeological monitors must be empowered to halt construction activities within 25 feet of the discovery to review the possible archaeological material and to protect the resource while it is being evaluated. If the deposits are not eligible, avoidance is not necessary. If the deposits are eligible, they will need to be avoided or adverse effects must be mitigated. Upon completion of the assessment, the archaeologist shall prepare a report documenting the methods and results, and provide recommendations for the treatment of the archaeological materials discovered. The report shall be submitted to City of San Jose Planning, Building, and Code Enforcement director, and the NWIC.	LTS

Table II-1 *continued*

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
CULT-3 *Continued*		Prehistoric materials can include flaked-stone tools (e.g. projectile points, knives, choppers) or obsidian, chert, basalt, or quartzite toolmaking debris; bone tools; culturally darkened soil (i.e., midden soil often containing heat-affected rock, ash and charcoal, shellfish remains, faunal bones, and cultural materials); and stone milling equipment (e.g., mortars, pestles, handstones). Prehistoric archaeological sites often contain human remains. Historical materials can include wood, stone, concrete, or adobe footings, walls and other structural remains; debris-filled wells or privies; and deposits of wood, glass, ceramics, metal, and other refuse. Project personnel shall not collect or move any archaeological materials or human remains and associated materials. Fill soils used for construction purposes should not contain archaeological materials.	
CULT-4: Ground disturbance associated with the demolition, grading, site preparation and construction of the proposed project may disturb human remains, including those interred outside of formal cemeteries.	S	CULT-4: If human remains are encountered, work within 25 feet of the discovery shall be redirected and the County Coroner notified immediately. At the same time, an archaeologist shall be contacted to assess the situation. If the human remains are of Native American origin, the Coroner must notify the Native American Heritage Commission within 24 hours of this identification. The Native American Heritage Commission will identify a Most Likely Descendant (MLD) to inspect the site and provide recommendations for the proper treatment of the remains and associated grave goods. Upon completion of the assessment, the archaeologist shall prepare a report documenting the methods and results, and provide recommendations for the treatment of the human remains and any associated cultural materials, as appropriate and in coordination with the recommendations of the MLD. The report shall be submitted to City of San Jose Planning, Building, and Code Enforcement director, and the NWIC.	LTS

Table II-1 *continued*

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
CULT-5: Ground disturbing activities within the project area could adversely impact paleontological resources.	S	CULT-5a: A qualified paleontologist shall be present during initial project ground-disturbance at or below 5 feet from original ground surface. The paleontologist shall determine if further monitoring of project ground-disturbing activities below the soil layer is necessary, or if periodic site inspections are appropriate. If site inspections are recommended, each subsequent inspection shall determine if more thorough paleontological monitoring is necessary. Prior to project ground-disturbing activities, pre-field preparation by a qualified paleontologist shall take into account specific details of project construction plans for the project area as well as information from available paleontological, geological, and geotechnical studies. Limited subsurface investigations may be appropriate for defining areas of paleontological sensitivity prior to ground disturbance. If paleontological resources are encountered during project activities, all work within 25 feet of the discovery shall be redirected until the paleontological monitor can evaluate the resources and make recommendations. If paleontological deposits are identified, it is recommended that such deposits be avoided by project activities. Paleontological monitors must be empowered to halt construction activities within 25 feet of the discovery to review the possible paleontological material and to protect the resource while it is being evaluated. If avoidance is not feasible, adverse effects to such resources shall be mitigated. Mitigation can include data recovery and analysis, preparation of a report and the accession of fossil material recovered to an accredited paleontological repository, such as the UCMP. Monitoring shall continue until, in the paleontologist's judgment, paleontological resources are no longer likely to be encountered. Upon project completion, a report shall be prepared documenting the methods and results of monitoring. Copies of this report shall be submitted to the City of San Jose Planning, Building, and Code Enforcement director and to the repository to which any fossils were transmitted.	LTS

Table II-1 *continued*

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
CULT-5 *continued*		CULT-5b: If paleontological resources are encountered during project activities, and a paleontologist monitor is not present, all work within 25 feet of the discovery shall be redirected until a qualified paleontologist has evaluated the discoveries, prepared a fossil locality form documenting the discovery and made recommendations regarding the treatment of the resources. If the paleontological resources are found to be significant, adverse effects to such resources shall be avoided by project activities. If project activities cannot avoid the resources, adverse effects shall be mitigated. At a minimum, mitigation shall include data recovery and analysis, preparation of a report, and the transmittal of any fossil material recovered to a paleontological repository, such as the UCMP. Upon completion of project activities, a report documenting the methods and findings of the mitigation shall be prepared and copies submitted to City of San Jose Planning, Building, and Code Enforcement director as well as to the paleontological repository to which fossils were transmitted. Project personnel should not collect or move any paleontological materials and associated materials. Fill soils used for construction purposes should not contain paleontological materials.	
K. VISUAL AND AESTHETIC RESOURCES			
VIS-1: The proposed project would alter the visual character of historic San Jose Diridon Station.	S	VIS-1: Implementation of Mitigation Measure CULT-2a and CULT-2b would somewhat reduce this impact. However, the alteration of the station's visual setting and feeling would remain a significant impact.	SU
VIS-2: The removal of all ordinance sized trees on the project site would substantially damage scenic resources.	S	VIS-2: Mitigation Measure BIO-1 requires the loss of ordinance sized trees would be mitigated by implementation of landscaping plans to be reviewed and approved by the City of San Jose. For private projects, the City of San Jose requires tree replacement for those trees greater than 18 inches in diameter with 24-inch box trees at a ratio of 4:1. As a City proposed project, the City would commit to meeting the tree replacement ratio, but given the footprint of redevelopment on the site, replacement trees may be planted beyond the project site in the project area. Implementation of Mitigation Measure BIO-1 would reduce impacts to scenic resources through the loss of trees to a less-than-significant level.	LTS

Table II-1 *continued*

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
L. SHADE/SHADOW AND LIGHT/GLARE			
SHADE-1: Throughout most of the year in the morning hours, the proposed project would increase the shade and shadow cast on the historic San Jose Diridon Station.	S	SHADE-1: Implementation of Mitigation Measure CULT-2a and CULT-2b would somewhat reduce this impact. However, shadows cast over the station, particularly those that would occur during winter mornings (as exemplified by the shadow simulation for December 21), would remain a significant impact.	SU
SHADE-2: Obtrusive light and glare resulting from nighttime operation of the proposed stadium could present a nuisance to surrounding land uses, specifically nearby residences and the Lick Observatory.	S	SHADE-2a: The proposed project shall incorporate lighting controls at the proposed stadium to reduce the potential nuisance associated with obtrusive light and glare resulting from nighttime stadium operation. Lighting banks shall be placed and designed to minimize obtrusive spill light and glare as much as possible (e.g. shielding at the source) and shall be directed towards the playing field and away from the sky.	SU
		SHADE-2b: After nighttime events, when nighttime stadium cleanup is necessary, the field lights shall be reduced to one-third of their standard intensity and shall remain on no more than one hour after the event to provide lighting for cleanup activities.	
SHADE-3: Light and glare associated with the proposed scoreboards and lighting structures and fireworks displays could interfere with the safe operation of the San Jose International Airport during nighttime events.	S	As discussed in Section V.A, Land Use, of this EIR, a Determination of No Hazard from the FAA would be required for the proposed project prior to development approval. In addition, implementation of Mitigation Measure LU-1 requires FAA consultation (if required by FAA) for the coordination of fireworks displays. Implementation of this mitigation measure, as well as Mitigation Measures SHADE-2a and SHADE-2b, discussed above, would reduce this significant impact to a less-than-significant level.	LTS
M. UTILITIES			
UTIL-1: The water demand of the proposed project could cause a reduction in water pressure for surrounding land uses being served at the lower end of the pressure range.	S	UTIL-1: Prior to the issuance of a certificate of occupancy, the City shall either 1) install one new well in an easement within the area with access to the existing water lines, or 2) install inter-zone regulators at two existing SJWC facility stations to supply water from an adjacent, higher pressure zone.	LTS

Table II-1 *continued*

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
UTIL-1 *continued*		The SJWC preferred mitigation would be a new well facility located near the stadium (possibly in an easement on the southerly portion of the site adjacent to Los Gatos Creek). The well site would be required to meet all setbacks and requirements of the California Department of Health Services and the SCVWD. This well would pump water from the same basin as all of the SJWC's existing wells, the Santa Clara Valley Groundwater Subbasin. A new well would require approximately 5 feet by 5 feet of space for the above-ground well head with sufficient over-head space for well drilling and pump maintenance. The pump would be located in the well and would connect to existing water transmission line adjacent to the site. An alternative to providing an additional well would be installing inter-zone regulators at two of the SJWC's existing facility locations. This would not require additional space, but would require additional piping, telemetry, and site modifications funded by the City. This option is not preferred by the SJWC as it would reduce operational flexibility.	
UTIL-2: The solid waste generated during the demolition, land clearing and construction could interfere with waste diversion goals mandated by the California Integrated Waste Management Act.	S	UTIL-2: Prior to the demolition of any structure on the site, the City shall prepare a waste management plan for the recycling of construction and demolition materials. The waste management plan shall ensure that a minimum of 50 percent (by weight) of construction, demolition, and land clearing waste is recycled or salvaged.	LTS
UTIL-3: The proposed project may require the relocation of the existing PG&E substation.	S	UTIL-3: The City shall work with PG&E to provide a new substation and transmission and distribution infrastructure.	LTS
N. PUBLIC SERVICES AND FACILITIES			
There are no significant public services and utilities impacts.			
O. ENERGY			
No significant adverse impacts related to energy would result from the proposed project.			

Source: LSA Associates, Inc., 2004.

III. PROJECT DESCRIPTION

A. OVERVIEW OF THE PROPOSED PROJECT

The Baseball Stadium in the Diridon/Arena Area (proposed project) consists of the development of an approximately 1.5 million square-foot major league baseball stadium and a parking structure with ground floor commercial uses on approximately 23.1 acres in the City of San Jose. The baseball stadium would have a maximum seating capacity of 45,000 and a maximum height of 165 feet, with scoreboards approximately 200 feet and lights approximately 235 feet above finished grade. The proposed project would require City entitlement actions including demolition, construction, and development permits.

B. PROJECT OBJECTIVES

The City of San Jose is proposing the construction of a downtown baseball stadium as the first step towards drawing Major League Baseball to the city. The objectives of the proposed project are summarized as follows:

- an open-air stadium of 45,000 seats and associated facilities meeting major league standards for size and quality of improvements expected in modern stadiums;
- a site that is at least 14 acres, located within the Greater Downtown area of San Jose, and of a configuration capable of accommodating the above-described stadium and associated facilities;
- a site that is readily accessible (within ¾ mile) by substantial public transportation opportunities, especially regional transit;
- a site that offers potential for using a high number of existing parking facilities (within ¾ mile) and offers the potential for dedicating up to 150 spaces on-site for exclusive use by the stadium ;
- a site that possesses views of the Downtown San Jose skyline and the sense of Silicon Valley between the Santa Cruz and Diablo Mountain Ranges;
- the ability to use the stadium's seating capacity for occasional major civic and entertainment events;
- the ability to convert the ballpark's infield area during the off-season to a small enclosed temporary amphitheater with a capacity of 5,000 to 15,000 seats for music, concerts and entertainment; and
- a site that can provide an appropriate context for designing a modern structure in the architectural tradition of old ballparks.

C. PROJECT LOCATION

As shown in Figure III-1, the project site is situated in the South San Francisco Bay Area, in the City of San Jose, Santa Clara County. The project site is located along the western edge of the Greater Downtown Area of San Jose, in the Burbank/Del Monte Strong Neighborhoods Initiative Area. The project site extends from W. San Fernando Street south to Los Gatos Creek and from Los Gatos Creek west to the rail road tracks, as shown in Figure III-2.

D. PROPOSED PROJECT

The proposed project would reconfigure the 17 existing parcels located on the project site (shown in Figure V.A-3) in order to develop an approximately 1.5 million square-foot major league baseball stadium with a maximum seating capacity of 45,000. As part of the proposed project, an approximately 420,000 square-foot, five-story parking structure with approximately 1,200 parking spaces and ground floor commercial uses is proposed south of the ballpark, across Park Avenue. A pedestrian bridge crossing Park Avenue would connect the two structures. Montgomery Street between W. San Fernando and Park Avenue would be abandoned and S. Autumn Street would be realigned to the east to accommodate the proposed project. All existing structures on the project site would be demolished or relocated. The various components of the proposed project are outlined below.

The project described below includes both the potential relocation of the PG&E substation to the southern tip of the project site, south of the proposed parking garage, and the realignment of S. Autumn Street to the east, with a minimum average setback of 50 feet from the Los Gatos Creek top of bank. The degree of the S. Autumn Street realignment to the east is subject to further project design and refinement, and may exceed the average 50 foot setback from the creek top of bank. Accordingly the project site and amount of acquisition assumed to be necessary in this EIR is also greater than what may ultimately be necessary.

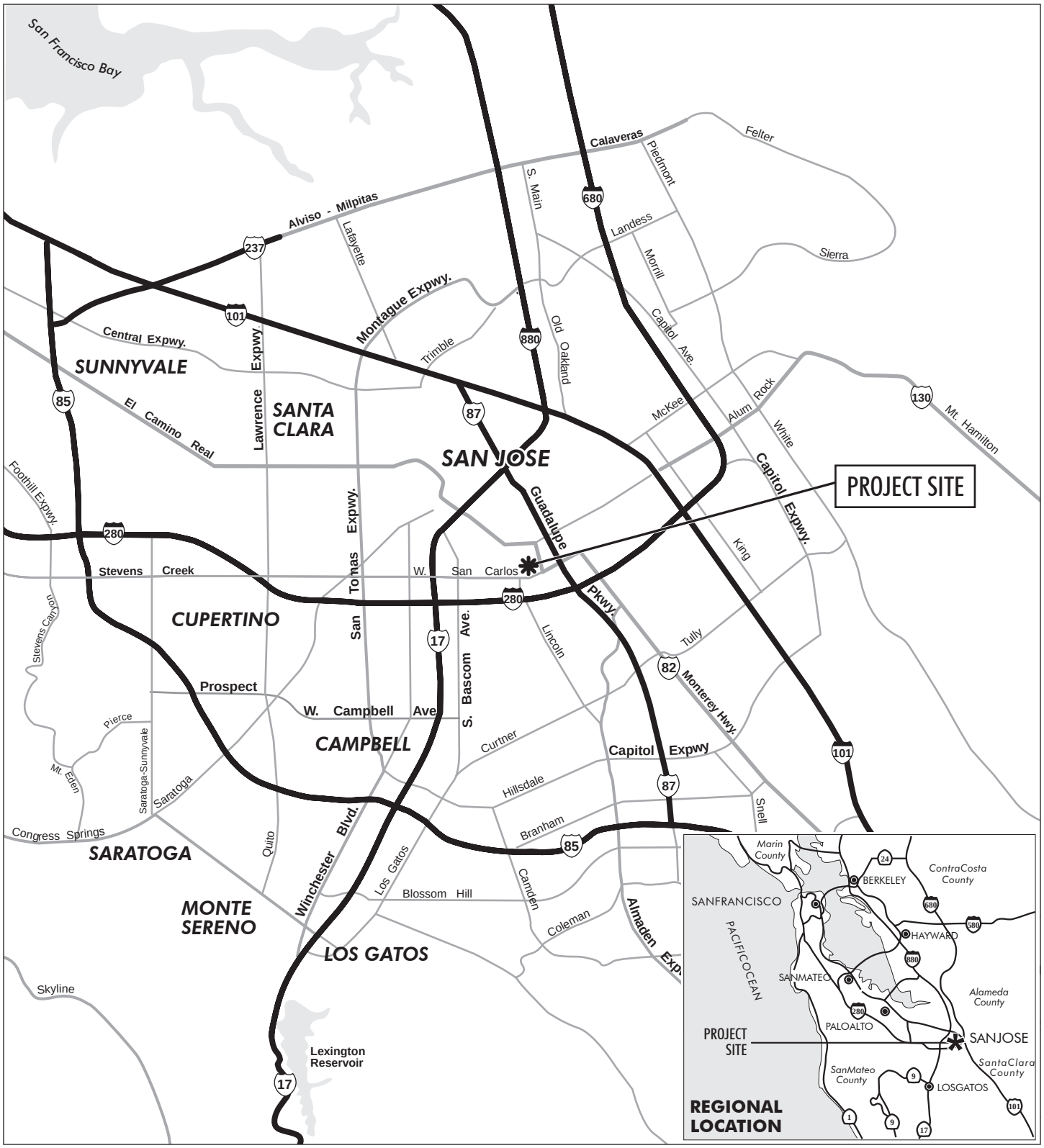
Figure III-3 shows the conceptual site plan for the proposed ballpark. The firm hired to do conceptual development studies is Hellmuth, Obata & Kassabaum, Inc. (HOK Sport). This firm has designed urban ballparks such as AT&T Park in San Francisco and PETCO Park in San Diego. HOK Sport is currently charged with site planning; specific stadium design is not being conducted at this time.

1. Baseball Stadium

The proposed baseball stadium would include baseball-related facilities, as well as associated restaurant and retail/commercial uses. Table III-1 lists the proposed uses within the stadium and the associated square feet. Baseball stadium uses are also discussed in this section.

a. Baseball Facilities. Baseball-related facilities to be located within the proposed stadium would include the playing field, spectator facilities, food service and retail, home and visiting team facilities, press facilities, service and operation facilities, administrative facilities, parking, loading docks, lighting/scoreboard, sound system, and public access and plazas.

(1) Playing Field. The stadium structure would be oriented on the site so that the first baseline of the playing field would roughly parallel W. San Fernando Street to the north and Park



LSA

FIGURE III-1

Baseball Stadium in the Diridon/Arena Area

Regional Location Map

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MILES

SOURCE: LSA ASSOCIATES, INC., 2002.

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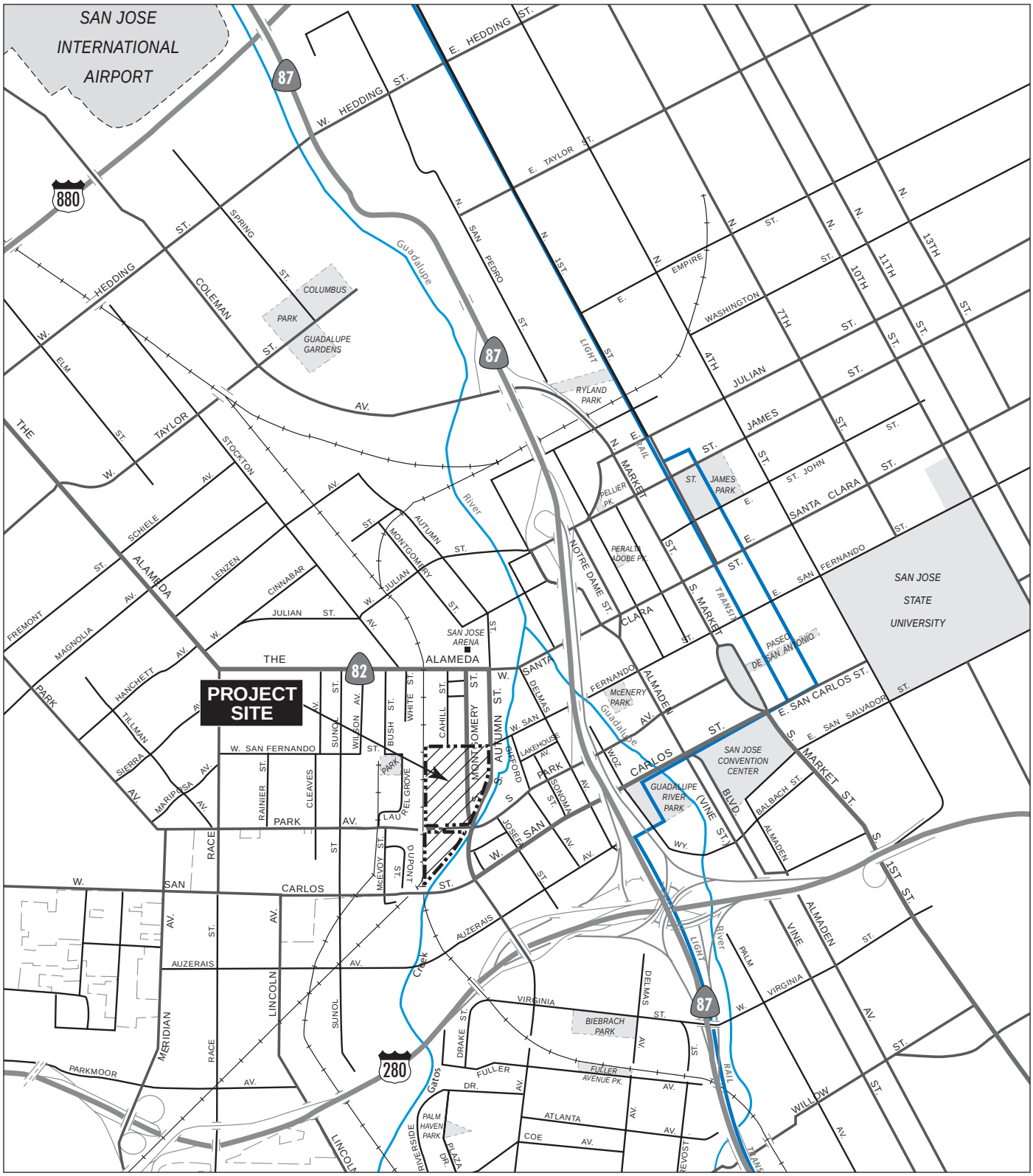

LSA

FIGURE III-2

N

0 800 1600
FEET

PROJECT SITE

Baseball Stadium in the Diridon/Arena Area

Project Site Location

SOURCE: CALIFORNIA STATE AUTOMOBILE ASSN., 2005; LSA ASSOCIATES, INC., 2005

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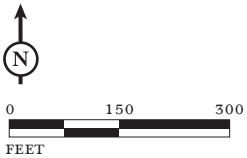
LSA

FIGURE III-3



Baseball Stadium in the Diridon/Arena Area

Conceptual Site Plan

SOURCE: CITY OF SAN JOSE, REDEVELOPMENT AGENCY, 2006.

I:/SJO530 ballpark/figures/Fig_III3.ai (02/10/06)

back of Figure 3

Avenue to the south. The third base line would roughly parallel the train tracks to the west of the project site. Home plate would face northeast, towards the intersection of W. San Fernando Street and S. Autumn Street. The playing field would be approximately 135,000 square feet. It is assumed that the open-air turf portions of the playing field would be natural grass.

(2) Spectator Facilities. The proposed stadium would have up to five levels of seating and an approximate building height of 165 feet. The ballpark would provide various seating options that would differ in price. General seating bowl characteristics are listed in Table III-2.

Approximately 342,730 square feet of other spectator facilities are also integral to the proposed project and would include the following:

- rest rooms (33,830 square feet);
- concourses for circulation (286,000 square feet);
- club lounges (33,570 square feet);
- fan entertainment, such as a Hall of Fame museum, family entertainment center, or picnic area (15,000 square feet); and
- guest services including first aid, customer service and ticket windows (5,500 square feet).

(3) Food Service. Concession stands and food court seating areas would occupy approximately 37,370 square feet. Food service support areas, such as kitchens, pantries, and staff areas would occupy an additional 72,600 square feet. The stadium would also include 2 to 3 specialty restaurants of up to 17,000 square feet total. It is anticipated that the specialty restaurants would be open to the public year-round. Access to year-round restaurants would be from the public sidewalks and plazas surrounding the stadium.

(4) Retail and Community Facilities. Retail operations, including a main retail store, satellite retail stores, and novelty stands would occupy approximately 27,000 square feet. It is anticipated that the 15,000 square foot main retail store would be open to the public year-round. In addition to the retail facilities, 18,000 square feet of community facility space has been allocated. This area may be used for a conference center or other meeting area.

Table III-1: Baseball Stadium Uses

Baseball Facilities	Area (Square Feet)
Playing Field	134,850
Spectator Facilities	
Seating	337,490
Restrooms	33,830
Concourses	286,000
Club Lounges	33,570
Fan Entertainment	15,000
Guest Services	5,500
Subtotal	*711,390*
Food Services	
Concessions	37,370
Food Service Support Areas	72,600
Specialty Restaurants	17,000
Subtotal	*126,970*
Retail and Community Facilities	
Retail	27,000
Community Facilities	18,000
Subtotal	*45,000*
Team Facilities	
Home Team	36,100
Visiting Team	16,500
Auxiliary Locker Facilities	7,050
Subtotal	*59,650*
Press Facilities	22,950
Police Facilities	1,500
Services and Operating Facilities (including loading areas)	129,700
Administrative Facilities	60,000
Parking (on-site)	75,000
Public Plazas	64,920
Net Total	***1,431,930***

Note: Numbers are approximate for planning purposes and may be subject to change during stadium design process.
Source: HOK Sport December 2005.

Table III-2: Seating Bowl Characteristics

Seating Type	Seating Capacity	Seating Area (square feet)
General Reserved	34,000	221,000
Field Club Seats	500	4,000
Club Level Seating	4,000	32,000
Suite Seating (luxury suites, owner's suites, party suites)	1,450	47,990
General Admission	5,000	32,500
Total	**44,950**	**337,490**

Source: HOK Sport, December 2005.

(5) Team Facilities. The proposed stadium would include facilities for the home and visiting team. Team facilities include clubhouse facilities (locker rooms) as well as a dugout and tunnel, batting/pitching tunnel, and bullpen. Approximately 59,650 square feet is dedicated to team facilities. The home team clubhouse would be approximately 26,000 square feet and the dugout and tunnel, batting/pitching tunnel, and bullpen would be approximately 10,100 total square feet. The visiting team clubhouse would be approximately 10,600 square feet and the dugout and tunnel, batting/pitching tunnel, and bullpen would be approximately 5,900 square feet. Auxiliary locker facilities for umpires, mascots, staff, and others would be approximately 7,050 square feet.

Typical for ballpark design, the bullpens used by pitchers would be located in foul territory beyond the dugouts, along both foul lines. The home team dugout would be on the third-base side of the field.

(6) Press Facilities. The proposed stadium would include facilities to accommodate the press that would cover the baseball games. Press facilities would include but are not limited to writing press area, broadcast/auxiliary booths, interview rooms, camera/still photo locations, press dining/kitchen areas and restrooms. Approximately 22,950 square feet of use would be dedicated to press facilities.

(7) Police Facilities. An approximately 1,000 square foot event-related police substation would be located on the stadium site and would include two holding cells. In addition, a safety command center would be located within the stadium and would be shared by multiple agencies. The command center would have a direct view of the field in order to direct resources to areas of need for police, fire, or medical responses. Approximately 1,500 square feet would be dedicated to police service facilities.

(8) Services and Operating Facilities. Approximately 129,700 square feet is needed for services and operating facilities include the following:

- event staff facilities, such as locker rooms and break areas;
- maintenance facilities such as maintenance shops and cleaning crew facilities;
- groundskeeping office and lockers and equipment storage areas;
- baseball operations, such as security command posts and offices and storage areas; and
- mechanical, electrical and other systems.

(9) Administrative Facilities. Office facilities would be provided for team administration, tickets (in support of ticket windows), ballpark operations and food service operators. Approximately 60,000 square feet of administrative facilities would be included as part of the proposed baseball stadium.

(10) Parking. Approximately 150 parking spaces would be provided for players and staff as part of the proposed stadium. Typically, these parking spaces are located within or immediately adjacent to the stadium facility and access would most likely be provided from Park Avenue.

(11) Loading Docks. The loading area would contain 5 loading docks to be used for concession delivery, merchandise delivery, and waste removal, and 8 loading docks for media broadcast

trucks. Typically, these loading docks are located in the service area of the ballpark and access would be provided from Park Avenue.

(12) Lighting/Scoreboard. Up to two main scoreboards and several auxiliary boards would be provided in the stadium. The maximum height of the main scoreboards would be 200 feet above finished grade.

Up to eight lighting structures would be provided in the stadium, generally four in the outfield and four in the infield. The maximum height of the light towers would be 235 feet above finished grade. These lighting structures would be designed to illuminate various zones on the playing field. Based on current lighting practices it is assumed that the field lights would be white light, such as metal halide, with between 1,500 to 2,000 watts per bulb. Lighting would be directed towards the playing surface and lighting design would incorporate techniques to limit the amount of light escaping into areas surrounding the stadium including precision reflectors and glare control optics.

(13) Sound System. A public announcement (PA) system would be included in the design of stadium. The PA system for the downtown stadium is proposed to be a distributed speaker system, which would utilize speakers located around each section of the park to minimize the need for extra-loud and high-mounted units.

(14) Public Access and Plazas. The main pedestrian, public access would be provided on the southeast corner of the site, in the vicinity of Park Avenue and S. Autumn Street. Two secondary access locations would be provided. Public plazas would be provided at the entrances to the stadium. A minimum of 64,920 square feet of open space will be developed as part of the site.

b. Baseball Stadium Uses. The proposed ballpark complex would be used for major league baseball games and associated activities, as well as events other than baseball.

(1) Baseball Uses. The primary use of the ballpark would be for the approximately 80 major league home baseball games per season as scheduled by Major League Baseball. These 80 games are held between the months of March and September. Games are typically held on weekdays at 12:35 p.m. or 7:05 p.m., and on weekends at 1:05 p.m. or 7:05 p.m. The ballpark could also be used for post-season games (e.g., championship play-offs) and exhibition games (e.g., All-Star Game).

(2) Non-Baseball Events. The ballpark facility may also be used for events other than baseball. Such events might range from music and entertainment presentations to large civic gatherings for such events as a 4th of July celebration or the visit of a prominent figure. Approximately 15 to 20 times a year, events may be held at the ballpark utilizing all of the ballpark's existing seats; temporary seating may also be provided on the field level for these events. However, this activity would not necessarily increase the number of seats as seating in the grandstands would be eliminated because there were not views of the stage or other event. These events could occur at varying dates and times. In addition to these types of events, other events might also be held using less than the ballpark's proposed maximum seating capacity.

2. Commercial Development South of Park Avenue

The stadium parking garage would likely contain ground floor commercial uses. Approximately 20,000 square feet of commercial uses associated with the baseball stadium would be developed with the stadium parking garage, south of Park Avenue.

There is currently a building on this area of the site which houses a water pump to keep the Park Avenue railroad underpass free of standing water during heavy rain events. Such a pump and housing would be incorporated into parking garage or commercial development area design.

3. Parking Facilities and Access

a. Parking Structure and Pedestrian Bridge. As part of the proposed project, an approximately 420,000 square-foot, five-story (maximum of 80 feet in height) parking structure is proposed south of the ballpark, across Park Avenue. The parking structure would include approximately 1,200 parking spaces and would have an approximately 72,000 square foot building footprint. A pedestrian bridge crossing Park Avenue would connect the two structures. Vehicle access to the parking garage would be provided from Park Avenue and S. Autumn Street. Once parked, pedestrians would either cross from the parking structure to the stadium via the bridge across Park Avenue or by descending to street-level and crossing to the entry plaza.

b. Other Parking. A total supply of 21,072 parking spaces currently exist within ¾- miles to the north and east of the proposed stadium (shown in Figure V.C-6). Assuming that these spaces are normally 25 percent occupied in the evening without an event at the HP Pavilion, there are an estimated 15,804 available spaces for the stadium.

c. Site Access. Several roadways would be abandoned or realigned as part of the proposed project. S. Montgomery Street, between W. San Fernando Street and Park Avenue would be abandoned. Otterson Street, west of S. Montgomery Street would also be abandoned. S. Autumn Street between Santa Clara Street and Park Avenue would be converted to a two-way street. S. Montgomery Street between Santa Clara Street and San Fernando Street would also be converted to a two-way street with curb side parking areas used for passenger drop-off and pick-up. S. Autumn Street would be realigned approximately 2 to 80 feet to the east of its current location, setback approximately 50 from the top of bank of Los Gatos Creek, to accommodate the proposed project.

d. Bird Avenue/Autumn Street Design. A series of transportation-related changes are planned for the Bird Avenue/Autumn Street corridor, either as background improvements (something already planned without the stadium) or as part of the stadium project. The changes include the extension of Autumn Street to Coleman Avenue, the realignment of Autumn Street (and abandonment of Montgomery Street) along the eastern side of the stadium site, and transportation operations improvements on Bird Avenue between I-280 and Park Avenue. These improvements are described in detail in the transportation technical background report (Appendix C of the EIR).

4. PG&E Substation

An existing PG&E substation located adjacent to the railroad tracks northwest on the project site will be modified or may be relocated as part of the proposed project. This approximately 1.5 acre facility

includes 115-kilovolt transmission lines, underground electrical distribution lines, distribution transformers and electrical switch gear that serve the electrical needs in the downtown area.

Two options are being considered at this time: (1) reconfiguration of the existing substation to accommodate the relocation of underground electrical distribution lines or (2) relocation of the substation south to the existing Fire Training Center site.

a. Reconfiguration. Reconfiguration would involve substantial above ground changes to the existing substation. In order to keep the substation operational during construction, reconfiguration would take place in phases and a new bank of electrical switchgear to accommodate future electrical demand would also be required. With this addition, there would be a total of five electrical banks (three standard transformers and two smaller transformers) resulting in a slightly larger substation footprint. The additional size has not yet been determined and it is possible additional land to the north and east of the existing substation would be needed to accommodate the reconfiguration. Additions to the existing substation would be appropriately screened.

b. Relocation. If necessitated by stadium site design, the PG&E substation would be relocated on the project site south of the proposed parking garage. Under this option, the substation would also be comprised of five electrical banks (three standard transformers and two smaller transformers) and would permit a more efficient configuration of equipment. The relocated substation would be enclosed in an area approximately 250 feet by 340 feet. Most of the equipment would be less than 20 feet in height except as required for the necessary clearances for a safe design. The relocated substation would be partially screened to limit its visibility on the site. The existing substation site would be cleared of all equipment and materials.

5. Site Acquisition, Demolition/Relocation and Preparation

The Redevelopment Agency is in the process of working with individual property owners to purchase properties within the project site. To date 5 of 16 properties are owned or are in negotiations with the San Jose Redevelopment Agency.

The proposed project would include the demolition or relocation of 17 buildings totaling 327,045 square feet, one of which is an historic resource. Removal of 12 buildings south of San Fernando Street to Park Avenue and east of the railroad tracks to Los Gatos Creek, on the location of the proposed stadium, would be required. These one- to three-story structures total approximately 285,085 square feet of existing commercial, light industrial uses, and office uses. Removal of four one-story buildings and a seven-story live fire training tower, totaling 41,960 square feet, south of Park Avenue and west of S. Autumn Street, on the location of the proposed parking garage and PG&E substation may also be required.

The site is relatively flat and minimal grading would be necessary as part of the project. Excavation would be required for approximately 75 percent of the stadium site to accommodate the structure design, including below-field facilities, such as foundations, trenched utilities and field drainage.

The project site is approximately 23.1 acres. Portions of the site are presently developed as light industrial, residential and commercial uses, as well as roadways. There are also many landscape trees

within and around these uses. Approximately 45 of these trees meet the City's definition of ordinance-size trees (56-inches or more in circumference or 18 inches in diameter at 2 feet above ground).

6. Project Construction and Schedule

Assuming the ballot initiative is approved in November 2006, a stadium design team would be selected by December 2006. Site preparation, infrastructure development and PG&E relocation would begin in March 2007. Construction would begin approximately 1 year later in March 2008. Opening day would be in April 2010.

7. Employment

The proposed stadium would employ a maximum of 1,560 full- and part-time employees, including the following:

- 495 day of game (groundskeepers, engineers, plumbers, medical support, switchboard operators, ticket sellers, ticket takers, ushers, security, maintenance);
- 715 concessionaire;
- 80 players, coaches trainers;
- 135 media; and
- 135 other (ancillary development).

The proposed parking garage and commercial uses south of Park Avenue would also add employment to the project site.

E. USES OF THE EIR

The City of San Jose may use the EIR for actions necessary to implement the project, including the following approvals for a publicly funded project:

- Ballot Initiative.
- Contracts for public infrastructure improvements.
- Right-of-way acquisition.
- Demolition, grading, building, encroachment and other construction permits.
- Stormwater Pollution Prevention Plan (SWPPP).
- Relinquishment of SR 82.

The EIR may also be used by the following agencies for other regulatory reviews and approvals that may be necessary to implement the project:

- City of San Jose/Redevelopment Agency/Board/Council.
- Valley Transportation Authority (VTA).
- Bay Area Regional Water Quality Control Board (RWQCB).

- Santa Clara Valley Water District (SCVWD).
- California Public Utilities Commission (PUC).
- Bay Area Air Quality Management District (BAAQMD).
- California Department of Transportation (Caltrans).

IV. CONSISTENCY WITH PLANS AND POLICIES

This chapter of the EIR evaluates the consistency of the proposed Baseball Stadium in the Diridon/ Arena Area project with applicable land use plans and planning policies. This section includes a description of relevant plans and policies and a discussion of potential policy inconsistencies and potential conflicts between these documents and the proposed project.

Policy conflicts are not considered to have a significant effect on the environment, and are therefore differentiated from impacts described in the other topical sections of this chapter of the EIR. Adverse physical impacts associated with such policy conflicts are addressed in the appropriate technical sections of this chapter (e.g., Air Quality, Noise).

A. REGIONAL PLANS AND POLICIES

1. Bay Area 2005 Ozone Strategy: ABAG/BAAQMD/MTC

The Bay Area 2005 Ozone Strategy is the joint responsibility of three agencies: Association of Bay Area Governments (ABAG); Bay Area Air Quality Management District (BAAQMD); and Metropolitan Transportation Commission. It establishes regional policies and guidelines to meet the requirements of the Clean Air Act, as amended. The Bay Area is a non-attainment area for ozone because federal standards have been exceeded for this pollutant. The updated 2005 Ozone Strategy, adopted in 2006, outlines measures and improvements to help the Bay Area comply with the State's ozone standard. The 2005 Ozone Strategy proposes the adoption of transportation, mobile source and stationary source controls on a variety of pollutant sources to offset population growth and provide improvement in air quality. The consistency of the proposed project with this regional plan is primarily a question of the consistency with the population/employment assumptions utilized in developing the 2005 Ozone Strategy. The 2005 Ozone Strategy is based on population and employment projections developed by ABAG.[1]

Consistency: The proposed project is the development of a major league stadium and related parking areas at a location with unsurpassed existing and potential future public transit facilities. The project is a public project, and responds to the need for additional recreational and entertainment facilities in the greater San Jose area. No direct population growth would result from the proposed project. In this way, the proposed project is consistent with growth anticipated under the City's General Plan and falls within the population projections prepared by ABAG. As a result, it will not conflict with the Bay Area 2005 Ozone Strategy.

2. Santa Clara Valley Urban Runoff Pollution Prevention Program

The Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP) was developed in accordance with the requirements of the 1986 San Francisco Bay Basin Water Quality Control Plan,

[1] Association of Bay Area Governments (ABAG), 2003. *Projections 2003, Forecasts for the San Francisco Bay Area to the Year 2030.* July.

for the purpose of reducing water pollution associated with urban stormwater runoff. This program was also designed to fulfill the requirements of Section 304(1) of the Federal Clean Water Act, which mandated that the Federal Environmental Protection Agency (EPA) develop National Pollutant Discharge Elimination System (NPDES) Permit application requirements for various stormwater discharges, including those from municipal storm drain systems and construction sites.

The State Water Resources Control Board implemented an NPDES general construction permit for the Santa Clara Valley. For properties of 1 acre or greater, a Notice of Intent (NOI) and Storm Water Pollution Prevention Plan (SWPPP) must be prepared prior to commencement of construction. Development of the project site would be required to conform to the requirements of the NPDES permitting program. The project would comply with the City's National Pollutant Discharge Elimination System (NPDES) permit compliance guidance which requires development to incorporate construction and post-construction mitigation measures to control the discharge of pollutants into the storm drainage system to the maximum extent practicable.

Consistency: The proposed project would be designed to be consistent with the provisions of the Santa Clara Valley Urban Runoff Pollution Prevention Program. Detailed measures to reduce water quality impacts of development are proposed in Section V.H, Hydrology and Water Quality.

3. Santa Clara Valley Congestion Management Program

The Santa Clara Valley Transportation Authority (VTA) oversees the Santa Clara County Congestion Management Program (CMP). This legislation requires that all urbanized counties in California prepare a CMP in order to obtain each county's share of gas tax revenues. The CMP legislation requires that each CMP contain five mandatory elements: (1) a system definition and traffic level of service standard element; (2) a transit service and standards element; (3) a trip reduction and transportation demand management element; (4) a land use impact analysis program element; and (5) a capital improvement element.

The Santa Clara County CMP includes subregional roadways within San Jose that are identified as CMP road facilities. The CMP intersections and the roadway segments that could be impacted by the proposed project are identified and analyzed in Section V.C, Transportation, Circulation and Parking.

a. CMP Intersections. The level of service results for the CMP intersections under project conditions are summarized in Section V.C, Transportation, Circulation and Parking. The traffic analysis shows that none of the CMP study intersections would be significantly impacted by the project.

b. CMP Freeway Segments. The analysis of the CMP freeway segments (see Table V.C-8) indicates that the proposed project will significantly impact four segments:

SR 87 southbound between Coleman Avenue and Julian Street
SR 87 southbound between Julian Street and I-280
I-280 eastbound between Meridian Avenue and Bird Avenue
I-280, eastbound between Bird Avenue and SR 87

The mitigation necessary to reduce significant impacts upon these freeway segments would involve widening the freeway. This measure is not considered feasible because the State of California Department of Transportation (CalTrans) owns and maintains the freeways. In addition, significant

rights-of-way would need to be acquired and many homes and businesses would need to be demolished. These impacts are therefore designated significant and unavoidable in Section V.C, Transportation and Circulation, of this EIR.

While it is anticipated that the project would impact regional freeway segments on SR 87 and I-280, the project represents planning that is generally consistent with the CMP policies. The project is an infill project, located in an urban area that is extraordinarily well served by transit facilities. Please refer to Section V.C, Transportation and Circulation, for a more detailed discussion of transit.

Consistency: The analysis of CMP roadways and intersections that is called for by the Santa Clara Valley Congestion Management Program is provided in Section V.C, Transportation, Circulation and Parking. Its presentation, along with the various mitigation measures that are recommended in this EIR, lead to the conclusion that a baseball stadium at the proposed location would be consistent with this program.

B. LOCAL PLANS AND POLICIES

1. San Jose 2020 General Plan

The City's General Plan, *San Jose 2020 General Plan* (General Plan), was adopted in August 1994 by the City Council. The General Plan is an adopted statement of policies for the physical development of the City. As such, it seeks to determine the shape that future development will take within a broad environmental, social, and economic framework. It is intended for use by both City officials and private citizens in providing a structure for future growth. The General Plan contains each of the State-mandated elements, but since the elements are intrinsically interrelated, they are combined in the document and are not separated according to topic.

The General Plan identifies specific goals and policies for city concept; community development; housing; services and facilities; aesthetics, cultural and recreational resources; natural resources; hazards; and sustainability. One of the key elements of the General Plan is the Land Use/Transportation Diagram, which also includes a rail transit, bicycle network, and scenic routes and trails diagram. The Land Use/Transportation Diagram provides a geographical reference and a spatial context to the goals and policies of the General Plan. It identifies various land use designations, special strategy areas, and planned residential communities/planned communities. An overview of the land use designations and the special strategy area applicable to the proposed project is provided below. A discussion of the General Plan's major strategies and relevant policies and their relationship to the proposed project is also provided.

a. Land Use Designations. The General Plan Land Use/Transportation Diagram identifies the designated land uses for all property within the City's Sphere of Influence. The Diagram also illustrates the relationship between land uses and the transportation network.

The General Plan designates the majority of the properties located between W. San Fernando Street and Park Avenue as *Mixed Use*. The PG&E Substation is designated *Public/Quasi-Public*. Properties east of S. Autumn Street to Los Gatos Creek are designated *General Commercial*. The Los Gatos Creek Corridor is designated *Public Park Open Space.* South of Park Avenue, the Fire Training

Facility is designated *Public/Quasi-Public*. Figure IV-1 shows existing General Plan land use designations for the project site and vicinity.

The General Plan provides that only existing uses and ownerships and future uses for which substantial planning has been completed are designated Public/Quasi-Public. The ballpark is in the early stages of planning and the initial City actions are 1) the City Council's consideration of placement of a ballot measure before the voters of the City of San Jose on whether public funds should be used for a proposed ballpark, and 2) a decision by the voters of the City of San Jose to allow use of public funds for a proposed ballpark. Should the voters authorize use of public funds and the City Council then pursue development of a ballpark at the proposed site, General Plan Amendments would be initiated to change the General Plan designation of the project site to Public/Quasi-Public to reflect the planned ballpark use. The environmental impacts associated with such future General Plan Amendments, if initiated and moved forward for consideration by the City Council of the City of San Jose, would be reviewed by, and appropriate environmental clearance would be processed for consideration by, the recommending and decision-making bodies for such General Plan Amendments at that time.

b. Special Strategy Areas. The project site is located within the Greater Downtown Area, as shown in Figure IV-2. The boundary of the Greater Downtown extends beyond San Jose's traditional downtown center to include the areas around Diridon Station, areas north to approximately Taylor Street, areas on the east that include San Jose State University, and areas on the south to approximately I-280. *Strategy 2000, San Jose Greater Downtown Strategy for Development,* provides the vision for this area, a prominent and vital 24-hour downtown that is a catalyst to bring new investment, residents, and visitors to the center of the City.

c. Major Strategies. The Major Strategies identify the principal objectives of the General Plan. They establish the basic framework for planning in San Jose. The strategies also express the philosophy that the City should take a leadership role in the planning process, while encouraging community and private sector participation. All of the strategies are interrelated and supportive of each other. A summary of the major strategies and policies that apply to the proposed project is presented below:

- Economic Development Major Strategy: The City of San Jose's Economic Development Strategy strives to make San Jose a more "balanced community" by: (1) encouraging more commercial and industrial growth to balance the existing residential development; (2) equitably distributing jobs and housing; and (3) controlling the timing of development.

  Consistency: The proposed project would provide employment opportunities within the City helping to balance the commercial and residential relationship, and would contribute to the financial base of the City.

- Growth Management Major Strategy: The Growth Management Major Strategy addresses the need to balance the urban service demand of new development with the need to balance the City's budget. One of the key components of this Major Strategy is to support infill development as a way of decreasing the costs associated with the provision of public services through increased efficiency.

  Consistency: The project is consistent with the Growth Management Major Strategy. It is an infill project, which would invigorate an underutilized area, and in doing so, possibly forestall development in outlying areas which would require increased expansion of services and costs to serve the development.

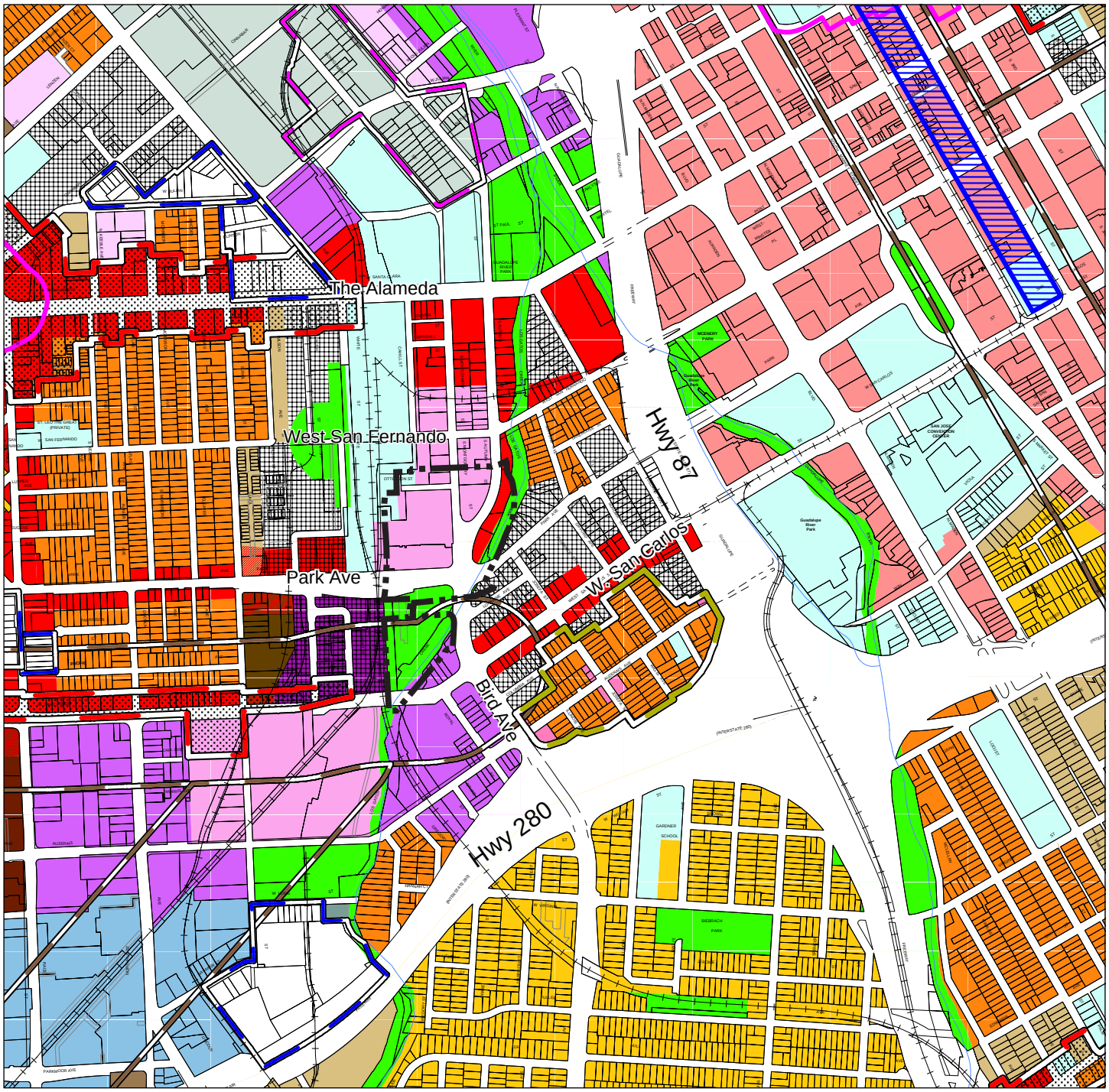


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FIGURE IV-1

Medium Low Density Residential (8.0 DU/AC)
Medium Density Residential (8-16 DU/AC)
Medium High Density Residential (12-25 DU/AC)
High Density Residential (25-50 DU/AC)
Transit Corridor Residential (20+ DU/AC)
Residential Support for the Core Area (25+ DU/AC)
Neighborhood/Community Commercial
General Commercial
Core Area
Office
Industrial Park
Light Industrial
Heavy Industrial
Combined Industrial/ Commercial
Public/Quasi-Public
Neighborhood Business District
Transit-Oriented Development Corridor
Public Park and Open Space
Mixed Use Overlay
Mixed Industrial Overlay

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Baseball Stadium in the Diridon/Arena Area

General Plan Land Use Designations

SOURCE: CITY OF SAN JOSE, 2006

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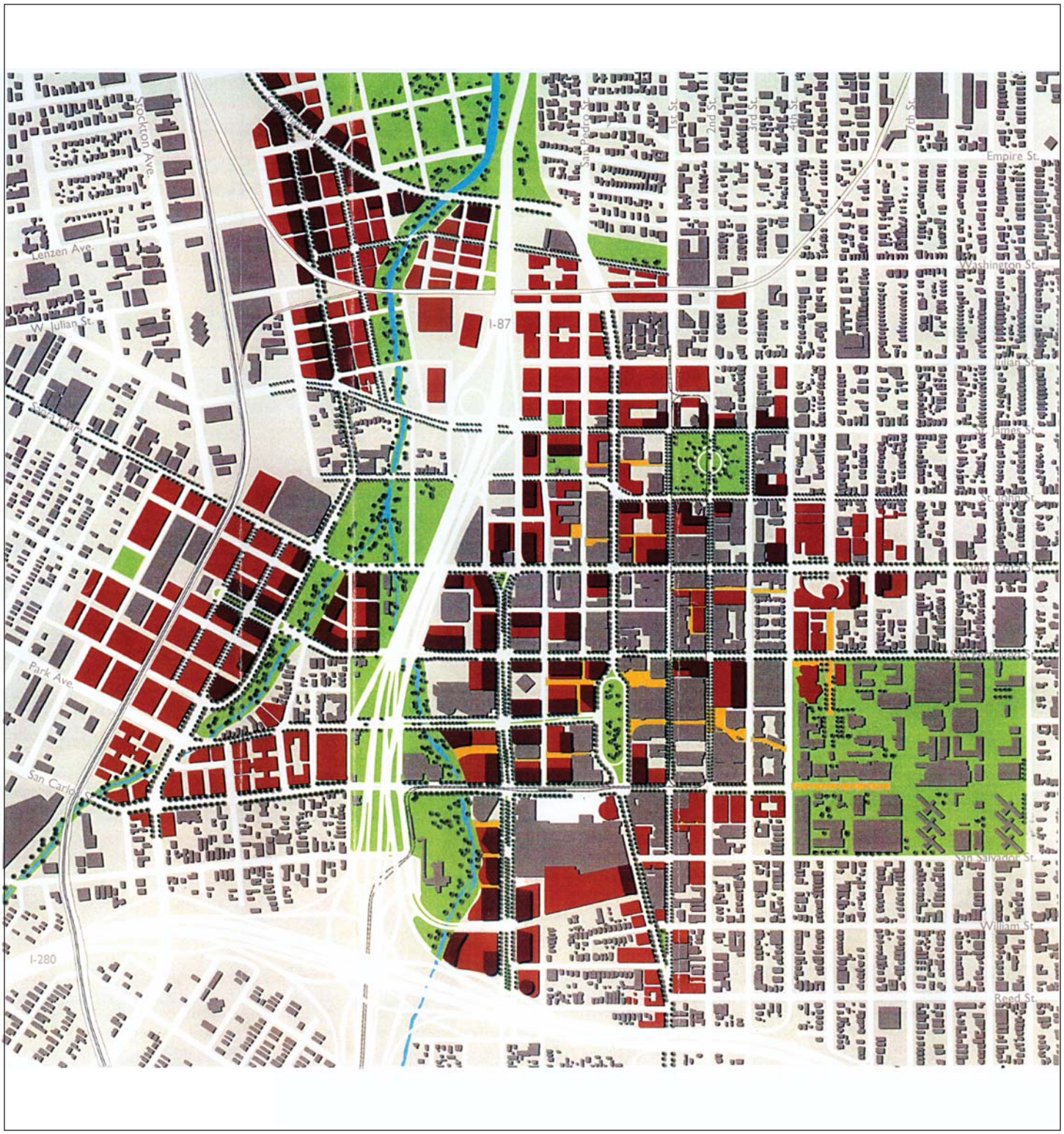

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FIGURE IV-2

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- RIVER AND CREEK
- PARKS AND GREEN OPEN SPACE
- PASEOS AND PLAZAS
- POTENTIAL DEVELOPMENT
- POTENTIAL DEVELOPMENT, HIGHER DENSITY
- EXISTING STRUCTURES

Baseball Stadium in the Diridon/Arena Area
San Jose Greater Downtown Strategy
for Development Illustrative

SOURCE: CITY OF SAN JOSE, 2003.

I:\SJO530 ballpark\figures\Fig_IV2.ai (01/05/06)

- Downtown Revitalization Major Strategy: The Downtown Revitalization Major Strategy emphasizes the importance of a prominent and attractive downtown as a catalyst that brings new investment, residents, businesses and visitors to the center city.

  Consistency: The proposed baseball stadium would support the Downtown Revitalization Major Strategy by providing a significant entertainment and civic venue that would attract substantial numbers of fans to Downtown, thereby supporting Downtown businesses, and stimulating ancillary private investment responding to the ballpark.

- Urban Conservation Preservation Major Strategy: The Strategy underscores the importance of protecting and enhancing San Jose's neighborhoods and historical resources to promote community identity and pride. This Strategy encourages infill development while recognizing that nearby neighborhoods should be protected from impacts. Encouraging economic development will enable the City to maintain current levels of service and help maintain the neighborhoods.

  Consistency: There are three neighborhoods in the project vicinity; however, uses adjacent to the project site are primarily transit-oriented mixed-use, public/quasi-public, and public park/open space. The proposed project would be consistent with this Strategy by promoting community identity and pride, but would unavoidably impact a historic resource (see Chapter V.J, Cultural Resources). Additionally, a project of this scale and type would also create adverse effects for nearby neighborhoods (e.g., noise and light) as described in Chapters V.E, Noise, and V.L, Shade/Shadow and Light/Glare, respectively.

- The Greenline Major Strategy: This is a strategy to define the ultimate perimeter of urbanization in San Jose and preservation of hillsides, the baylands and the rural/agricultural area in the south Coyote Valley.

  Consistency: See the discussion on the Growth Management Strategy above. Through the siting of the proposed project, views of downtown skyline and the hills that frame the valley would be highlighted for ballpark patrons, but the stadium would obscure existing views for some adjacent properties.

- Housing Major Strategy: The Housing Strategy is designed to promote housing opportunities.

  Consistency: Housing is not included as part of the proposed project. A single residential unit would be removed from the City housing stock. The portion of the site north of Park Avenue is planned for mixed uses, including the potential for transit-supportive high density housing, and the development of the site with the ballpark would eliminate that potential. However, substantial opportunities for development of transit-supportive mixed uses, including high density housing, exist within the immediate Diridon Area and the Downtown as a whole, such that the project would not impede future efforts to implement the Housing Major Strategy. The proposed project would be essentially neutral vis-a-vis this strategy.

- Sustainable City Major Strategy: The Sustainable City Strategy reflects San Jose's desire to become an environmentally and economically sustainable city, minimizing waste, and efficiently using its natural resources.

  Consistency: The project site is in Downtown San Jose, within walking distance of the central downtown area and in close proximity to several forms of public transit. The proposed project includes the development of a major league baseball stadium to allow for local presentation of that form of entertainment/recreation. These components of the project support the City's strategy related to developing a sustainable city.

d. General Plan Goals and Policies. The key goals and policies that are relevant to the proposed project are discussed below.

- Urban Conservation Policy 2: The City should encourage new development which enhances the desirable qualities of the community and existing neighborhoods.

  Consistency: A local major league baseball stadium would enhance the desirable qualities of the community, although a project of this scale and type would also create adverse effects for nearby neighborhoods (e.g., noise and light) as described in Chapters V.E and V.L, respectively.

2. Downtown Strategy 2000: San Jose Greater Downtown Strategy for Development

Strategy 2000: San Jose Greater Downtown Strategy for Development (*Strategy 2000*) was adopted in June 2005 and provides a long-range conceptual program for redevelopment. *Strategy 2000* focuses on revitalizing the traditional Downtown by allowing higher density infill development and replacement of underutilized uses, and expanding the Greater Downtown Core Area and land use intensities to the west and north into areas that are presently undeveloped and underutilized. *Strategy 2000* is an update of the San Jose *Downtown Strategy Plan 2010*, adopted by the San Jose City Council and the Redevelopment Agency Board in 1992.

The Guiding Principles of *Strategy 2000* are as follows:

- Make the Greater Downtown a memorable urban place to live, work, shop and play
- Promote the identity of Downtown San Jose as the Capital of Silicon Valley
- Create walkable, pedestrian-friendly Greater Downtown
- Promote and prioritize development that serves the needs of the entire City and Valley

Another objective of the Plan is to promote the development of a prominent and vital 24-hour downtown that is a catalyst to bring new investment, residents, and visitors to the center of the City. The Plan envisions Downtown as a regional focus for employment, cultural activities, entertainment, civic uses, and retail activity at the center of an expanding transit network, and near to existing and planned residential areas.

Consistency: The proposed project is located within the Greater Downtown Area, and would generally meet the goals of *Strategy 2000*. The project would allow for the development of a major league baseball stadium, along with associated commercial and retail opportunities on an infill site within the downtown. It would help enhance Greater Downtown San Jose's reputation as a memorable place, on par in terms of entertainment and recreation opportunities, with the other two major cities of the Bay Area (San Francisco and Oakland), both of whom currently have major league baseball franchises.

3. Diridon/Arena Area Strategic Development Plan[2]

The project site is included in the *Diridon/Arena Area Strategic Development Plan* (Figure IV-3). The *Diridon/Arena Strategic Development Plan* includes strategies and actions that aim to: (a) complete the Downtown Riverfront Park encompassing the Guadalupe River and Los Gatos Creek as local and regional open space amenities; (b) expand Diridon Station to create a grand transit station of archi-

[2] San Jose, City of, 2005. *Diridon/Arena Strategic Development Plan*. June 6

tectural and functional significance; (c) enhance existing residential neighborhoods and reinforce downtown living with additional high density residential development; (d) create a high activity, lively pedestrian environment with excellent connectivity to downtown destinations and regional transit; (e) provide a variety of commercial and mixed use development opportunities, ranging from larger scale corporate or institutional sites to incremental, infill development zones; and (f) encourage future development in three development zones: (i) Diridon Station Area (Transit Oriented/Downtown District); (ii) Station South (Transit Oriented Neighborhood District); and (iii) Arena North (Mixed Use District). The Plan calls for Transit Oriented Mixed-Use development on the proposed project site.

Consistency: The proposed project would compliment the vision set forth in the *Diridon/Arena Area Strategic Development Plan*. However, a baseball stadium is not specifically included in the Plan. The ballpark is in the early stages of planning and the initial City actions are: 1) the City Council's consideration of placement of a ballot measure before the voters of the City of San Jose on whether public funds should be used for a proposed ballpark, and 2) a decision by the voters of the City of San Jose to allow use of public funds for a proposed ballpark. Should the voters authorize use of public funds and the City Council then pursue development of a ballpark at the proposed site, Amendments would be initiated to the Diridon/Arena Area Strategic Development Plan to reflect the planned ballpark use. The environmental impacts associated with such future Amendments, if initiated and moved forward for consideration by the City Council of the City of San Jose, would be reviewed by, and appropriate environmental clearance would be processed for consideration by, the recommending and decision-making bodies for such Strategic Plan Amendments at that time.

4. Midtown Specific Plan[3]

The project site is included in the *Midtown Specific Plan* (MSP), which provides development guidelines for a 210-acre industrial and commercial service area situated to the south of W. Santa Clara Street and west of Los Gatos Creek (Figure IV-4). The goal of the MSP is to create a mixed-use community that includes high-density commercial and residential areas that are geared towards public transit while at the same time maintaining some existing service and industrial uses in the area. The MSP, which is consistent with the General Plan, was adopted by San Jose City Council in December 1992, and amended as recently as June 2005.

The MSP specifically calls for the intensification of development immediately adjacent to Cahill (now Diridon) Station and to the W. San Carlos Light Rail Transit (LRT) Station; the creation of a new residential community with a wide range of housing choices; the preservation and intensification of industrial and commercial-service uses within Midtown; the reinforcement of existing neighborhood business districts; the creation of a network of open space and pedestrian walkways; the development of a street pattern that enhances neighborhoods; and the design of development that is compatible with surrounding areas.

To achieve these goals, the MSP provides generalized land use guidelines for the overall neighborhood, and specialized plans for individual sub-areas. The document also sets policy for the design of parks and community centers, traffic routes, and utility service. It also includes a chapter on implementation of the MSP to ensure consistency with the *City of San Jose 2020 General Plan* and existing land use regulation, financing alternatives for development, and administrative protocol.

[3] San Jose, City of, 1992. *Midtown Specific Plan*, Final Draft. December 8.

The MSP proposes Transit Oriented Mixed Use for the project site north of Park Avenue and a potential future 5-acre neighborhood park/playing fields south of Park Avenue on the City-owned property currently utilized by the City of San Jose Fire Department as a training facility. This location is well suited for a more active recreational park, which could serve Midtown residents as well as residents across Los Gatos Creek in the Parkside Neighborhood (Delmas Plan Area). The park would also contribute to the enhancement of Los Gatos Creek within the Midtown and provide for the implementation of a portion of the regional creek trail system. The Plan acknowledged implementation of this park would necessitate relocation of the Fire Training Facility. More specifically, the plan provides the following design criteria for this park:

- The park is proposed to include formalized playing (sport) fields, including a softball diamond and a hardball and tennis court, as appropriate and required.
- The park should incorporate a bicycle and jogging trail along Los Gatos Creek, and should maintain the riparian character and habitat along the creek corridor."

Consistency: A baseball stadium is not specifically included in the Plan and would necessitate relocation of the Fire Training Facility and eliminate the potential for development of the 5-acre park envisioned by the Plan upon relocation of the Fire Training Facility. The ballpark is in the early stages of planning and the initial City actions are 1) the City Council's consideration of placement of a ballot measure before the voters of the City of San Jose on whether public funds should be used for a proposed ballpark, and 2) a decision by the voters of the City of San Jose to allow use of public funds for a proposed ballpark. Should the voters authorize use of public funds and the City Council then pursue development of a ballpark at the proposed site, Amendments would be initiated to the Midtown Specific Plan to reflect the planned ballpark use. The environmental impacts associated with such future Amendments, if initiated and moved forward for consideration by the City Council of the City of San Jose, would be reviewed by, and appropriate environmental clearance would be processed for consideration by, the recommending and decision-making bodies for such Midtown Specific Plan Amendments at that time.

Development of the proposed project would result in the elimination of the planned park site at the Fire Training Facility, contributing to the overall shortfall in parkland area for the Midtown/Diridon area. In order to ensure that the loss of the future park site at the Fire Training Facility does not contribute to the overall shortfall in park space for this area, the City has identified several potential future alternative park sites in the vicinity of the project site that could be explored to address the recreational needs of the neighborhood, as shown in Figure V.N-1. Should the City pursue development of the Fire Training Facility in association with the ballpark, and identify a preferred location(s) to pursue additional park facilities to offset the loss of the planned park at the Fire Training Facility, additional environmental review would be conducted prior to, and to inform, the City decision to develop a park at that location(s).

5. Burbank/Del Monte Neighborhood Improvement Plan[4]

The project site is the northeast corner of the Burbank/Del Monte neighborhood (see Figure V.A-4, Neighborhoods Within the Project Vicinity). The *Burbank/Del Monte Neighborhood Improvement Plan* expresses the community's vision and includes goals that would bring about positive changes and help the neighborhood achieve its vision: (a) develop parks and open space; (b) provide commun-

[4] San Jose, City of, 2002. *Burbank/Del Monte Neighborhood Improvement Plan*, June.

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NOT TO SCALE

1 RESIDENTIAL – LOW DENSITY
2 TRANSIT ORIENTED MIXED-USE
3 GENERAL COMMERCIAL
4 CORE AREA COMMERCIAL
5 OFFICE
6 COMBINED INDUSTRIAL/ COMMERCIAL
7 PUBLIC PARK
8 TRANSPORTATION
9 PARKING
INCREMENTAL INFILL DEVELOPMENT
PROJECT SITE

FIGURE IV-3

Baseball Stadium in the Diridon/Arena Area

Diridon/Arena Strategic Development Plan - Proposed Land Use

SOURCE: CITY OF SAN JOSE, 2003.

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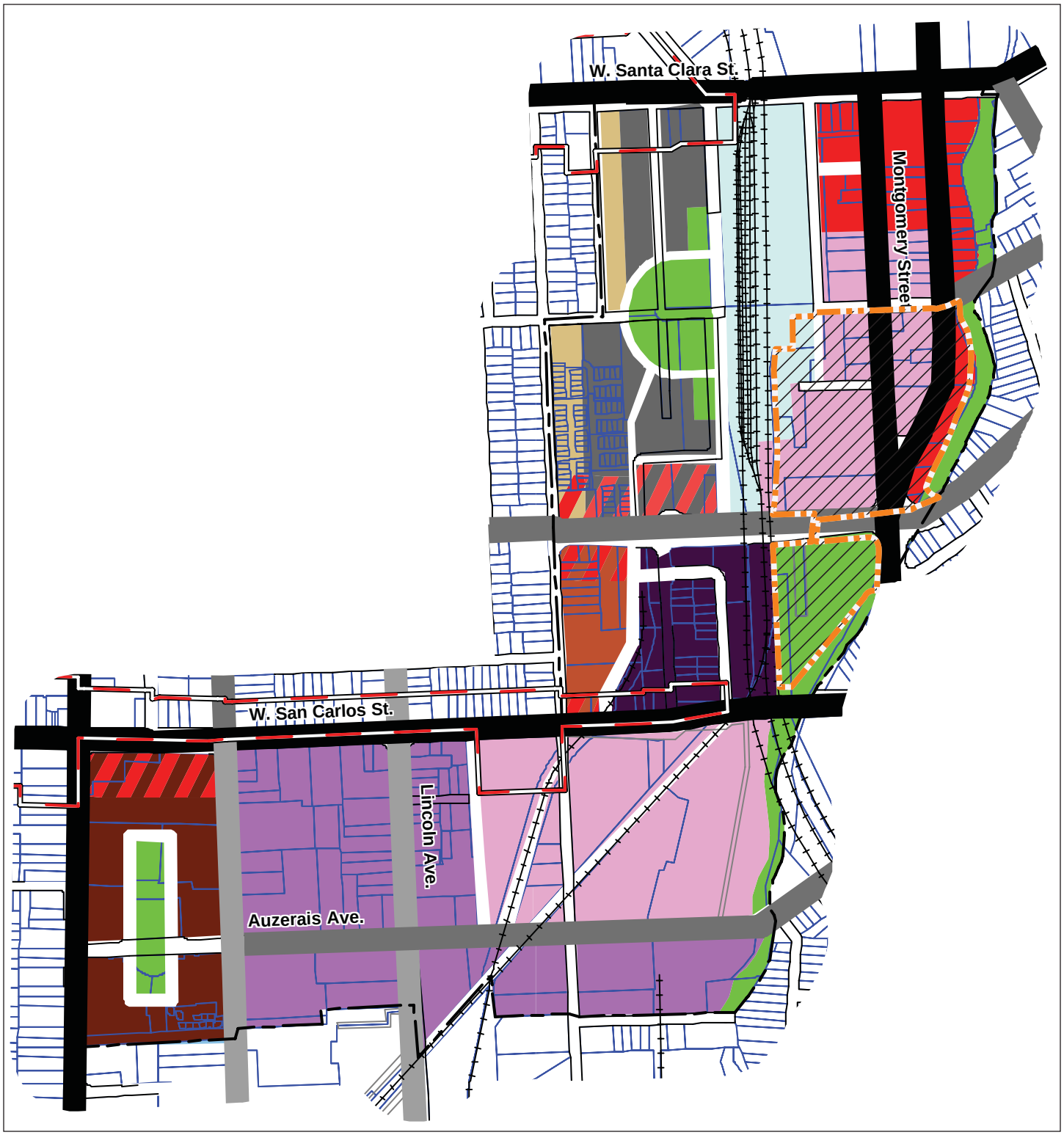

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FIGURE IV-4

High Density Residential (25-65 DU/AC)
High Density Residential General Commercial Overlay (HDR-GC)
Transit-oriented Mixed Use (TMU)
General Commercial
Neighborhood Business District Boundary
Residential Support for the Core Area (25+ du/ac)
Combined Industrial/Commercial with Live/Work Overlay
Public/Quasi-Public
Public Park/Open Space
Combined Industrial/ Commercial
Project Boundary

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Baseball Stadium in the Diridon/Arena Area

Midtown Specific Plan Land Use Map

SOURCE: CITY OF SAN JOSE, 2003.

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ity facilities in the neighborhood; (c) create a pedestrian-friendly environment; (d) improve circulation, transportation and parking; (e) strengthen economic development; (f) revitalize housing; (g) beautify the neighborhood; (h) encourage maintenance and stewardship; and (i) improve programs, services and community organization.

Consistency: The SNI plan developed by the community did not contemplate or envision a ballpark.

6. Delmas Park Neighborhood Plan

The Delmas Park Neighborhood is located immediately east of the project site and is generally bounded by Autumn Street/Bird Ave to the west and Highway 87 to the east. West Santa Clara Street forms the northern boundary of the neighborhood, with Interstate 280 forming the approximate southern boundary. The *Delmas Park Neighborhood Improvement Plan* was developed under the Strong Neighborhoods Initiative (SNI). The goal of the SNI is to improve neighborhood conditions, enhance community safety, facilitate community services and strengthen neighborhood associations. The community's vision for the neighborhood is expressed in a prioritized list of "action items" in *Delmas Park Neighborhood Improvement Plan*, including improving residential parking conditions, creating a neighborhood traffic plan, modifying current land use policy, implementing streetscape improvements, improving streets and sidewalks, and generally improving pedestrian circulation.

Consistency: The SNI plan developed by the community did not contemplate or envision a ballpark.

7. Riparian Corridor Policy Study[5]

The Riparian Corridor Policy in the City of San Jose's General Plan is specifically tied to the policies of the *Riparian Corridor Policy Study* (RCPS). The Study provides a guide to protect biotic resources when development occurs along creek systems. The RCPS is designed to minimize impacts to riparian resources and help protect riparian habitat.

The project site is adjacent to the western bank of Los Gatos Creek, approximately ½-mile south of the confluence of Los Gatos Creek and the Guadalupe River. The northern portion of the project site, north of Park Avenue, is separated from the creek by S. Montgomery Street and S. Autumn Street. South of Park Avenue, the project site is immediately adjacent to the creek, which forms the southeast boundary of the site. Los Gatos Creek passes under the intersection of Park Avenue and Bird Avenue/S. Autumn Street through a culvert that daylights just east of the commercial buildings on S. Autumn Street.

The project would realign S. Autumn Street between Park Avenue and W. San Fernando eastward, towards Los Gatos Creek. Existing commercial buildings and parking lots located between S. Autumn Street and Los Gatos Creek would be removed to provide an average 50-foot buffer between the realigned S. Autumn street and the creek. The setback for the realigned Autumn Street may be less than 50 feet as Los Gatos Creek crosses streets at a diagonal. It is expected that the buffer area would contain a multi-use trail (part of the Los Gatos Creek Trail) and landscaping.
South of Park Avenue, the project would construct a five-story, 1,200-space parking garage. A pedestrian bridge across Park Avenue would connect the garage with the stadium. Access to the garage

[5] The Habitat Restoration Group and Jones and Stokes Associates, Inc., 1999. *City of San Jose Riparian Corridor Policy Study.* Approved by City Council May 17, 1994, revised March 1999.

would be from Park Avenue, and from S. Autumn Street /Bird Avenue. The garage would be oriented toward Park Avenue and the stadium, and would maintain an average 50-foot buffer from Los Gatos Creek.

a. Guideline 1A: Orientation. The RCPS states that new urban development areas and street patterns should be oriented to provide views of the corridor for the purposes of visibility, habitat protection and public safety. Further, the policy states that sites should be designed to draw activity away from riparian areas and that noise generating activities and activities requiring night lighting should be located away from the riparian area.

The stadium would be located approximately 100 to 120 feet west of Los Gatos Creek, taking into account the average 50-foot riparian setback and the width of realigned Autumn Street. Stadium entry plazas would be located facing W. San Fernando Street and Park Avenue, thereby orienting visitor activity to the north and south sides of the stadium, away from Los Gatos Creek. Lighting immediately outside of the stadium would consist of sidewalk and street lighting, typical of lighting in urban areas. Stadium lighting and the public address system for the stadium would be directed inward, toward the seats and playing field, and would not be oriented towards the nearby riparian area. The parking garage located across Park Avenue, south of the stadium, would be located closer to Los Gatos Creek, but would have driveways fronting Park Avenue and S. Autumn Street. Lighting for the garage would be designed to avoid spillover to Los Gatos Creek.

Appropriate design measures would be implemented into the sound and lighting systems for the stadium and the ingress/egress points of the garage to reduce the project's adverse affects on surrounding areas, including the Los Gatos Creek riparian corridor. See Sections V.E, Noise, and V.L, Shade/Shade and Light/Glare, for complete discussions of potential noise and light/glare impacts from the project.

b. Guideline 1B: Incompatible Land Uses. The RCPS identifies land uses that are discouraged within and adjacent to riparian setback areas to preserve the health of existing vegetation and wildlife, protect water quality, and preserve recreation uses in the riparian corridor. Incompatible uses include those that generate dumping and littering, allow off-road vehicle use, create noxious odors and/or involve the use of toxic materials and those that generate high volumes of vehicle traffic. The project is consistent with this guideline as it would remove a retail auto parts store, commercial buildings and surface parking lots immediately adjacent to Los Gatos Creek. The removal of those land uses would allow for the establishment of an average 50-foot setback area between the creek and the realigned S. Autumn Street. The setback of S. Autumn Street would be incrementally reduced at the various points the street crosses the creek, due to the diagonal trend of the creek relative to the grid street system. It is anticipated that the Los Gatos Creek Trail would be located within the new setback area, thereby enhancing recreational uses in the riparian area. While the stadium would increase traffic, the majority of traffic and parking associated with stadium events would occur across the greater Downtown area, and not specifically adjacent to the Riparian Corridor. Pedestrian volumes moving along sidewalks that cross the creek are expected to increase substantially as described in Section V.C, Transportation, Circulation and Parking.

The project would construct a 1,200-space parking garage with ground floor commercial space south of the stadium and Park Avenue, on the Fire Training Facility site, which abuts Los Gatos Creek. The PG&E substation may also be relocated to this site. Current Fire Department training activities

involve the operation of fire fighting apparatus, including fire engines, mobile pumps, etc. Based on the conceptual site plan, the parking garage would be accessed via Park Avenue and S. Autumn Avenue/Bird Avenue, thereby concentrating traffic away from the riparian corridor.

c. Guideline 1C: Setback Area. The RCPS states development adjacent to riparian habitats generally should be set back 100 feet from the outside edge of the riparian habitat (or top of bank, whichever is greater) to reduce anticipated impacts to riparian setback communities and hydrologic regimes. The establishment of an appropriate riparian setback area between the corridor and urban development can prevent loss of groundwater recharge; reduced stormwater detention and filtration; disturbance to wildlife breeding and/or foraging from excessive noise and/or night lighting; loss of edge habitat that reduces value of the corridor for many wildlife species; and the introduction of non-native plant and animal species that reduce riparian habitat quality.

According to the RCPS, exceptions to the 100-foot riparian setback area can be considered in limited circumstances as long as basic riparian habitat protection objectives are achieved. Conditions and circumstances on the stadium site that warrant consideration of a setback less than 100 feet include per the RCPS: 1) the project site is located in Downtown San Jose; and 2) the project proposes redevelopment with uses that are more compatible with the riparian corridor than the existing industrial use (buildings and pavement covering the area up to the edge of the creek bank). In addition, the project is in an urban infill location where properties are already developed with little or no setback.

The project is generally consistent with this guideline as it would create an average 50-foot setback area between the Los Gatos Creek and the realigned S. Autumn Street where no setback between the commercial buildings and parking lots exists. The proposed parking garage with ground floor commercial space south of the stadium would create a new, 50-foot setback between the creek and the proposed garage and PG&E substation. Currently, the paving on the Fire Training Facility site extends clear to the edge of the riparian habitat.

Other recent projects along this reach of Los Gatos Creek have been approved by City Council with less than a 100-foot setback. The San Jose Water Company project at West Santa Clara Street included setbacks of 50 feet along both Los Gatos Creek and the Guadalupe River. The KB Home project at Auzerais Avenue was approved with minimum riparian setback of 40 feet (with a 50-foot average for the length of the riparian corridor north of Auzerais Avenue).

The proposed ballpark average 50-foot riparian setback from Los Gatos Creek can be found to be generally consistent with the RCPS objectives. The proposed setback is considered sufficient by the project's consulting wildlife biologist to protect sensitive species and buffer the habitat from impacts resulting from the operation of the stadium. This conclusion is based on: 1) the existing biological conditions of the riparian corridor adjacent to the site; 2) the presence of pavement up to the edge of the riparian canopy; and 3) the presence of urban land use on both sides of the creek. The removal of existing pavement and commercial buildings and parking lots on both northern (realigned S. Autumn Street) and southern (Parking garage) portions of the project site will provide for a greater creek setback than currently exists and the proposed project is generally consistent with the goal in the RCPS related to the protection of valuable riparian resources without unreasonably limiting the economic and recreational use of adjacent lands. Best Management Practices would be implemented during site preparation and project (see Section V.H, Hydrology and Water Quality).

8. Los Gatos Creek Trail Master Plan

The Los Gatos Creek Master Plan was adopted in 1985, and calls for the enhancement of the creek corridor as part of a regional open space trail system connecting the San Francisco Bay to the Santa Cruz Mountains. While portions of the trail have been implemented, the area within the Diridon/ Arena Area has not yet been constructed. Reach 5 of the Los Gatos Creek Trail is planned as an approximately ⅔-mile long multi-use trail located between Auzerais Avenue and W. Santa Clara Street. Reach 5 will connect to Reach 4 of the Los Gatos Creek Trail to the south and will extend to Confluence Park to the north. The trail will consist of a Class 1, 12-foot-wide paved path, with 2-foot wide compacted base rock shoulders on each side where space allows. Portions of the trail will extend along existing sidewalks that will be improved to accommodate the trail.

A portion of Reach 5 would be located within the stadium project area. The trail project is independent of the stadium project, but would utilize the riparian setback areas resulting from the removal of the commercial buildings and parking lots east of S. Autumn Street and from the development of the Fire Training Facility site. (In the event that the stadium is not constructed, the Reach 5 project would assume land acquisition for the trail alignment). At the time of preparation of this EIR, the Reach 5 project was in early planning stages.

9. The Greenprint

The City's *Greenprint*, adopted in 2000, is a 20-year strategic plan for parks, community facilities and recreational programs. The Capital Action Plan of the *Greenprint* calls for the development of three new parks in the Midtown Area, including a future park at the Fire Training Facility site. The *Greenprint* notes that the project site is within Council District 6, which is expected to experience a substantial increase in residential population by 2020, which will require an additional 70.54 acres of neighborhood/community serving parkland in order to serve this population with adequate levels of park space.[6] The park planned at the Fire Training Facility site would represent 5 acres of this needed parkland. Development of the proposed project would result in the elimination of the planned park site at the existing Fire Training Facility site, contributing the overall shortfall in parkland area for the Midtown/Diridon area. In order to ensure that the loss of the future park site at the Fire Training Facility site does not contribute to the overall shortfall in park space for this area, the City has identified several potential future alternative park sites in the vicinity of the project site that could be explored to address the recreational needs of the neighborhood, as shown in Figure V.N-1. Should the City pursue development of the Fire Training Facility site in association with the ballpark, and identify a preferred location(s) to pursue additional park facilities to offset the loss of the planned park at the Fire Training Facility, additional environmental review would be conducted prior to, and to inform, the City decision to develop a park at that location(s).

[6] David Mitchell, 2006. Parks Planning Manager, City of San Jose Department of Parks, Recreation and Neighborhood Services. Personal communications with the City of San Jose Department of Planning, Building and Code Enforcement. January.

V. SETTING, IMPACTS AND MITIGATION MEASURES

This chapter contains an analysis of each potentially significant environmental issue that has been identified in the Notice of Preparation (NOP) and Initial Study prepared for the Baseball Stadium in the Diridon/Arena Area Project, and, as such, constitutes the major portion of the EIR. Copies of the NOP and Initial Study are included as Appendix A and B, respectively, in this EIR. Sections A through O of this chapter describe the environmental setting of the proposed project site as it relates to each specific issue. The impacts resulting from implementation of the proposed project and mitigation measures that would reduce impacts of the project, if necessary, are also presented in each of the sections.

DETERMINATION OF SIGNIFICANCE

Under CEQA, a significant effect is defined as a substantial, or potentially substantial, adverse change in the environment.[1] The *CEQA Guidelines* direct that this determination be based on scientific and factual data. Each impact and mitigation measure section of this chapter is prefaced by a summary of criteria of significance. These criteria have been developed using the *CEQA Guidelines* and applicable City policies, such as the *San Jose 2020 General Plan* (General Plan).

1. Issues Addressed in the EIR

The following environmental issues are addressed in this chapter:

- Land Use
- Population, Employment and Housing
- Transportation, Circulation and Parking
- Air Quality
- Noise
- Biological Resources
- Geology, Soils and Seismicity
- Hydrology and Water Quality
- Hazards and Hazardous Materials
- Cultural and Paleontological Resources
- Visual and Aesthetic Resources
- Shade/Shadow and Light/Glare
- Utilities
- Public Services and Facilities
- Energy

Preliminary analysis included in the Initial Study (included as Appendix B to this EIR) determined that the proposed project would not result in significant impacts to agricultural or mineral resources. Consequently, these issues are not examined in this chapter of the EIR.

[1] Public Resources Code 21068.

2. Format of Issue Sections

Each environmental topic considered in this chapter is comprised of two primary sections: (1) Setting, and (2) Impacts and Mitigation Measures. An overview of the general organization and the information provided in the two sections is provided below:

- *Setting*. The Setting section for each environmental topic generally provides a description of the applicable physical setting for the project site and its surroundings at the beginning of the environmental review process (e.g., existing land uses, existing soil conditions, existing traffic conditions). An overview of regulatory considerations that are applicable to the specific environmental topic is also provided.
- *Impacts and Mitigation Measures*. The Impacts and Mitigation Measures section for each environmental topic presents a discussion of the impacts that could result from implementation of the proposed Baseball Stadium project. The section begins with the criteria of significance, establishing the thresholds to determine whether an impact is significant. The latter part of this section presents the impacts from the proposed project and mitigation measures, if required. The impacts of the proposed project are delineated into separate categories based on their significance according to the criteria listed in each topical section: less-than-significant impacts, which do not require mitigation measures, and significant impacts, which do require mitigation measures.

Impacts are numbered and shown in bold type, and the corresponding mitigation measures are numbered and indented. Impacts and mitigation measures are numbered consecutively within each topic and begin with an acronymic reference to the impact section (e.g., LU). The following symbols are used for individual topics:

LU:	Land Use
POP:	Population, Employment and Housing
TRANS:	Transportation, Circulation and Parking
AIR:	Air Quality
NOISE:	Noise
BIO:	Biological Resources
GEO:	Geology, Soils and Seismicity
HYDRO:	Hydrology and Water Quality
HAZ:	Hazards and Hazardous Materials
CULT:	Cultural and Paleontological Resources
VIS:	Visual and Aesthetic Resources
SHADE:	Shade/Shadow and Light/Glare
UTIL:	Utilities
PUB:	Public Services and Facilities
ENRG:	Energy

Impacts are also categorized by type of impact, as follows: Less-than-Significant (LTS), Significant (S), and Significant and Unavoidable (SU). These notations are provided following each impact and each mitigation measure to identify their significance before and after mitigation.

A. LAND USE

This section describes existing land uses at the proposed project site and vicinity and evaluates potential land use impacts that could result from the proposed project.

1. Setting

The following setting information provides an overview of the land uses within the project site and surrounding areas. The section begins by discussing the regional setting, and then provides more specific information about the project site and vicinity. A photo location map of project land uses is provided in Figure V.A-1.

a. Regional Setting. The project site is located in the Santa Clara Valley, situated at the southern part of the San Francisco Bay Area within the City of San Jose, as shown in Figure III-1. The Valley was historically used for agricultural production. However, due in part to the establishment and growth of the electronics industry, the Santa Clara Valley today consists largely of urban development.

b. Local Setting. The 23.1-acre project site is located along the western edge of Downtown San Jose, which is situated in the central portion of the City and occupies approximately 3 square miles of the 177 square-mile City. The Greater Downtown is generally divided by SR 87, which runs in a north-south direction. East of SR 87, the Downtown area is currently developed with a mix of office, commercial, hotel, residential, civic, and service uses. Building heights in the central business district of the Greater Downtown Area range from less than 25 feet to over 280 feet. The business district is dominated by commercial office and retail uses. Development west of SR 87 is characterized by residential neighborhoods, older industrial uses, and a limited amount of vacant land. Development is of lower intensity on larger parcels than development in the central business district. Many non-residential buildings are typically no taller than one- to three-stories.

Within the Greater Downtown Area, as described in Chapter IV, Consistency with Plans and Policies, the project site is situated within the Strong Neighborhoods Initiative (SNI) Redevelopment Area and the Diridon/Arena Strategic Development Plan Area (Diridon Area), which is located within the older, urbanized area of the City. The Diridon Area includes a mix of single- and multi-family residential units, commercial, office, and light industrial land uses. The project site is located within the northeastern corner of the Burbank/Del Monte Strong Neighborhoods Initiative Area, which consists of a variety of commercial, industrial, transportation, and residential uses. Prominent land uses in the Diridon Area include the historic Diridon Station (see Photo 1) and Water Company building, the San Fernando light-rail station, and the approximately 100-foot tall HP Pavilion. The area is also characterized by a number of large surface parking lots.

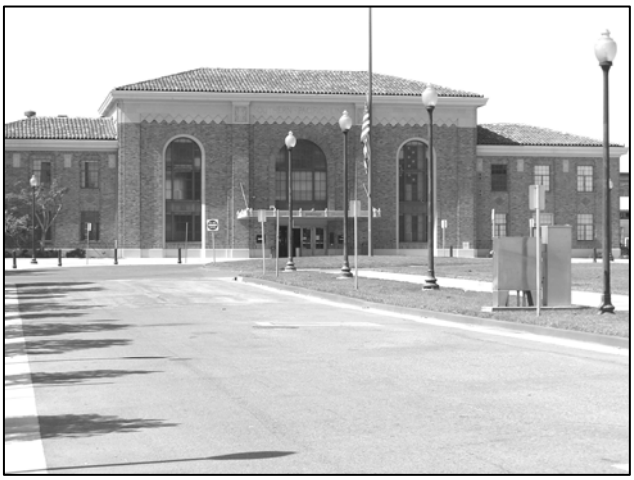

Photo 1: San Jose Diridon Station

The project site extends from W. San Fernando Street south to Los Gatos Creek (where the creek bends westward) and from Los Gatos Creek west to the railroad tracks. Figure V.A-2a and V.A-2b show the locations of minor streets within a ½-mile of the project site. Table V.A-1 lists these minor streets in alphabetical order as they correspond to the grids shown in Figure V.A-2b.

Table V.A-1: Minor Streets in the Project Vicinity

Minor Streets	Grid Location (Fig. V.A-2b)
Atlas Ave.	A2
Brown Ave.	C4
Bush St.	B1
Cahill St.	B2
Cinnabar St.	A1
Cleaves St.	A2
Clinton Place	A1
Columbia Ave.	B3
Drake St.	B4
Dupont St.	B3
Eugene Ave.	A2
Farle Ave.	A3
Florence Way	B2, C3
Garland Ave.	A2
Gifford Ave.	B2,C3
Gregory St.	B4
Hannah St.	B4
Harrison Ave.	B4
Harrison St.	B4
Helen St.	B4
Home St. (W.)	A4, B4
Hulet St.	B4, C4
Illinois Ave.	C3, 4
Jerome St	C4
Josefa St.	B3, C3
Keeble Ave. (N.)	A1
Keeble Ave. (S.)	A2
Lakehouse Ave.	C2
Laurel Grove Way/Lane	B2
Lorraine Ave.	B3
Luther Ave.	A2
McEvoy St.	B3
Minor Ave.	C3, 4
Morrison Ave.	A2
Morrison Ave. (N.)	A1
Morrison Ave. (S.)	A2
Notre Dame Ave.	C1
Pacific Ave.	A3
Parkinson Ct.	A3
Post St.	C1
Rainier St.	A2
Rhodes Ct.	A1
River St.	C1
Royal Ave.	B3
Saint John St. (W.)	B1
Sonoma St.	C2
Sunol St.	A2, 3, 4
White St.	B1
Willis Ave.	C3, 4
Wilson St.	A2
Woz Way	C2

Source: LSA Associates, Inc., 2005.

c. Existing Land Uses on the Project Site. The developed project site is comprised of a number of different land uses, including commercial, light industrial, transportation, utility and office uses. The project site is developed with 17 buildings, totaling 327,045 square feet, some of which are occupied. Information about existing businesses located throughout the project site – including building addresses, Assessor's Parcel Numbers (APNs), site acreage, and approximate building area – is provided in Table V.A-2. An aerial photo of project parcels including project site and surrounding APNs is included in Figure V.A-3. A brief description of each major use on the project site is also included below.

(1) Pacific Gas and Electric Company (PG&E) Substation. The existing PG&E substation is located adjacent to the railroad tracks on the project site and maybe relocated as part of the proposed project. This 1.5-acre facility includes 115-kV transmission lines, underground distribution lines, distribution transformers and electrical switching gear that serves the electrical needs of the Downtown area.

Connecting with the substation are single-mast towers supporting a high voltage 115-kV transmission line. These towers follow W. San Fernando Street, Los Gatos Creek, and Guadalupe Creek northward. South of the substation, 115-kV lines parallel the railroad tracks, where the lines then follow the Los Gatos Creek corridor.

(2) SBC Communications. The existing one-story SBC Communications installation and repair facility is located on S. Montgomery Street. The building, constructed in the 1930s, was built for use as a bakery. The building has been used for telecommunications uses since the 1970s.

(3) Former KNTV Television Studio. The one-story KNTV building is located at the corner of Park Avenue and S. Montgomery Street. KNTV was San Jose's first television station and began broadcasting from this location in the 1950s. This building is currently vacant.

LSA

FIGURE V.A-1

N

0 150 300
FEET

PROJECT BOUNDARY

VIEWPOINT LOCATIONS

Baseball Stadium in the Diridon/Arena Area

Aerial View of Project Site and Land Use Photo Location Map

SOURCE: GLOBEXPLORER; LSA ASSOCIATES, INC., 2005.

I:/SJO530 ballpark/figures/Fig_VA1.ai (02/10/06)

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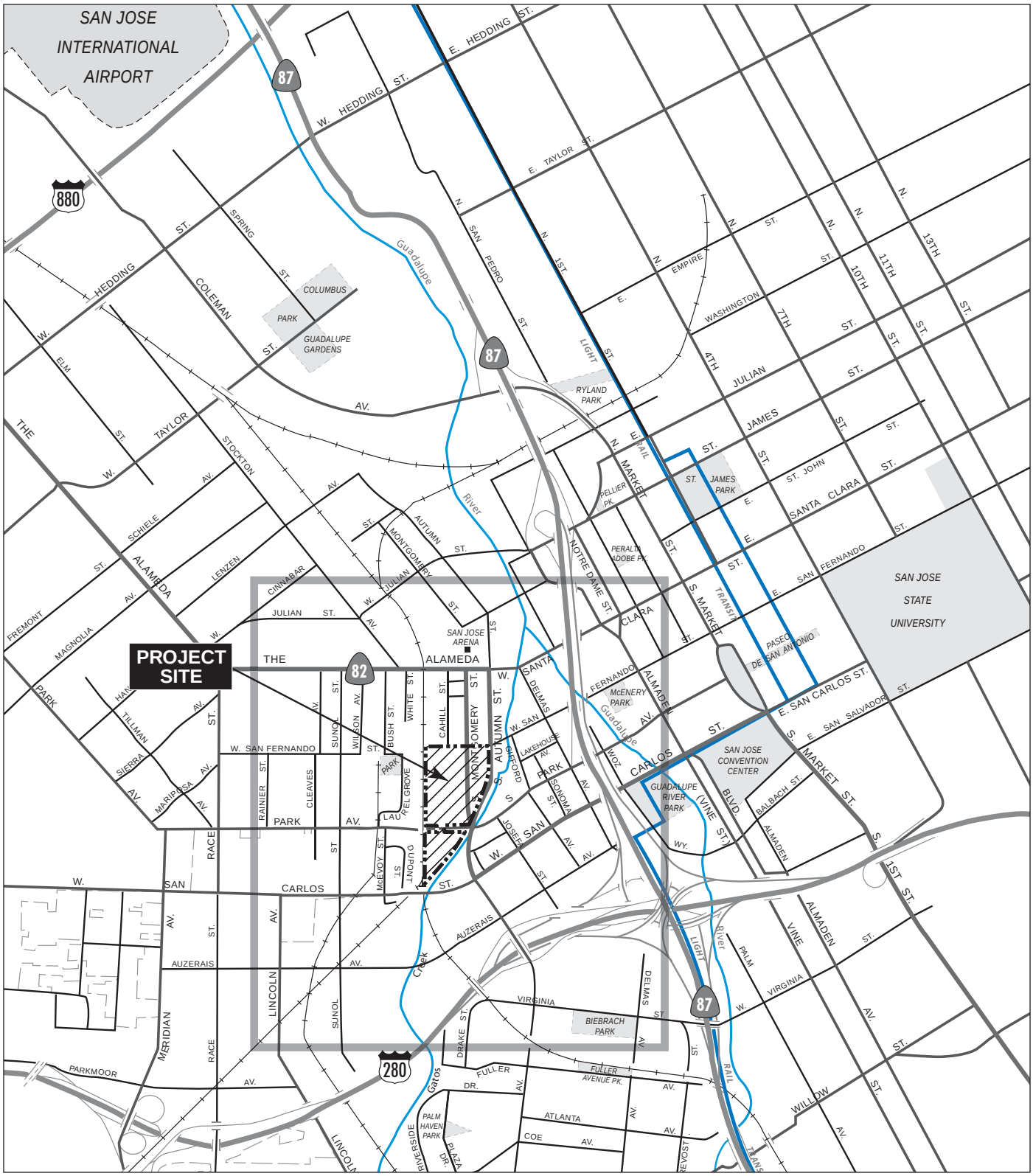

LSA

FIGURE V.A-2a

N

0 800 1600
FEET

PROJECT SITE

MINOR STREET LOCATION AREA

Baseball Stadium in the Diridon/Arena Area

Minor Street Location Map

SOURCE: CALIFORNIA STATE AUTOMOBILE ASSN., 2005; LSA ASSOCIATES, INC., 2005

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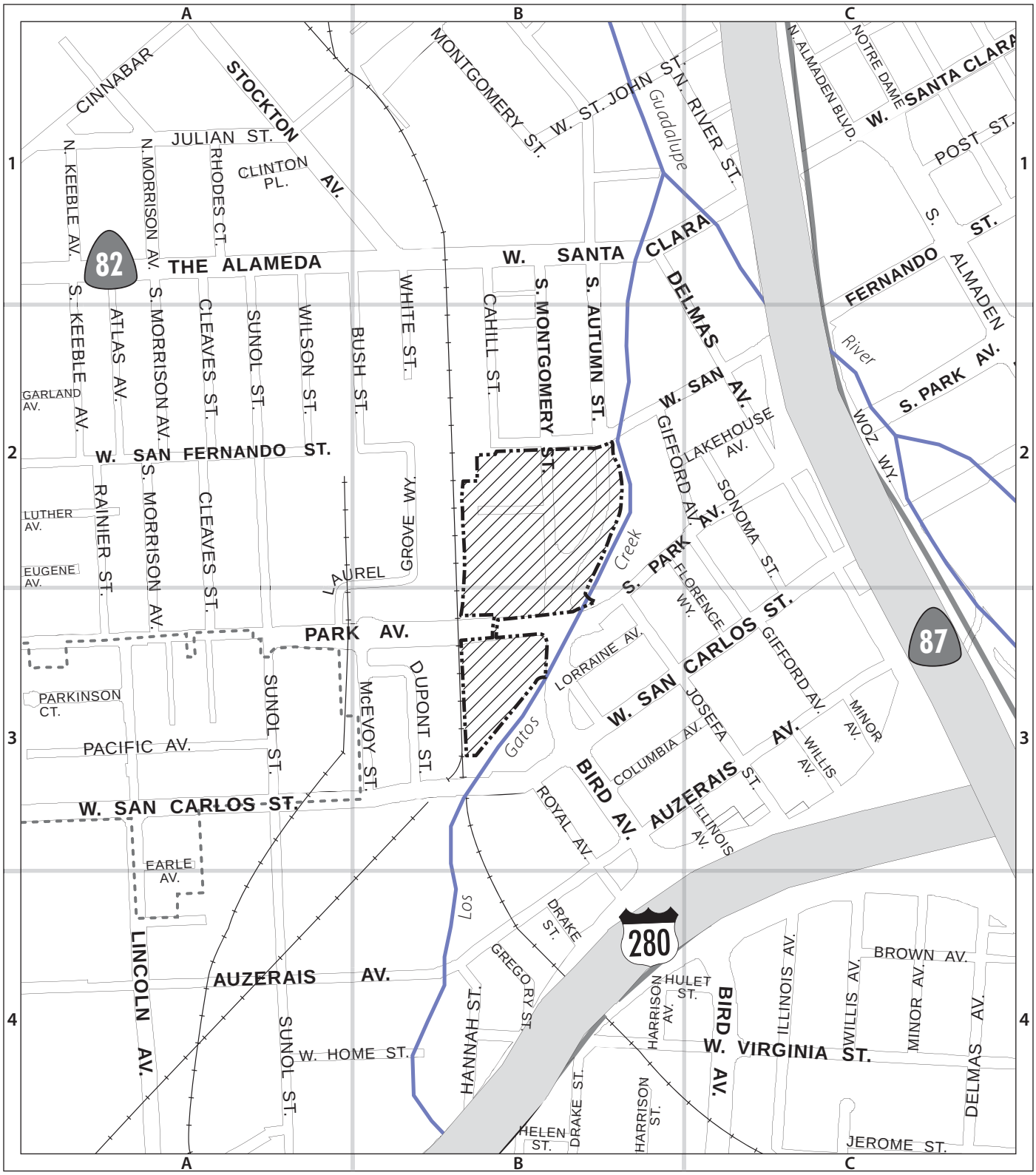

LSA

FIGURE V.A-2b

PROJECT SITE

CITY LIMITS

N

0 400 800

FEET

Baseball Stadium in the Diridon/Arena Area

Minor Streets in the Project Vicinity

SOURCE: CALIFORNIA STATE AUTOMOBILE ASSN. 2005; LSA ASSOCIATES, INC., 2005.

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LSA

FIGURE V.A-3

PROJECT BOUNDARY

N

0 150 300
FEET

Baseball Stadium in the Diridon/Arena Area

APN Location Map

SOURCE: GLOBEXPLORER; CITY OF SAN JOSE; LSA ASSOCIATES, INC., 2005.

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Table V.A-2: Existing Land Uses on the Project Site

Current Land Uses	Address	APNs	Site Acreage	Building Area (Sq. Ft.)
PG&E Substation	630 W. San Fernando St.	261-35-002	1.5	–
Former Stephen's Meat Products	105 S. Montgomery St.	261-35-007, -003, -010, and -006	1.0	27,200
SBC Communications	145 S. Montgomery St.	261-35-027	4.5	150,000
Former KNTV television studio	645 Park Avenue	261-35-014	1.6	15,000
Patty's Inn and single-family residence	102 S. Montgomery St. and 530 W. San Fernando St.	259-48-012	0.15	2,900
Amtrak offices	510 W. San Fernando St. 114 S. Montgomery St. and 115 S. Autumn St.	259-48-011, and -013	1.0	22,964
Arc Gas Products	140 S. Montgomery St.	259-48-052	0.6	12,300
Pacific Blue Traders garden store	150 S. Montgomery St.	259-48-053	1.0	9,710
Creative Security Concepts Inc. Alliance for Community Care	150 and 150A S. Autumn St.	259-48-071, -074	1.0	28,314
CarQuest	170 S. Autumn St.	259-48-060	0.35	12,197
Multi-tenant office building	595 Park Avenue	259-48-073, and -057	0.55	4,500
City of San Jose Fire Department Field Operations and Vehicle Maintenance Facility	245 and 255 S. Montgomery St.	261-37-025	5.0	41,960

Source: City of San Jose and LSA Associates, Inc., 2005.

(4) Former Stephen's Meat Products. The one-story building located at the corner of W. San Fernando Street and S. Montgomery Street was formerly occupied by a family-owned meat processing facility, and is shown in Photo 2. This property was purchased by the San Jose Redevelopment Agency in February 2006. Processing at the site was discontinued in 2002 and the site was used only for distribution activities until September 2005. The building has since been vacant. The building contains several walk-in coolers and freezers, former processing rooms, spice storage rooms, a shipping area and general office space. Several brick and metal smoke houses are also located within the building. A canopy-covered loading area is located along the southern side of the building.

Photo 2: Stephen's Meat Products, 105 S. Montgomery St.

An asphalt and concrete paved parking area on the southern side of the building is surrounded by chain-link fencing. A small customer parking area is located on the eastern side of the building.

(5) National Railroad Passenger Corporation (Amtrak) Offices. The Amtrak offices located at W. San Fernando Street, S. Montgomery Street and S. Autumn Street occupy approximately 22,694 square feet of the 1-acre parcel. The larger of the two buildings is located at the northeast corner of the site and is used mainly for general office purposes. A connected two-story structure at the northwest corner of the building is also used for office space on the second floor; the ground floor is open to the north and south and is used as a vehicle drive/entrance and for covered vehicle parking. The southern portion of this building is used as a warehouse area for storage of various Amtrak and State of California Department of Transportation (Caltrans) maintenance items. The second of the two main buildings is located on the western portion of the site and is used by Amtrak as a computer center for railway control and operations purposes. The remaining portions of the site are used for outdoor storage and vehicle parking.

(6) Patty's Inn and Single-Family Residence. Patty's Inn, a local corner bar, is located at the corner of W. San Fernando Street and S. Montgomery Street, as shown in Photo 3. The building consists of a bar, small kitchen area, storage area with a cooler, and customer seating areas. A storage shed is also located in the parking lot to the south of the building. The one-story, wood-framed residence located behind the bar is currently rented and also includes a small shed or garage at the southwest corner of the parcel. One resident currently rents the property.

Photo 3: Patty's Inn

(7) Arc Gas Products. This one-story building is located at S. Autumn Street. Arc Gas Products operates a specialty gas analytical lab and fills pure and mixed gas canisters. The business also operates a welding supply store, maintenance, and repair shop.

(8) Pacific Blue Traders. This site is located at the intersection of S. Montgomery Street and S. Autumn Street. The site is developed with a single-story, brick-sided warehouse building that has been converted for retail and office uses. The building is currently occupied by Pacific Blue Traders, a home and garden store. A billboard is also located on the roof of the building.

(9) Creative Security Concepts and Alliance for Community Care. This one-story commercial building is located along S. Autumn Street, and borders Los Gatos Creek to the east. The building is currently occupied by a securities business and the Alliance for Community Care, which provides vocational mental health services. Before being renovated for commercial uses, the building was used for medical purposes, including a plasma center, tissue bank and processing facility, and a medical laboratory. The site includes surface parking accommodating approximately 58 parking spaces.

(10) Carquest. This approximately 12,197 square foot one-story commercial building is located along S. Autumn Street. The building is currently occupied by Carquest, a retail auto parts

store. Past uses have included machine shop and auto repair businesses. The site includes a small surface parking lot for business employees and customers.

(11) Three-Story Office Building. This site is located at the corner of S. Autumn Street and Park Avenue. The three-story building contains a number of office suites. Our City Forest, a non-profit group sponsored by the City of San Jose Department of Streets and Traffic, currently occupies one of these office suites. A variety of other businesses occupy the remaining office space.

(12) City of San Jose Fire Department Field Operations and Vehicle Maintenance Facility. This 5-acre facility extends south of Park Avenue to W. San Carlos Street. The site is bounded by Bird Avenue and Los Gatos Creek to the east and the rail line to the west. Photo 4 looks north across the Fire Training Facility, from the W. San Carlos Street overpass. (The light colored roof of the HP Pavilion is visible in the distance.) The training site includes approximately 11,680 square feet of offices, classrooms, and locker rooms, 11,732 square feet of vehicle repair and storage space, 5,688 square feet of general storage space, and a seven-story, 4,860 square foot training tower. The site also includes a specialized piece of concrete called a "Drafting Pit," which acts as a cistern. The Fire Department uses this to draw water through fire truck pumps when testing equipment. There is also a building on the site which houses a water pump to keep the Park Avenue railroad underpass free of standing water during heavy rain events.

Photo 4: Fire Training Site

(13) Streets and Roadways. Streets traversing the project site include: S. Montgomery Street, a two-lane, south-running one-way street; S. Autumn Street, a two-lane, north-running one-way street; Otterson Street, a two-way street that dead ends at the PG&E substation site; and Park Avenue, a four-lane, east-west running street. A landscaped median is located between S. Autumn and S. Montgomery Streets where they meet at Park Avenue.

(14) Planned Los Gatos Creek Trail. A portion of Reach 5 of the Los Gatos Creek Trail would be located on the eastern portion of the project site. Reach 5 is planned as an approximately ⅔-mile-long multi-use trail located between Auzerais Avenue and W. Santa Clara Street which would connect to Reach 4 on the south and Confluence Park on the north. The trail will consist of a Class 1, 12-foot-wide paved path with portions of the trail extending along existing sidewalks that will be improved to accommodate the trail.

The trail project is independent of the stadium project, but would utilize the riparian setback areas resulting from the removal of the commercial buildings and parking lots east of S. Autumn Street and from the development of the Fire Training Facility site. (In the event that the stadium is not constructed, the Reach 5 project would assume land acquisition for the trail alignment). At the time of preparation of this EIR, the Reach 5 project was in early planning stages.

(15) Land Use Designations. The San Jose 2020 General Plan designates the majority of the properties located between W. San Fernando Street and Park Avenue as *Neighborhood/Community Commercial*. The PG&E Substation is designated *Public/Quasi-Public*. Properties east of S. Autumn Street to Los Gatos Creek are designated *General Commercial*. The Los Gatos Creek corridor and the Fire Training site are designated *Public Park and Open Space.* Figure IV-1 shows existing General Plan land use designations for the project site and vicinity.

The majority of the project site is zoned *LI, Light Industrial*. The three-story office building located at the intersection of S. Autumn Street and Park Avenue is zoned *CG, Commercial General*.

d. Land Uses in the Vicinity of the Project Site. A variety of land uses are found in the vicinity of the project site. These land uses are described below. Figure V.A-4 shows existing neighborhoods located within the project vicinity.

(1) Land Uses to the North. W. San Fernando Street, a two-lane road, forms the northern boundary of the project site. North of W. San Fernando Street are commercial, light industrial, and transportation related uses including under- and above-ground light rail lines and Diridon Station, which is on the National Register of Historic Places. Uses along W. San Fernando Street in the vicinity of the project site include a restaurant, commercial establishments, and a two-story tri-plex residence at the corner of W. San Fernando Street and S. Montgomery Street. The Diridon Station and associated surface parking lots are also located north of W. San Fernando Street. Beyond these uses, north of the underground light rail line, are large expanses of surface parking lots serving the area, as well as the 17,000 seat HP Pavilion, which is approximately a ¼-mile from the project site.

Photo 5: View North of W. San Fernando Street

The approximately 100-foot tall HP Pavilion is the dominant feature in the area and hosts hockey games as well as concerts and other sports and musical events. Potential impacts resulting from simultaneous events occurring at the HP Pavilion and the proposed stadium are discussed in Sections V.C, Transportation, Circulation, and Parking, V.D, Air Quality, and V.E, Noise of this EIR. Photo 5 looks north of the project site at the intersection of W. San Fernando Street and S. Autumn Street; the HP Pavilion can be seen in the distance. Directly east of the HP Pavilion is the Arena Green, which includes a segment of the Guadalupe River Trail along the confluence of the Guadalupe River and Los Gatos Creek, lawn and picnic areas, and a carousel. The light rail line continues above-ground northeast of the project site and continues to the San Fernando Street light rail station, just east of Los Gatos Creek, where it continues south and then east through the central downtown area. Southeast of the project site, on W. Santa Clara Street, is the San Jose Water Works building, a City Landmark Structure. Industrial and commercial uses are located beyond the HP Pavilion, north to Coleman Avenue. The airport approach zone (described and analyzed in detail in Chapter IV, Consistency with Plans and Policies) begins northwest of W. Santa

Clara Street and continues west to the Norman Y. Mineta San Jose International Airport, which is located approximately 1½ miles northwest of the project site.

(2) Land Uses to the East. Los Gatos Creek forms the eastern boundary of the project site. Bird Avenue, a six-lane road, and a segment of Los Gatos Creek form the eastern and southeastern boundary of the San Jose Fire Training Facility site. The Delmas Park neighborhood is located immediately east of and adjacent to the creek, as shown in Figure V.A-4. The Delmas Park neighborhood consists predominantly of low- to medium-density residential uses, mixed with some general commercial and some light industrial uses southeast of Park Avenue. Photo 6 looks north from the Delmas Park neighborhood; the peak of the HP Pavilion roof is visible in the distance. Farther to the east, SR 87 runs in a north-south direction, separating the Diridon Area from the Core Area of Downtown San Jose. The Guadalupe River Park and Children's Discovery Museum are located immediately east of SR 87, and the San Jose Convention Center is located east of the Guadalupe River. The Downtown Core Area is characterized by hotel and office buildings ranging from less than 25 feet to over 280 feet tall. Service, transportation, and public/quasi public-related uses and surface parking lots also dominate the area. San Jose State University is located on the eastern edge of the Downtown Core Area, and encompasses several city blocks. The City Hall complex is also located in this area. Beyond the university, land uses transition to low- and medium-density residential uses.

Photo 6: Gifford Avenue in the Delmas Park neighborhood, east of the project site

(3) Land Uses to the West. The project site is bordered on the west by railroad tracks running south of Diridon Station. There are approximately seven sets of tracks at the station's widest point; the right of way ranges from 120 to 290 feet. These lines continue southeast of the project site and accommodate Caltrain, Altamont Commuter Express (ACE), and Amtrak trains, which run frequently through the area. Diridon Station is also a light rail stop and the Vasona Corridor light rail lines parallel the rail-road tracks south to W. San Carlos Street where they continue in a southwestern direction. Immediately west of the tracks, and north of Park Avenue, medium-density residential townhomes are currently being constructed. Photo 7 shows these townhomes beyond the

Photo 7: Townhomes, west of the railroad tracks

rail line, looking west from Diridon Station. Farther west, and north of Park Avenue land uses consist primarily of medium-density residences. South of Park Avenue medium-density residential uses are mixed with general commercial and office uses. As shown in Figure V.A-4, the established Burbank/Del Monte neighborhood extends west of the site, and is characterized by medium-low density and commercial uses. The neighborhood is bordered on the west by Interstate 880 (I-880), which runs in a north/south direction approximately 2 miles from the project site.

(4) Land Uses to the South. The southern boundary of the project site is formed where Los Gatos Creek meets W. San Carlos Street, a four-lane road. The creek continues upstream south of the Fire Training Facility and west of Bird Avenue and extends throughout San Jose into the City of Los Gatos. Land uses immediately southeast of Los Gatos Creek to the intersection of W. San Carlos Street and Bird Avenue consist of industrial and commercial uses. Immediately southwest of the project site, across W. San Carlos Street and west of Los Gatos Creek, approximately 150 townhomes and approximately 235 multi-family condominiums are currently under construction. The future San Carlos Street light rail station is also located in this area. Farther south of W. San Carlos Street and west of Los Gatos Creek, land uses consist primarily of light to heavy industrial uses including large industrial and research and development parks. As shown in Figure V.A-4, the Gardner neighborhood is located in the area southeast of the project site. East of Los Gatos Creek, land uses consist of medium-density residential and regional commercial uses. High density townhomes and condominiums are being developed east of the site, at the corner of W. San Carlos Street and Bird Avenue. Beyond these uses, Interstate 280 (I-280) curves in a northeast/southwest direction approximately a ½-mile south of the project site. South across I-280, land uses transition to medium-low density uses east of Los Gatos Creek and medium-high density uses west of the creek. The Willow Glen neighborhood is located farther south, and is characterized by lower density single-family uses.

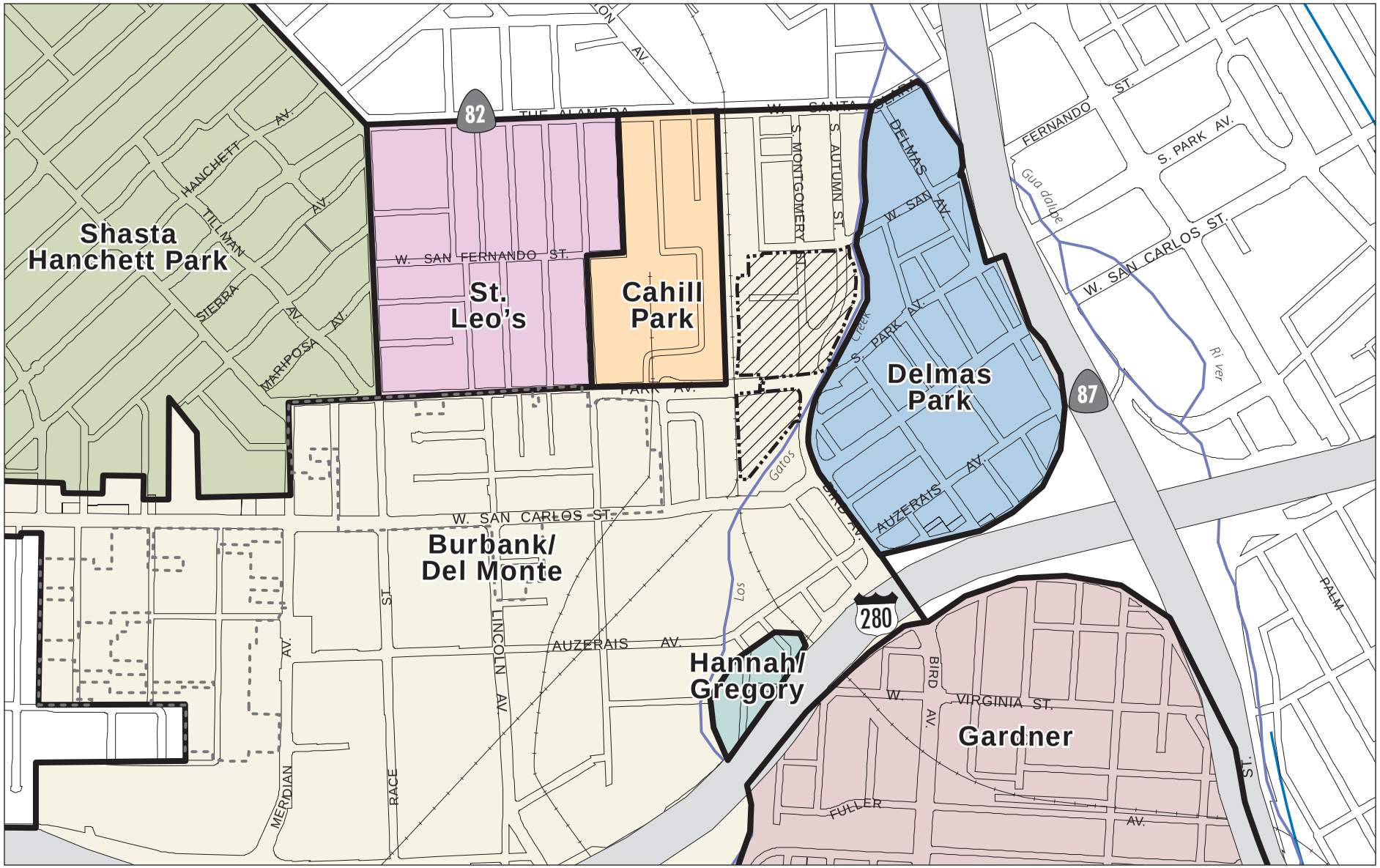
2. Impacts and Mitigation Measures

The following section presents a discussion of the impacts related to land use that could result from implementation of the proposed project. The section begins with the criteria of significance, establishing the thresholds to determine whether an impact is significant. The latter part of this section presents the land use impacts from the proposed project and the mitigation measures, if required. Impacts are delineated into separate categories based on their significance according to the criteria listed below: less-than-significant impacts, which do not require mitigation, and significant impacts, which do require mitigation.

This land use section addresses issues of land use compatibility. The related issues of aesthetics and shade/shadow and light/glare are separately addressed in sections that follow (Sections V.K and V.L).

a. Criteria of Significance. The proposed project would have a significant impact if it were to:

- Divide the physical arrangement of an established community;
- Introduce new land uses that would conflict with established or proposed uses; or
- Conflict with applicable land use plans, policies, or regulations adopted by agencies with jurisdiction over the project (including, but not limited to, the general plan, specific plans or zoning ordinance), adopted for the purpose of avoiding or mitigating an environmental effect.



LSA

FIGURE V.A-4

PROJECT SITE

CITY LIMITS

NEIGHBORHOOD BOUNDARIES

N

0 500 1000

FEET

Baseball Stadium in the Diridon/Arena Area

Neighborhoods Within the Project Vicinity

SOURCE: CITY OF SAN JOSE; LSA ASSOCIATES, INC., 2006.

I:/SJO530 ballpark/figures/Fig_VA4.ai (02/13/06)

back of Figure V.A-4

b. Less-than-Significant Land Use Impacts. Less-than-significant impacts of the proposed project are discussed below.

(1) Property Acquisition and Relocation of Existing Businesses. The Redevelopment Agency is in the process of negotiating with individual property owners to purchase these properties. To date 5 of 16 properties are owned or are in negotiations with the San Jose Redevelopment Agency. In compliance with State Redevelopment Law, businesses displaced by the proposed project would receive placement assistance from the Redevelopment Agency in finding new locations to operate their businesses.

In addition, the billboard on the roof of Pacific Blue Traders would need to be relocated.

(2) Divide an Established Community. The project site is generally bounded by W. San Fernando Street to the north, Los Gatos Creek to the east, Los Gatos Creek and W. San Carlos Street to the south, and the railroad tracks to the west. The railroad tracks to the west and Los Gatos Creek to the east currently serve as major boundaries from surrounding development on either side of the project site. The project site is currently disconnected from the core of the Downtown area by both Los Gatos Creek and SR 87.

Construction of the proposed stadium and associated parking structure would require demolition of 17 existing buildings totaling 327,045 square feet. Demolition of 12 buildings south of W. San Fernando Street to Park Avenue and east of the railroad tracks to Los Gatos Creek, on the location of the proposed stadium, would be required. These one- to three-story structures total approximately 285,085 square feet of existing commercial, light industrial, and office uses, and one residence. Demolition of four one-story buildings and the seven-story live fire training tower, totaling 41,960 square feet, south of Park Avenue and west of Los Gatos Creek, on the location of the proposed parking garage and PG&E substation may also be required. Demolition of these structures would not break up an existing community as there as there are few residences in the area and only one residence on the project site. Additionally, the Diridon/Arena Area Strategic Development Plan and Midtown Specific Plan designated this area for redevelopment, with the intention of creating new uses in the area that would better connect the community to the traditional downtown center.

Once demolition is complete, construction of the proposed stadium and garage would not divide the physical arrangement of an established community. The project site is separated from residential uses on the west by the railroad tracks and on the east by Los Gatos Creek. The proposed stadium would be of a similar scale as the HP Pavilion and would connect with existing uses north of the site, specifically the HP Pavilion, which would reinforce the concept of a sports and entertainment district at the western edge of the Downtown. Proposed year-round restaurant, retail, and community facilities at the stadium would draw residents west of the Downtown to the Diridon Area. Year-round activity at the stadium could result in an increase in the development of pedestrian-serving uses in the project vicinity. This would serve to better connect the Diridon Area to the Downtown and would encourage pedestrian activity in the area. In this way, development on this site would serve to better connect the urban fabric of the area.

(3) Land Use Conflicts. Land uses on the project site, and in the immediate vicinity of the project site, have historically been industrial and commercial in nature. The proposed project would include the development of a baseball stadium with a height of approximately 165 feet. Scoreboard

and lighting structures would increase the total height of the structure to approximately 200 and 235 feet, respectively. This change in land use and increase in land use intensity would substantially alter the existing character of the project area; however, the proposed project would not substantially conflict with established or proposed uses surrounding the site.

It should be noted that the types of land use conflicts that would be considered significant here are those that have an intrinsic land use basis. In today's world of advanced design solutions and building materials (in which creative site planning and sensitive building massing can ameliorate many conflicts of adjacency, and noise suppressing window treatments, landscaping, and air conditioning can reduce physical impacts), land use impacts *per se* are rare.

- North of the site, across W. San Fernando Street land uses are primarily entertainment oriented, including the HP Pavilion and associated surface parking lots; the proposed stadium would complement this use, and create more activity in the area. Due to the proximity of the aircraft flight paths for the Norman Y. Mineta San Jose International Airport, development on the project site is subject to height restrictions pursuant to Federal Aviation Regulations, Part 77. These federal regulations define a set of imaginary surface restrictions which radiate out several miles from an airport's runways. The entire project site north of Park Avenue is limited to a maximum elevation of 208 feet above mean sea level, with the portion of the site south of Park Avenue limited to a maximum elevation ranging from 208 to 240 feet above mean sea level. As the ground elevation of the site is roughly 95 to 100 feet, any structure higher than approximately 110 feet in height above grade, including the proposed stadium (165 feet), scoreboards (200 feet), and lights (235 feet) would exceed these elevation limit standards.

  Proposed development requiring notification to the FAA under Federal Aviation Regulations, Part 77, must receive a Determination of No Hazard prior to development permit approval in compliance with General Plan Aviation Policy #47. Proposed development which includes structures exceeding the FAA's imaginary surface standards are required to include incorporation of any FAA requirements specified in a Determination of No Hazard (to be obtained prior to development approval) as well as dedication of avigation easements to the City of San Jose in compliance with General Plan Aviation Policy #49. Although the baseball stadium and associated structures would exceed the FAA's imaginary surface standards by as much as 125 feet, they would not present a hazard to the safe operation of the airport as the appropriate FAA clearances would be obtained prior to project approval. In addition, the FAA may require a temporary flight restriction (TFR) for certain events held at the stadium.

- East of the site is Los Gatos Creek. The eastern edge of the realigned S. Autumn Street would be set back an average of 50 feet from the top of the creek bank, and riparian-type landscaping would be planted in this area. A multi-use trail is proposed on this setback as part of another project planned to implement the Los Gatos Creek Trail Master Plan.

  The proposed project would increase pedestrian and vehicular activity in the area, thereby increasing potential disturbances to nearby Delmas Park residences, east of Los Gatos Creek (for example, along Gifford Avenue and Florence Way). These residents are already subject to major entertainment related activity in the area, due to events at the HP Pavilion.

  In addition to increased activity in the area, potential noise disturbances could occur due to stadium events. However, this is an urban neighborhood located on the edge of the Greater Downtown and surrounded by some of the highest density development in the City. Potential adverse effects on nearby residential uses due to increased pedestrian and vehicular activity and increased

noise levels are discussed in Section V.C, Transportation, Circulation, and Parking, and Section V.E, Noise, respectively. In terms of land use conflicts per se, the impact would be less than significant (i.e. residential and large scale civic and entertainment uses can exist in close proximity to one another).

- South of the site land uses primarily include active rail lines and light to heavy industry. Proposed stadium uses would not conflict with these established uses. However, future residents of the townhomes and multi-family condominiums currently under construction south of the project site, across W. San Carlos Street, would be subject to increased pedestrian and vehicular activity and increased noise levels due to operation of the proposed project. As discussed above, these potential adverse effects are discussed in Section V.C, Transportation, Circulation, and Parking and Section V.E, Noise, respectively. In terms of land use conflicts per se, the impact would be less-than-significant.
- West of the site, across the railroad tracks, land uses are primarily medium density residential and commercial; the proposed stadium would be separated from these areas by the railroad tracks. As discussed above, potential adverse effects are discussed in Section V.C, Transportation, Circulation, and Parking and Section V.E, Noise, respectively. In terms of land use conflicts per se, the impact would be less-than-significant.

(4) Conflict with Applicable Land Use Plans. An in-depth discussion of the proposed project relationship with applicable plans can be found in Chapter IV, Consistency with Plans and Policies. The City and other partner jurisdictions are preparing a Santa Clara Valley Habitat Conservation Plan, anticipated for adoption in 2009. This plan is also discussed in Chapter IV, Consistency with Plans and Policies.

c. Significant Land Use Impacts. Implementation of the proposed project would result in the following significant land use impact.

<u>Impact LU-1</u>: Fireworks displays occurring during stadium events could present a hazard to the safe operation of the San Jose International Airport. (S)

Occasional fireworks displays at the stadium could interfere with the safe operation of the San Jose International Airport. The proposed stadium currently does not have a proposed schedule for firework displays. However, ballparks typically have a three minute mini-display at the end of each ballgame, several longer shows for special nights that do not exceed ten minutes, and an occasional major show that may last for up to 30 minutes, such as might occur on the 4th of July. The City would require fireworks sponsors to obtain a permit as they are temporary events. The following mitigation measure would ensure that fireworks displays would have a less than significant impact on the operation of the San Jose International Airport.

> <u>Mitigation Measure LU-1</u>: In addition to obtaining the required City permit, fireworks sponsors shall coordinate events in advance with airport staff, the air traffic control tower, and the FAA (if requested by the FAA) to ensure that the activity (timing, height, and materials) does not pose a hazard to the safe operation of the San Jose International Airport. (LTS)

B. POPULATION, EMPLOYMENT AND HOUSING

This section describes existing and projected population, employment and housing statistics, and evaluates impacts the proposed project may have on population, employment and housing.

1. Setting

The following sections utilize data from the U.S. Census Bureau, the Association of Bay Area Governments (ABAG), and the City of San Jose 2020 General Plan.

a. Population. The City of San Jose is an urbanized community located in Santa Clara County in the southern region of the San Francisco Bay area. Founded in 1777 with a then population of 66 persons, San Jose, or Pueblo de San Jose, was the first civilian settlement in California.[1] By early-1850, the City had formally incorporated with a population of approximately 4,000 persons, and served as the State capital for the first two sessions of the California legislature.[2]

In 2000, the City's incorporated area population of 894,943 persons comprised approximately 53 percent and the total Santa Clara County population of 1,682,585.[3] Also in 2000, the City's population for the first time exceeded that of the City of Oakland and the City of San Francisco, making San Jose the most populous community in the Bay Area. By 2005, ABAG estimated San Jose's population to have increased 4.6 percent over the previous 5-year period to 985,000 persons. ABAG estimates that by 2030, San Jose's total population will increase an additional 36 percent from 2005 reaching approximately 1,339,400 persons, comprising 61.7 percent of Santa Clara County's population.[4] A summary of San Jose and Santa Clara County population data is provided in Table V.B-1.

As described in Section V.A, Land Use, the 23.1-acre project site is developed with urban uses, including one single-family residence associated with the corner bar known as Patty's Inn. In 2005, the population associated with the one single-family residence on the site was approximately three persons, comprising a miniscule portion of the City's total population.[5]

b. Employment. Two types of employment data are described below, including: 1) Total Jobs – which indicates the number of all jobs within the community; and 2) Employed Residents – which indicates the number of residents of working age who actively participate in the civilian labor force. The civilian labor force includes: those who are employed (excepting those in the armed forces); and those who are unemployed but actively seeking employment. Those residents who have never held a job, who have stopped looking for work, or who have been unemployed for a long period are not considered to be in the labor force. Table V.B-2 provides employment data for San Jose and Santa Clara County. Data provided in the "difference" row of Table V.B-2 illustrate how the number of jobs provided is impacted by the labor force available to fill those jobs. A *positive* difference indicates that

[1] City of San Jose, 2005. Websites: www.sanjoseca.gov; www.usacitiesonline.com; www.leginfo.ca.gov.

[2] Ibid.

[3] US Census, 2000. Summary File (SF) 1, 100-Percent Data, Table DP-1. website: http://factfinder.census.gov.

[4] Association of Bay Area Governments (ABAG), 2004. *Projections 2005, Forecasts for the San Francisco Bay Area to the Year 2030.* December.

[5] Population calculated by multiplying the number housing units within the project area (i.e., one unit) by the average household size from 2000 US Census, which was 3.2 persons per dwelling unit.

Table V.B-1: Total Population –San Jose and Santa Clara County

Source	2000		2005		2020		2030	
	City	County	City	County	City	County	City	County
U.S. Census 2000	894,943	1,682,585	–	–	–	–	–	–
ABAG *Projections 2005*	941,998	1,682,585	985,000	1,750,100	1,196,900	2,073,300	1,339,400	2,267,100

Note: ABAG data include persons within San Jose's Sphere of Influence.

Sources: US Census, 2000. SF 1, Table DP-1; ABAG, 2004. *Projections 2005.*

Table V.B-2: Employment Data – San Jose and Santa Clara County

	2000		2005		2020		2030	
	City	County	City	County	City	County	City	County
Total Jobs	432,480	1,044,130	375,750	903,840	514,220	1,161,930	617,790	1,339,970
Employed Residents	470,027	863,432	401,970	734,000	531,910	944,200	626,240	1,086,300
Difference (Jobs-Employed Residents)	-37,547	180,698	-26,220	169,840	-17,690	217,730	-8,450	253,670

Note: ABAG data include employment for areas within San Jose's Sphere of Influence.

Source: ABAG, 2004. *Projections 2005;* LSA Associates, 2005.

more jobs are provided in the community than there are workers available to fill those jobs; and a *negative* difference indicates that the number of employed residents exceeds the number of jobs provided to accommodate the demand for them in the community.

(1) Total Jobs. In 2000, San Jose had 432,480 total jobs which comprised approximately 41 percent of all jobs provided in Santa Clara County. ABAG estimates that the total number of jobs in San Jose decreased 13 percent to 375,750 total jobs over the five year period between 2000 and 2005. By 2030, ABAG projects that the total number of San Jose jobs will increase an additional 64 percent from 2005, reaching approximately 617,790 total jobs and providing almost half of all Santa Clara County jobs at 46 percent.

The number of existing jobs on the project site was estimated by applying standard employment density factors for commercial, office, and industrial land use categories. Generally, commercial uses provide one job per 300 to 800 square feet of building area; office uses provide one job per 250 to 350 square feet of building area; and industrial uses provide one job per 350 to 850 square feet of area.[6] For the purposes of this analysis, mid-point employment density factors for each of these land use categories were used: Commercial – 1 job per 500 square feet; Office – 1 job per 300 square feet; and Industrial – 1 job per 600 square feet. Applying these employment density factors to the known developed square footages for existing and occupied land uses on the project site in 2005 results in an estimate of 320 total jobs on the project site, accounting for a fraction of all City jobs (i.e., 0.09 percent).

(2) Employed Residents. In 2000, ABAG estimated that San Jose had 470,027 employed residents, comprising 54 percent of all Santa Clara County employed residents. ABAG estimates that

[6] Natelson Notes-An Economic Development Resource of the Natelson Company, Inc. (TCNI), Spring 2002.

the total number of employed residents decreased 14 percent to 401,970 persons over the five-year period between 2000 and 2005. By 2030, ABAG projects that the number of employed residents in San Jose will increase an additional 55 percent from 2005 to 626,240 persons, comprising 57 percent of Santa Clara County's workforce.

c. Housing. The following section describes the housing characteristics of San Jose, Santa Clara County, and the project site.

(1) Households. In 2000, San Jose had 291,370 households, comprising approximately 51 percent of the 565,863 households in Santa Clara County. ABAG estimates that the total number of households in San Jose had increased 6 percent by 2005, to 309,020 households. By 2030, ABAG estimates the number of San Jose households will increase an additional 35 percent from 2005, reaching 417,790 households. A summary of San Jose and Santa Clara County household data is provided in Table V.B-3.

The average household size for San Jose was 3.19 persons in 2000, which was slightly larger than the Santa Clara County average of 2.92 persons per household.[7] Average household size has increased in both San Jose and Santa Clara County since 1990, when it was 3.08 and 2.81, respectively. ABAG projects household sizes for San Jose and Santa Clara County will remain relatively constant through 2030 at 3.18 and 2.93 persons per household, respectively.

As previously described, in 2005, the project site had one housing unit with an estimated household population of three persons.

(2) Housing Stock. The housing stock in the City of San Jose is characterized primarily by single-family homes, a smaller percentage of multi-unit units, and relatively low vacancy rates. In 2000, the US Census reported that San Jose had 281,706 housing units with 98 percent of those units occupied (i.e., 276,417 occupied units). Of these, the US Census reported that 67 percent were single-family attached or detached units, 29 percent were multi-family units, and 4 percent were mobile homes. According to the 2000 U.S. Census, 62 percent of all occupied housing units in San Jose were owner-occupied and the remaining 38 percent were renter-occupied.

d. Jobs-to-Housing Balance. The jobs-to-housing balance concept is used to determine whether a community has an adequate number of jobs available to provide employment for all the residents within the community seeking employment. Understanding this "balanced" relationship concept can be useful to our understanding of the interconnections among housing affordability, traffic flows and congestion, and air quality within a community and its broader region.

(1) Methodology. Typically, the term "jobs-to-housing balance" is used to refer to a relationship between jobs and housing units within a community. A jobs-to-housing units ratio of 1.5 is considered ideal, which takes into account residents who do not participate in the labor force (e.g., those who are retired, disabled, or students). The 1.5 jobs-to-housing units ratio indicates a community has an adequate number of jobs to meet the demand for jobs by its residents, and therefore, is in balance.

[7] US Census, 2000. Summary File (SF) 1, 100-Percent Data, Table DP-1.

Table V.B-3: Household Data – San Jose and Santa Clara County

Data Type	1990		2000		2005		2020		2030	
	City	County	City	County	City	County	City	County	City	County
Households	250,218	520,180	291,370	565,863	309,020	595,550	370,620	692,440	417,790	762,720
Household Population	770,745	1,463,219	930,686	1,652,871	973,200	1,719,200	1,184,900	2,041,800	1,327,400	2,235,600
Average HH Size	3.08	2.81	3.19	2.92	3.14	2.89	3.19	2.95	3.18	2.93

Note: ABAG data for 2005, 2020, and 2030 include all households within San Jose's Sphere of Influence.

Source: US Census, 1990. STF 1, Table DP-1; US Census, 2000. SF-1, Tables DP-1 and QT-H1; ABAG, 2004. *Projections 2005*; LSA Associates, 2005.

A more helpful indicator of balance, however, is the relationship between the number of jobs provided to the number of residents seeking employment (i.e., employed residents). An ideal jobs-to-employed residents ratio is 1.0, which indicates that every resident seeking a job could find one within the community.

A jobs-to-employed residents ratio that is greater than one indicates the community provides more jobs than it has residents seeking those jobs. With this out-of-balance condition, the community is likely to experience in-commuting traffic congestion from people coming to jobs from outside the area, as well as intensified pressure for additional residential development to house the labor force demanded. Conversely, a jobs-to-employed residents ratio of less than one indicates a community has fewer jobs than employed residents demanding employment. With this converse out-of-balance condition, residents would need to commute outside of the community (i.e., out-commute) for employment. The resulting commuting patterns can lead to traffic congestion and adverse effects on both local and regional air quality.

This ratio does not, however, account for regional in- or out-commuting due to job/labor mismatches or housing affordability. Even if a community has a numerical balance between jobs and housing/ employed residents, sizeable levels of in-commuting and out-commuting are likely, where employment opportunities do not match the skills and educational characteristics of the local labor force. In such instances, regional commuting tends to occur. For example, a numerically balanced community may have high housing costs and low-wage jobs, thus encouraging its residents to out-commute for their high wage jobs elsewhere, and its workers to in-commute from outside the community where housing costs are affordable to their low wage incomes. This condition is often referred to as a jobs-to-housing *mis*match. A jobs-to-housing match would indicate that the types of jobs provided "matched" the income needs of the employed workers within the community.

(2) Jobs-to-Employed Residents in San Jose and Santa Clara County. According to ABAG, San Jose had more employed residents than total jobs in 2000 and 2005, indicating a somewhat higher than balanced level of out-commuting. San Jose's jobs-to-employed resident ratios in 2000 and 2005 of 0.92 and 0.93, respectively, indicate the community is almost balanced, with an adequate number of jobs available to accommodate San Jose's demand for jobs. Santa Clara County, however, has slightly more total jobs available than employed residents with a job-to-employed residents ratio of 1.21 in 2000, and 1.23 in 2005. By 2030, ABAG projects that San Jose's jobs-to-employed residents ratio will increase to 0.99, almost reaching a 1:1 balance of jobs to people

demanding jobs. Similarly, Santa Clara County's jobs-to-employed residents ratio will remain constant through 2030 at 1.23, with slightly more jobs than workers Countywide.

The condition of the City of San Jose jobs-to-employed residents ratio between 0.93 and 0.99 over the next 25 years, and the County with a ratio of about 1.23 is not uncommon among cities and counties in the San Francisco Bay Area.

Table V.B-4 provides housing and employment data for San Jose and Santa Clara County. This table also provides data indicating what the jobs-to-housing units ratios would be if this more general methodology was applied. As described earlier in this section, a jobs-to-housing units ratio of 1.5 is considered ideal and indicates that a balanced number of jobs are provided given the number of housing units within the community.

Calculating the jobs-housing balance for such a small area (i.e., 23.1-acre project site) is not a useful exercise because the existing 320 jobs on the site far exceeds the one housing unit with less-than three employed workers.

e. Regulatory Considerations. The following section provides City goals and objectives applicable to the proposed project.

(1) San Jose 2020 General Plan Goals and Policies. Applicable population, employment and housing goals and policies from the San Jose 2020 General Plan are described below.

City Concept

- *Balanced Community Goal 4*: Develop a balanced and complete community in terms of land use distribution and densities, housing types and styles, economic development and job opportunities, and opportunities for social and cultural expression.
    - *Balanced Community Policy 1*: The City should foster development patterns which will achieve a whole and complete community in San Jose, particularly with respect to improving the balance between jobs and economic development on the one hand, and housing resources and resident work force on the other. A perfect balance between jobs and housing may not be achievable but the City should attempt to improve this balance to the greatest extent feasible.
    - *Balanced Community Policy 4*: Business and industry should be encouraged to provide job opportunities for all members of the community's work force.

Community Development

- *Economic Development Goal 1*: Create more job opportunities for existing residents, particularly those who suffer from chronic unemployment, to improve the balance between jobs and resident workers.
- *Economic Development Goal 2*: Create a stronger municipal tax base by obtaining a greater share of the total industrial and commercial development in the County, and by nurturing and encouraging expansion of the existing industrial and commercial development in the City.
    - *Economic Development Policy 1*: The City should reduce the present imbalance between housing and employment by seeking to obtain and maintain an improved balance between jobs and workers residing in San Jose. A perfect balance between the number of jobs and employed residents may not be achievable but the City should strive to achieve a minimum ratio of 0.80 jobs/employed residents to attain greater fiscal stability.
    - *Economic Development Policy 2:* To enhance its economic development and employment opportunities, the City should: Seek to attract businesses and industries which are particularly suited to the area; encourage businesses and industries to provide jobs suitable for the City's unemployed and underemployed labor force.

Table V.B-4: Housing and Employment Data – San Jose and Santa Clara County

	2000		2005		2020		2030	
	City	County	City	County	City	County	City	County
Total Jobs	432,480	1,044,130	375,750	903,840	514,220	1,161,930	617,790	1,339,970
Employed Residents	470,027	863,432	401,970	734,000	531,910	944,200	626,240	1,086,300
Housing Units	291,370	565,863	309,020	595,550	370,620	692,440	417,790	762,720
Jobs-to-Housing Unit Ratio (Ideal is 1.5)	1.48	1.86	1.22	1.52	1.39	1.68	1.48	1.76
Jobs-to-Employed Residents Ratio (Ideal is 1)	0.92	1.21	0.93	1.23	0.97	1.23	0.99	1.23

Source: ABAG, 2004. *Projections 2005*; LSA Associates, Inc., 2005.

Housing

- *Goal 2*: Provide decent housing in a livable environment for all persons, including the homeless, regardless of such factors as age, race, sex, marital status, ethnic background, or income.
  - *Conservation and Rehabilitation Policy 9*: Conservation and rehabilitation of the existing housing stock is an important means of meeting the objective of providing housing opportunities for all San Jose residents. In furtherance of this policy, most neighborhoods are designated on the land Use/Transportation Diagram at existing densities to provide an incentive for the preservation and maintenance of the housing stock. furtherance of this policy, most neighborhoods are designated on the land Use/Transportation Diagram at existing densities to provide an incentive for the preservation and maintenance of the housing stock.

(2) Diridon/Arena Strategic Development Plan. As described in Chapter IV, Consistency with Plans and Policy, the project site is located within the 64.5 acre planning area of the Diridon/ Arena Strategic Development Plan. Of this plan's three development zones, the majority of the 23.1-acre project site is located in the Station South area, which envisions transit-oriented mixed use development that would allow up to 150 units per acre combined with office, retail, or other non-residential uses.

2. Impacts and Mitigation Measures

This section analyzes impacts related to population, employment and housing that could result from implementation of the proposed project. The section begins with the criteria of significance, which establish the thresholds to determine whether an impact is significant. The latter part of this section presents the impacts associated with the proposed project and identifies mitigation measures, as appropriate.

a. Criteria of Significance. The proposed project would have a significant impact on population, employment, and housing if it would:

- Displace substantial numbers of existing housing or people, necessitating the construction of replacement housing elsewhere;
- Induce substantial population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure);
- Create a substantial jobs-to-housing imbalance.

b. Less-than-Significant Population, Employment and Housing Impacts. The following discussion examines potential less-than-significant impacts of the proposed project.

(1) Displacement of Housing or People Necessitating the Construction of Replacement Housing Elsewhere. There is one existing housing unit on the proposed project site with an estimated household population of three persons. Development of the proposed project would require that this one existing single-family residence on the site would be removed and the associated household population relocated. Displacement of one single-family residence, however, would not constitute a substantial number of units.

(2) Induce Substantial Population Growth. Development of the proposed project would not directly or indirectly induce substantial population growth in the project area by providing new residences or businesses nor would it require the extension of public services and utilities to an area currently un- or underserved by public services, utilities or infrastructure. The proposed project is located in an urbanized area and involves the redevelopment of a 23.1-acre site currently occupied with a mix of office, service commercial, lodging, industrial, and institutional uses. The project is located in the Diridon/Arena Strategic Development Plan, which is a strategy document that envisions the revitalization and intensification of mixed land uses including those that would serve daily workers, visitors, sports enthusiast, and convention-goers. Such mixed uses envisioned include residential, commercial, entertainment, and office, which would add new jobs and residential population to the area. Development of the proposed project is in keeping with the vision of this area and, as such, redevelopment and revitalization of the area is not unanticipated. As a result, development of the proposed project would not result in direct or indirect population growth.

(3) Create a Substantial Jobs-to-Housing Imbalance. The proposed project would create approximately 1,500 to 1,800 new jobs and no new housing units. Implementation of the project would relocate approximately 320 existing jobs on the project for a total net increase of 1,480 new jobs, which would result in a very small positive impact on the City's 2005 jobs-to-housing unit balance, increasing it from 0.93 to 0.94. By 2030, the 1,800 jobs (or 1,480 net new jobs) added by the proposed project would represent a fraction of all City jobs (i.e., 0.29 percent), nonetheless, still positively impacting the jobs-to-housing units balance, adding jobs to a community with more employed residents that jobs available to meet the demand for jobs. As a result, the proposed project would benefit the City's overall current and long term jobs-to-housing balance, and would not result in significant impacts.

c. Significant Population, Employment and Housing Impacts. Implementation of the proposed project would not result in any significant population, employment, or housing impacts.

C. TRANSPORTATION, CIRCULATION AND PARKING

The following discussion of transportation is based upon an analysis prepared for the project by Hexagon Transportation Consultants, Inc. A copy of that analysis and technical documentation is provided in Appendix C of the Technical Appendices of this EIR. The purpose of the analysis is to identify the potential impacts of the proposed major league stadium, parking garage and associated commercial space. The proposed project would also entail several changes to the existing roadway network in the vicinity of the project site. These improvements are necessary to accommodate the ballpark design and associated traffic. Montgomery Street, between W. San Fernando Street and Park Avenue, would be abandoned; Otterson Street, west of Montgomery Street also would be abandoned; the segment of Autumn Street between W. Santa Clara Street and Park Avenue would be converted from a one-way (northbound) street to a two-way street; likewise, the remaining segment of Montgomery Street between W. Santa Clara Street and W. San Fernando Street would be converted from a one-way (southbound) street to a two-way street. Project-sponsored improvements also include modifications to the Bird Avenue corridor from Park Avenue to I-280.

1. Setting

The project site is is shown on Figure V.C-1.

a. Scope of Study. This study was conducted for the purpose of identifying the potential transportation and circulation impacts related to the proposed development. Project impacts within the City of San Jose are evaluated following the standards and methodologies set forth by the City of San Jose and the Congestion Management Program (CMP) of the Santa Clara Valley Transportation Authority (VTA). The VTA administers the County Congestion Management Program (CMP). All of the study intersections are located within the Greater Downtown Core (defined by the area formed by Coleman Avenue/Julian Street/St. James Street to the north, 4th Street and Civic Plaza to the east, I-280 to the south, and White Street/Stockton Avenue/Southern Pacific Railroad tracks to the west) which is exempt from the City of San Jose level of service policy. The policy states …the Downtown Core Area is exempted from traffic mitigation requirements. Intersections within and on the boundary of this area are also exempted from the level of service (LOS) "D" Performance Criteria. Nevertheless, for this analysis, all the study intersections were evaluated following standard LOS Policy procedures in order to disclose the level of service of the surrounding signalized intersections under the project traffic conditions.

The traffic analysis is based on peak-hour levels of service for 18 signalized intersections and 14 directional freeway segments. The study intersections include signalized intersections in and around the Diridon/Arena area that may be significantly impacted by the proposed project due to either substandard operations under background conditions or the magnitude of project-generated trips expected at the intersection. Other intersections outside the study area – specifically to the west – were not included because based on the proposed distribution, significant increases in traffic volumes are not anticipated on these surrounding local streets. However, additional operational studies may be required after the project is operational to determine any 'spillover effects' to the surrounding neighborhoods (and potential remedies such as permit parking requirements, police traffic control, and temporary barricades). There would be no parking facilities located west of the stadium and the trip distribution pattern, derived from San Jose Sharks hockey games attendance pattern and data, shows that the vast majority of trips would enter the study area from the surrounding freeways. The freeway segments analyzed include those segments on which the project is expected to have the greatest effect.

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FIGURE V.C-1

Baseball Stadium in the Diridon/Arena Area

Study Area

SOURCE: HEXAGON TRANSPORTATION CONSULTANTS, INC., 2006

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The study intersections and freeway segments are identified below. Study intersections are also shown in Figure V.C-1. CMP intersections are denoted with an asterisk (*).

Study Intersections

NB SR 87 Ramps and W. Julian St.*
SB SR 87 Ramps and W. Julian St.*
NB SR 87 Ramp and Santa Clara St.*
NB I-280 Ramps and Bird Ave.*
SB I-280 Ramps and Bird Ave.*
Autumn St. and Santa Clara St.*
Autumn St. and W. San Fernando St.
Autumn St. and Park Ave.
Bird Ave and W. San Carlos St.*
Bird Ave. and Auzerais Ave.
Delmas Ave. and W. San Fernando St.
Delmas Ave. and Park Ave.
Delmas Ave. and W. San Carlos St.
Delmas Ave. and Auzerais Ave.
Woz Way and Park Ave.
Woz Way and W. San Carlos St.
Woz Way and Auzerais Ave.
SR 87 and Woz Way

Study Freeway Segments

SR 87 northbound between Alma Avenue and I-280
SR 87 southbound between Alma Avenue and I-280
SR 87 northbound between I-280 and Julian Street
SR 87 southbound between I-280 and Julian Street
SR 87 northbound between Julian Street and Coleman Avenue
SR 87 southbound between Julian Street and Coleman Avenue
I-280 eastbound between Meridian Avenue and Bird Avenue
I-280 westbound between Meridian Avenue and Bird Avenue
I-280 eastbound between Bird Avenue and SR 87
I-280 westbound between Bird Avenue and SR 87
I-280 eastbound between SR 87 and 10th Street
I-280 westbound between SR 87 and 10th Street
I-280 eastbound between 10th Street and McLaughlin Avenue
I-280 westbound between 10th Street and McLaughlin Avenue

(1) Event Scenarios. The major league baseball season and the regular national hockey league season have two weeks overlap in April and one to two weeks overlap in September/October. If the Sharks were to advance to the league playoffs, as they did in the 2003-2004 season, then the games could continue through May. Based on the event history at the HP Pavilion, there are about ten other large events per year (excluding Sharks games) during the baseball season. A large event is defined as one with attendance of greater than 10,000 (capacity is about 17,500). During the baseball season, there are about 55 night games per year, or an average of two per week. In a year with hockey

playoffs, such as 2004, there might be 13 days with overlapping large events. In a non-playoff year, such as 2005, there might be five days with overlap.

The traffic analysis for the single-event scenario is based on the occurrence of a weekday evening baseball game without a simultaneous event at the HP Pavilion.

There is a possibility of the simultaneous occurrence of a baseball game or other large event at the ballpark, such as a concert, and an event at the HP Pavilion, be it a national hockey league game or a large concert or other event. The traffic analysis for the simultaneous-events scenario is based upon the occurrence of a weekday evening baseball game with a simultaneous event at the HP Pavilion.

(2) Study Time Periods. The traffic impact analysis which follows addresses conditions preceding a weekday sell-out baseball game starting at 7:00 p.m. In the single-event scenario, traffic conditions at the study intersections were analyzed for both the hour between 5:00 and 6:00 p.m. and the hour between 6:00 and 7:00 p.m. The two time periods evaluated reflect the peak hour of background commute traffic (typically ending at or before 6:00 p.m.) and the peak hour of project-generated traffic (the hour immediately preceding an event). It was determined that at the study intersections, the overall intersection volume with the project is expected to be greatest during the hour immediately preceding a week night game (between 6:00 and 7:00 p.m.). Because this is the case and because hockey games start at 7:30 p.m., the simultaneous-events scenario was studied for the 6:00 to 7:00 p.m. period only. The 6:00 to 7:00 p.m. time period is referred to as the Project Peak Hour. The 5:00 to 6:00 p.m. time period is referred to as the San Jose Transportation Policy (SJTP) Peak Hour. At the study freeway segments, the traffic generated by the stadium is relatively low in comparison to the background commute traffic volumes, causing the peak volume with the project to occur between 5:00 and 6:00 p.m. Therefore, the study freeway segments were evaluated for only the hour between 5:00 and 6:00 p.m.

The ingress period preceding a weekday evening game represents the time of highest combined traffic with the project. Traffic volumes after a weekday evening game ends or before a weekday afternoon game begins are expected to be lower than that during the time periods analyzed because background traffic volumes are substantially lower during those hours.

In addition to the analysis of study intersections and freeway segments, this section of the EIR also includes the following analyses: potential parking impacts; adequacy of pedestrian facilities; and potential impacts on nearby neighborhoods. A discussion of project-sponsored roadway improvements on Bird Avenue concludes this section.

b. Analysis Scenarios. Traffic conditions were evaluated for the following four scenarios:

Scenario 1: Existing Conditions. Existing conditions reflect the traffic volumes obtained from new manual turning-movement counts conducted in November 2005 on both a night with no event at the HP Pavilion (single-event scenario) and a night with a hockey game at the HP Pavilion (simultaneous-events scenario).

Senario 2: Background Conditions. Background traffic volumes were estimated by adding to existing volumes the projected volumes from approved but not yet completed

developments.[1] The background projects include the recently approved mixed-use development on the San Jose Water Company site, the KB Homes project on Auzerais, and Phase I of the *Strategy 2000 Plan* along with other smaller projects. Background conditions also reflect planned changes to the roadway network, including the extension of Autumn Street northward to Coleman Avenue.

Scenario 3: Project Conditions. Traffic volumes with the project (hereafter called *project traffic volumes*) were estimated by adding to background traffic volumes the additional traffic generated by the proposed stadium and the changes in traffic patterns resulting from the proposed roadway network changes. Project conditions were evaluated relative to background conditions in order to determine potential project impacts.

Scenario 4: Cumulative Conditions. Cumulative conditions include traffic added by all potential development in the area. For this study the traffic generated by buildout of Downtown San Jose in accordance with the *Strategy 2000 Plan* was added to represent cumulative conditions.

c. Methodology. This section presents the methods used to determine the traffic conditions for each scenario described above.

(1) Analysis Methodologies and Level of Service Standards. Traffic conditions at the study intersections were evaluated using level of service. Level of service is a qualitative description of operating conditions ranging from LOS A, or free-flow conditions with little or no delay, to LOS F, or jammed conditions with excessive delays. Signalized study intersections located in the City of San Jose are usually subject to both the City of San Jose and CMP level of service standards. Both methods are described below.

City of San Jose Signalized Intersections. The City of San Jose level of service methodology uses the TRAFFIX software program, which is based on the *Highway Capacity Manual* (HCM) 2000 method for signalized intersections. TRAFFIX evaluates signalized intersection operations on the basis of average delay for all vehicles at a specified intersection. Since TRAFFIX is also the CMP-designated intersection level of service methodology, the City of San Jose methodology employs the CMP default values for the analysis parameters. The City of San Jose level of service standard for signalized intersections is LOS D or better. The correlation between average delay and level of service is shown in Table V.C-1. The City's Downtown Core Policy states …the Downtown Core Area is exempted from traffic mitigation requirements. Intersections within and on the boundary of this area are also exempted from the LOS "D" Performance Criteria. Nevertheless, for this study, the intersections are evaluated following standard level of service policy procedures in order to disclose the level of service of the surrounding signalized intersections under the project traffic conditions.

CMP Intersections. Since TRAFFIX is the designated level of service methodology for both the CMP and the City of San Jose, the CMP study intersections are not analyzed separately, but rather

[1] For the simultaneous-events scenario, an adjustment was made to account for potential sell-out attendance at the HP Pavilion (the hockey game on the night of the traffic counts was not a sell-out). Note that this adjustment has been applied specifically to the HP Pavilion event-generated traffic only.

Table V.C-1: Intersection Level of Service Definitions Based on Delay

Level of Service	Description	Average Control Delay Per Vehicle (seconds)
A	Signal progression is extremely favorable. Most vehicles arrive during the green phase and do not stop at all. Short cycle lengths may also contribute to the very low delay.	Less than 10.0
B	Operations characterized by good signal progression and/or short cycle lengths. More vehicles stop that with LOS A, causing higher levels of average delay.	10.1 to 20.0
C	Higher delays may result from fair signal progression and/or longer cycle lengths. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant, though many still pass through the intersection without stopping.	20.1 to 35.0
D	The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable signal progression, long cycle lengths, or high volume-to-capacity (V/C) ratios. Many vehicles stop, and individual cycle failures occur frequently.	35.1 to 55.0
E	This is considered to be the limit of acceptable by most delay. These high delay values generally indicate poor progression, long cycle lengths, and high volume-to-capacity (V/C) ratios. Individual cycle failures occur frequently.	55.1 to 80.0
F	This level of delay is considered unacceptable by most drivers. This condition often occurs with oversaturation, that is, when arrival flow rates exceed the capacity of the intersection. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.	Greater than 80.0

Source: Transportation Research Board, *Highway Capacity Manual*, 2000.

are among the City of San Jose signalized study intersections analyzed using TRAFFIX. The only difference between the San Jose and CMP analyses is that project impacts are determined on the basis of different level of service standards –the CMP level of service standard for signalized intersections is LOS E or better.

Freeway Segments. As prescribed in the CMP technical guidelines, the level of service for freeway segments is estimated based on vehicle density. Density is calculated by the following formula:

$$D = V / (N*S)$$

where:

D = density, in vehicles per mile per lane (vpmpl)
V = peak hour volume, in vehicles per hour (vph)
N = number of travel lanes
S = average travel speed, in miles per hour (mph)

The vehicle density on a segment is correlated to level of service as shown in Table V.C-2. The CMP requires that mixed-flow lanes and auxiliary lanes be analyzed separately from HOV (carpool) lanes. The CMP specifies that a capacity of 2,300 vehicles per hour per lane (vphpl) be used for segments six lanes or wider in both directions and a capacity of 2,200 vphpl be used for segments four lanes wide in both directions. The CMP defines an acceptable level of service for freeway segments as LOS E or better.

Table V.C-2: Freeway Segment Level of Service Definitions Based on Delay

Level of Service	Description	Density (vehicles/mile/lane)
A	Average operating speeds at the free-flow speed generally prevail. Vehicles are almost completely unimpeded in their ability to maneuver with the traffic stream.	Less than 11.0
B	Speeds at the free-flow speed are generally maintained. The ability of maneuver with the traffic stream is only slightly restricted, and the general level of physical and psychological comfort provided to drivers is still high.	11.1 to 18.0
C	Speeds at or near the free-flow speed of the freeway prevail. Freedom to maneuver within the traffic stream noticeably restricted, and lane changes require more vigilance on the part of the driver.	18.1 to 26.0
D	Speeds begin to decline slightly with increased flows at this level. Freedom to maneuver with the traffic stream is more noticeably limited, and the driver experiences reduced physical and psychological comfort levels.	26.1 to 46.0
E	At this level, the freeway operates at or near capacity. Operations in this level are volatile, because there are virtually no usable gaps in the traffic stream, leaving little room to maneuver with the traffic stream.	46.1 to 58.0
F	Vehicular flow breakdowns occur. Large queues form behind breakdown points.	Greater than 58.0

Source: Transportation Research Board, *Highway Capacity Manual* (2000), Washington, D.C.; and *Traffic Level of Service Analysis Guidelines* (June 2003), Santa Clara Valley Transportation Authority.

d. Existing Traffic and Circulation Setting. This section describes the existing conditions for all of the major transportation facilities in the vicinity of the site, including the roadway network, transit service, and bicycle and pedestrian facilities.

(1) Existing Roadway Network. Regional access to the project site is provided via I-280, I-880, and SR 87. These facilities are described below.

- **I-280.** I-280 is an eight-lane freeway running east-west through downtown San Jose. Access to the site is provided via a diamond interchange at Bird Avenue. Access to the downtown area is further provided by interchanges at Almaden Boulevard and at 7th Street.
- **I-880.** I-880 is an eight-lane freeway running north- west of downtown San Jose. South of San Jose it becomes SR 17. Currently, the Coleman Avenue interchange at I-880 is under construction to reconfigure and widen the interchange. The estimated completion date is September 2006. Access to the site is provided indirectly via interchanges at I-280, Bascom Avenue, The Alameda, Coleman Avenue, and First Street.
- **SR 87**. SR 87 is a four-lane freeway running north-south through downtown San Jose. Currently SR 87 is under construction to add HOV lanes in each direction. The estimated completion date is sometime in 2007. SR 87 provides access to the site via half interchanges at Woz Way (to/from the south) and Park Avenue (to/from the north). Access to the downtown area is further provided by a northbound off-ramp to Santa Clara Street and a full interchange at Julian Street.
- **Bird Avenue**. Bird Avenue is a six-lane arterial street that runs north-south adjacent to the stadium site. South of I-280, Bird Avenue transitions to a local street within a few blocks. To the north, Bird Avenue becomes Montgomery Street and Autumn Street.
- **Montgomery Street**. Montgomery Street immediately adjacent to the project site is a two-lane, one-way arterial street (southbound) that provides a connection from Santa Clara Street to Bird Avenue. (Portions of Montgomery Street in the project area are three lanes.)

- **Autumn Street**. Autumn Street completes a one-way couplet with Montgomery Street. It is a three-lane, one-way arterial street running northbound from Bird Avenue to Santa Clara Street. North of Santa Clara Street, Autumn Street is a two-way street (one lane in each direction). Autumn Street currently ends just past Julian Street, but is planned to extend to Coleman Avenue in the San Jose General Plan.
- **Cahill Street**. Cahill Street is a short local street that connects the Diridon train station to The Alameda.
- **Delmas Avenue**. Delmas Avenue is a collector street that runs between Santa Clara Street and Auzerais Avenue. The part south of San Fernando Street is one-way southbound. Delmas Street provides access to the southbound SR 87 on-ramp at Auzerais Avenue.
- **Almaden Boulevard**. Almaden Boulevard generally is a six-lane arterial street in the downtown area. It provides access to the downtown via a partial interchange with I-280 (access to and from the west).
- **Julian Street**. Julian Street is an east-west arterial that traverses the north edge of downtown San Jose. It provides access to the area via an interchange with SR 87. East of SR 87, Julian is generally a two-lane one-way street (westbound). The portion of Julian Street between SR 87 and Market Street has been approved for realignment from a curved design to a part of the downtown grid. West of SR 87, Julian Street is a two-lane, two-way street.
- **The Alameda**. The Alameda is a four-lane arterial street generally running east-west in the vicinity of the project. It transitions into Santa Clara Street, which provides access to the site via Autumn Street.
- **Santa Clara Street**. Santa Clara Street is a four-lane arterial street that is one of the main streets in downtown San Jose. It transitions to The Alameda to the west and provides access to the HP Pavilion.
- **San Fernando Street**. San Fernando Street is two-lane collector street that runs along the northern boundary of the site. It provides access between downtown San Jose and the Diridon train station, where it ends.
- **Park Avenue**. Park Avenue is a four-lane local street in the downtown area and then transitions to a two-lane designated arterial to the west. Park Avenue runs along the southern edge of the stadium site.
- **San Carlos Street**. San Carlos Street is a four-lane arterial street that runs between downtown San Jose and the western part of the city.
- **Auzerais Avenue**. Auzerais Avenue is a two-lane collector street. It provides a connection between the stadium site and the SR 87 interchange at Woz Way.
- **Woz Way**. Woz Way is a relatively short two-lane local street that parallels the east side of SR 87. There is a northbound off-ramp from SR 87 to Woz Way that serves the downtown area, including the stadium site.

(2) Existing Bicycle Facilities. In the vicinity of the site, Bird Avenue, Montgomery Street, and Autumn Street are designated bike routes (see Figure V.C-2). Bike lanes recently have been added to San Fernando Street, and bike lanes are planned for Park Avenue. A multiuse pedestrian and

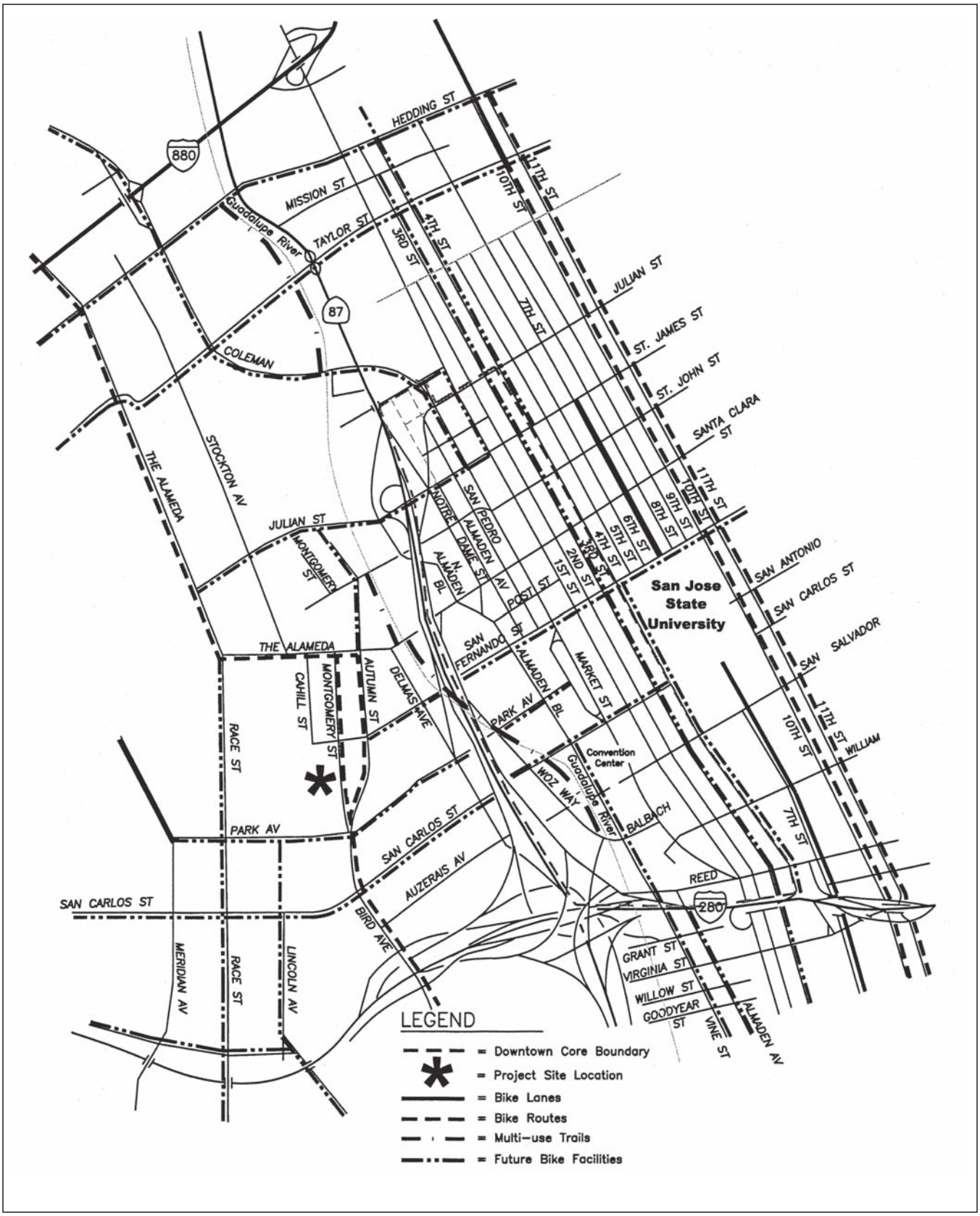

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FIGURE V.C-2

Baseball Stadium in the Diridon/Arena Area

Existing Bicycle Facilities

SOURCE: HEXAGON TRANSPORTATION CONSULTANTS, INC., 2006

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bike trail is planned along Los Gatos Creek, which is just east of the stadium site. Another facility in the area that might be used to access the stadium is the multiuse trail along the Guadalupe River through downtown.

(3) Existing Transit Service. The stadium site is adjacent to the Diridon train station, which is served by numerous bus, LRT, and commuter rail routes. These transit services are described below and shown in Figure V.C-3.

Table V.C-3: Existing Bus Lines

Location /Route	Route Description	Commute Hour Headways
At Diridon Station		
63	Almaden Valley to San Jose State University	30
64	Almaden LRT Station to Penitencia Creek Transit Center	20
65	Almaden LRT Station to San Jose State University	30
68	Gilroy/Gavilan College to Diridon Station	15
180	Fremont BART Station to Diridon Station	15
Hwy 17	Santa Cruz/Scotts Valley to San Jose	30
DASH	Downtown Shuttle	10
On the Alameda (two blocks)		
22	Eastridge Transit Center to Palo Alto/Menlo Park	10
305	South San Jose to Downtown Mountain View	60
522	Eastridge Transit Center to Palo Alto Transit Center	15

Source: Hexagon Transportation Consultants, 2006.

Bus Service. The Diridon station is served by six bus routes and the DASH shuttle (see Table V.C-3). In addition, three more bus routes are only two blocks away on The Alameda. Local routes 22, 63, 64, 65, and 68 provide connections throughout Santa Clara County and operate with 15 to 30 minute headways during peak hours. Routes 64 and 68 operate until around midnight, including on weekends, and Route 22 operates 24-hours a day, seven days a week. Route 180 provides express service to the Fremont BART station and operates seven days a week until midnight, generally on 30-minute headways. The Highway 17 shuttle provides express service to Santa Cruz seven days per week until 10:00 p.m., generally on 60-minute headways. Route 305 provides express service during commute hours only. Route 522 provides express service along the same route as Route 22 weekdays and Saturdays with 15 minute headways until 8:00 p.m. The DASH shuttle provides local service within downtown San Jose on weekdays during the daytime only (no night or weekend service).

Light Rail Transit (LRT) Service. The Diridon station is served by the Vasona LRT line. The Vasona Line provides service between downtown San Jose and Campbell/Los Gatos. Riders on the Guadalupe, Tasman, or Capitol LRT lines can transfer to the Vasona Line at the Convention Center station, or they could take the DASH shuttle to the stadium from that point. The Vasona line operates until midnight seven days a week, generally on 30-minute headways.

Rail Service. The Diridon station is served by Caltrain, ACE, and AMTRAK trains. The ACE and AMTRAK services do not run at night, so they would not be an option for most ball games. Caltrain service runs seven days a week until midnight, usually on one-hour headways. Caltrain provides rail service between San Jose and San Francisco. During weekday commute hours, Caltrain also operates south to Gilroy.

(4) Existing Traffic Conditions. New manual turning-movement counts were conducted in November 2005 at all study intersections. The counts were conducted on a night with no event at the HP Pavilion. The new traffic count data are shown graphically in Figure V.C-4 and are included in

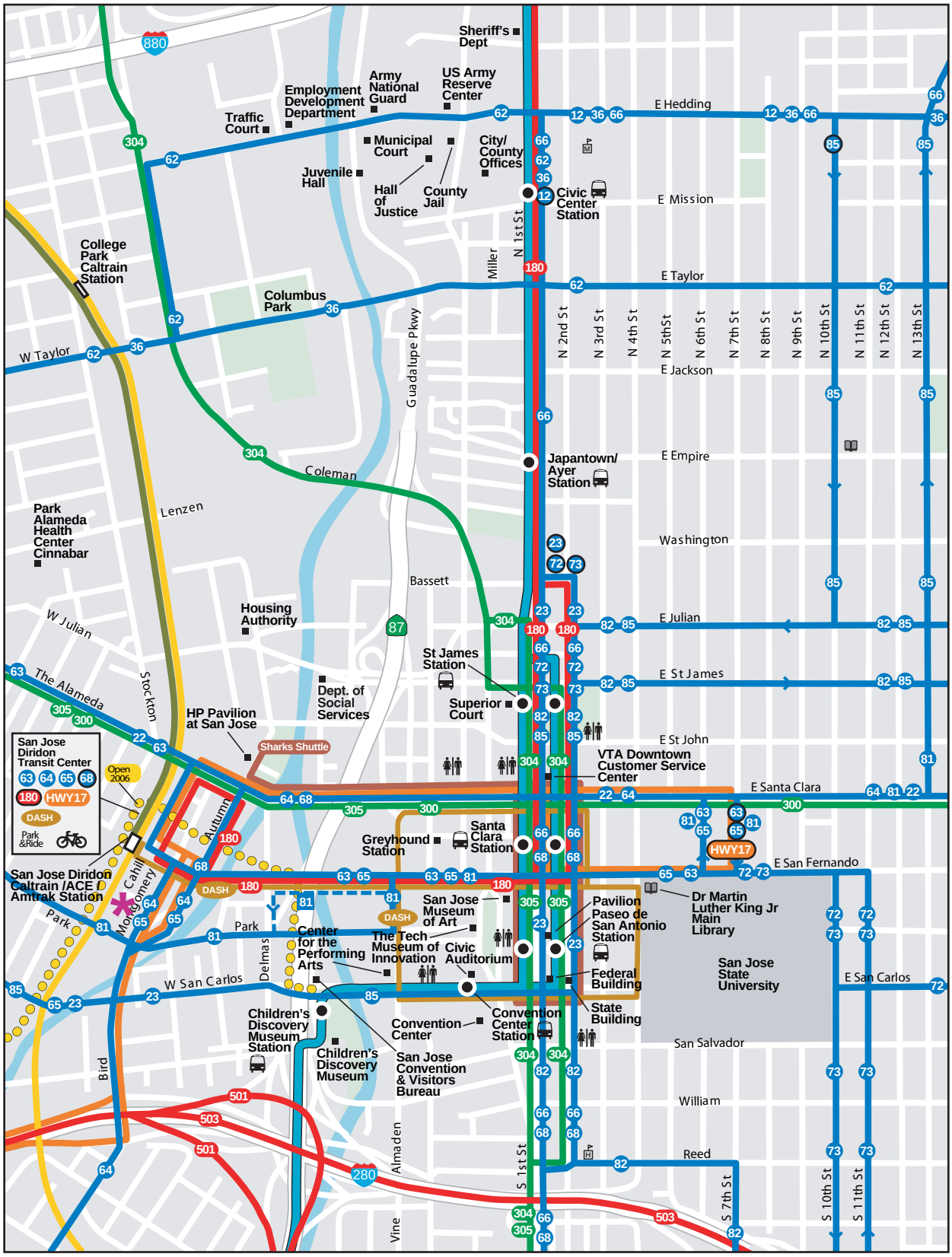

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FIGURE V.C-3

LEGEND

* = PROJECT SITE

0 1000 2000
FEET

Baseball Stadium in the Diridon/Arena Area

Existing Transit Services

SOURCE: HEXAGON TRANSPORTATION CONSULTANTS, INC., 2006

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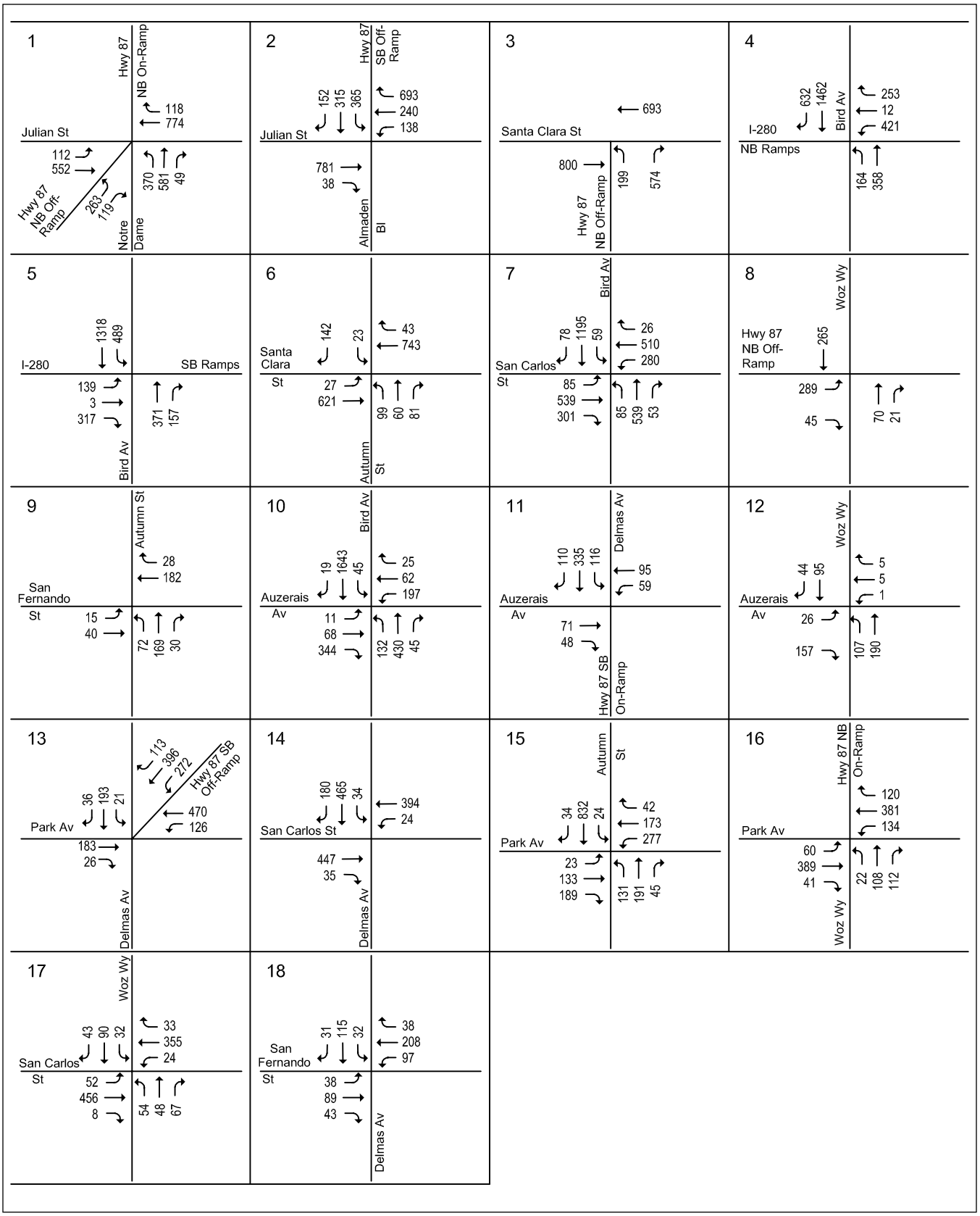

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FIGURE V.C-4

Baseball Stadium in the Diridon/Arena Area

Existing Traffic Volumes

Single-Event Scenario

(5:00-6:00 P.M.)

SOURCE: HEXAGON TRANSPORTATION CONSULTANTS, INC., 2006

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the Traffic Impact Analysis (Appendix C of this EIR. Detailed volume summary tables, which include the existing traffic volumes and count dates for all study intersections, are also provided there.

The traffic counts were used to calculate existing levels of service at the study intersections. The existing lane configurations were provided by City staff and confirmed by field observations. Table V.C-4 shows that all the study intersections currently operate at LOS D or better, which is acceptable by City and CMP standards.

Freeway traffic counts and level of service designations under existing conditions were obtained from the 2004 CMP Monitoring and Conformance Report. Table V.C-5 shows that during the PM peak hour both study segments on SR 87 operate at LOS F in the southbound direction, and two study segments on I-280 in the eastbound direction operate at LOS F. This is worse than the standard of LOS E.

Table V.C-4: Existing Intersection Level of Service Summary: 5:00 to 6:00 p.m. – Single-Event Scenario

Intersection	Count Date	5:00 to 6:00 p.m.	
		LOS	Average Delay
SR 87 and Julian Street (E)*	11/1/05	D	38.3
SR 87 and Julian Street (W)*	11/1/05	C	21.0
SR 87 and W. Santa Clara Street*	11/1/05	B	16.7
I-280 and Bird Avenue (N)*	11/1/05	C	26.2
I-280 and Bird Avenue (S)*	11/1/05	C	24.5
Autumn S. and W. Santa Clara St.*	11/1/05	B	18.3
Bird Ave. and W. San Carlos St.*	11/1/05	D	36.4
SR 87 and Woz Way	11/15/05	A	9.8
Autumn Street and San Fernando	11/1/05	B	10.4
Bird Avenue and Auzerais Avenue	11/1/05	C	24.5
Delmas Ave. and Auzerais Ave.	11/1/05	B	15.6
Woz Way and Auzerais Avenue	11/1/05	B	18.6
Delmas Avenue and Park Avenue	11/15/05	C	28.1
Delmas Ave. and W. San Carlos St.	11/1/05	C	20.1
Autumn Street and Park Avenue	11/1/05	C	34.8
Woz Way and Park Avenue	11/1/05	B	18.4
Woz Way and W. San Carlos St.	11/1/05	C	20.4
Delmas Ave. and San Fernando St.	11/1/05	B	16.5

Note: **Bold** indicates a significant project impact.

* Denotes CMP intersection.

Source: Hexagon Transportation Consultants, 2006.

(5) Existing Parking Facilities. The proposed project would rely on parking spaces at the proposed stadium (150), at the proposed new stadium parking garage (1,200), existing parking facilities in the Diridon/Arena area, as well as garages and lots in the Downtown area east of SR 87. An inventory of existing parking facilities in these areas (stratified by distance from the project) is provided in Table V.C-6. Figure V.C-5 shows the location and capacity of existing off-street parking facilities. Within ¾ miles from the stadium, a total of 21,072 parking spaces currently exist to the north and east of the project site. Assuming that these spaces are 25 percent occupied in the evening without an event at the HP Pavilion, there are an estimated 15,804 available parking spaces for the stadium.

Table V.C-5: Freeway Existing Level of Service – PM Peak Hour

Freeway	Location	Mixed Flow					
		Dir.	Lanes	Speed	Volume	Density	LOS
SR 87	Julian St. to Coleman Ave.	NB	2	67	2,280	17.0	B
		SB	2	18	3,200	88.9	**F**
	1-280 to Julian St.	NB	2	67	1,880	14.0	B
		SB	2	9	2,160	120.0	**F**
	Alma Ave. to I-280	NB	2	65	4,030	31.0	D
		SB	2	16	2,980	93.1	**F**
I-280	Meridian Ave. to Bird Ave.	EB	4	26	7,380	71.0	**F**
		WB	4	36	8,060	56.0	E
	Bird Ave. to SR 87	EB	4	23	6,990	76.0	**F**
		WB	3	66	4,750	24.0	C
	SR 87 to 10th St.	EB	3	67	3,620	18.0	C
		WB	3	67	2,810	14.0	B
	10thSt. to McLaughlin	EB	4	45	8,640	48.0	E
		WB	4	66	7,390	28.0	D

Note: **Bold** indicates a significant project impact.

Source: Hexagon Transportation Consultants and Santa Clara Valley Transportation Authority, *Congestion Management Program 2004 Monitoring and Conformance Report.*

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FIGURE V.C-5

LEGEND

= Project Site

= Garage Location

xx = Facility Number

xxxx = Facility Capacity (spaces)

= 1/3 Mile Radius

= 2/3 Mile Radius

= 3/4 Mile Radius

N

Baseball Stadium in the Diridon/Arena Area

Off-Street Ballpark Parking Facilities

SOURCE: HEXAGON TRANSPORTATION CONSULTANTS, INC., 2006

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Table V.C-6: Stadium Parking Facilities

Facility Name	Type	Unrestricted Parking Capacity
Off-Street Parking Facilities Within ⅓ Mile Radius		
18 Arena Lot D	Public	228
19 San Jose Water Lot (West)	Private w/Public Access	280
20 San Jose Water Lot (East)	Public	575
21 Santa Clara/SR 87*	Public	188
42 Park Center Plaza III	Private w/Public Access	1,320
47 Cahill Lot 4	Public	149
49 Cahill Lot 1	Public	180
50 Cahill Lot 2	Public	162
51 Cahill Lot 3	Public	90
56 Palermo Lot	Private w/Public Access	25
57 Power Play Hockey Lot	Private w/Public Access	14
59 Water District Lot	Private w/Public Access	70
	Subtotal	*3,281*
Off-Street Parking Facilities Within ⅔ Mile Radius		
1 Market/San Pedro Garage	Public	1,393
4 Ernst & Young Garage	Private w/Public Access	400
10 Comerica – 333 W. Santa Clara	Private w/Public Access	736
14 Auzerais Lot*	Public	71
24 Fairmont Plaza	Private w/Public Access	626
25 10 Almaden	Private w/Public Access	700
26 Opus West – 225 W. Santa Clara	Private w/Public Access	805
27 160. W. Santa Clara	Private w/Public Access	461
29 95 S. Market Street	Private w/Public Access	95
32 Park Center Plaza I	Private w/Public Access	1,066
33 Adobe	Private w/Public Access	1,104
34 Riverpark	Private w/Public Access	1,413
35 San Pedro Square	Private w/Public Access	125
37 California Bank & Trust – 84 W. Santa Clara	Private w/Public Access	35
38 National Lot (1 South Market Street)	Private w/Public Access	81
40 Plaza Lot (San Pedro/St. James)	Private w/Public Access	195
43 Terraine Lot	Private w/Public Access	85
44 Arena Lots A, B and C	Public	1,422
45 Crowne Plaza Garage	Private w/Public Access	276
46 Notre Dame Lot (NW c/o Notre Dam/St. John)	Private w/Public Access	94
48 Almaden/Woz Lot	Public	365
55 Milligan Lot	Private w/Public Access	45
58 Woz/87 Lot	Public	283
60 Convention Center	Public	675
	Subtotal	*12,551*
Off-Street Parking Facilities Within ¾ Mile Radius		
5 2nd/S. Fernando (Block 2)	Public	154
7 Market/San Carlos (Block 8)	Public	92
11 Market/San Salvador Lot	Public	137
17 Autumn St. Lot (Akatiff Lot)	Private w/Public Access	523
22 Pavilion Garage	Private w/Public Access	261
28 60 S. Market Street	Private w/Public Access	814
30 Community Towers	Private w/Public Access	70

Table V.C-6 *continued*

Facility Name	Type	Unrestricted Parking Capacity
39 Victory Parking	Private w/Public Access	439
61 Almaden/Balbach Lot	Public	45
	Subtotal	*2,535*
Proposed New Parking		
62 Proposed Stadium On-Site Parking	Public	150
63 Proposed Stadium Parking Lot	Public	1,200
On-Street Parking		
Within ½ Mile of HP Pavilion		1,355
	Total Within ¾ Mile Radius	*21,072*
Off-Street Parking Facilities Outside ¾ Mile Radius		
2 Third Street Garage	Public	837
3 2nd/S. Carlos Garage	Public	544
6 3rd/S. Fernando (Block 3)	Public	156
9 4th Street Garage	Public	750
12 2nd/St. James (Oasis Lot)	Public	138
13 First/St. James Lot	Public	37
15 San Pedro/Bassett Lot	Public	118
16 First/Julian Lot	Public	81
23 Colonade (201 S. Fourth)	Private w/Public Access	145
31 Second/San Carlos (Behind McDonalds)	Private w/Public Access	100
36 Fountain Alley	Private w/Public Access	149
41 Valley Title	Private w/Public Access	294
52 SJ State University 10th Street Garage	Public	1,927
53 SJ State University 4th Street Garage	Public	1,136
54 SJ State University 7th Street Garage	Public	1,980
64 First Street and I-280 Lot	Public	113
New City Hall Garage	Public	372
City Hall Employee Garage	(under construction)	1,132
	Subtotal	*10,009*
	TOTAL	**31,081**

[a] Does not include parking facilities west of the project site.

Source: Hexagon Transportation Consultants, 2005.

e. Background Conditions. Background conditions are defined as conditions just prior to completion of the proposed development. Estimated traffic volumes for background conditions comprise volumes from existing (or base) traffic volumes plus traffic generated by other approved developments in the vicinity of the site. This section describes the procedure used to determine background traffic volumes and the resulting traffic conditions that would result.

(1) Background Transportation Network. Background conditions assume the completion of the Autumn Street extension to Coleman Avenue. The Autumn Street extension incorporates a new crossing of the Southern Pacific railroad tracks. This crossing and the intersection of Autumn Street with Coleman Avenue currently are under construction as part of the Cousins MarketCenter retail project, along Coleman Avenue. The section of roadway from the railroad crossing south to the current terminus of Autumn Street is under design. This network change will not affect the existing lane configuration at any of the study intersections. However, the new roadway connection will alter traf-

fic patterns within the study area. The changes in existing traffic volumes caused the by extension of Autumn Street were estimated using the City's TRANPLAN model.

Year 2000 trip tables were assigned to the roadway network without and with the planned Autumn Street extension. The model runs show that extending Autumn Street to Coleman Avenue and thereby providing a direct connection to I-880 would cause traffic to divert to Autumn Street from other parallel routes, including Stockton Avenue, The Alameda, SR 87, Market Street and North First Street. The estimated changes in turning-movement volumes at the study intersections resulting from the Autumn Street extension are shown separately in the volume summary tables provided in Appendix C. With the above exception, it is assumed in this analysis that the transportation network under background conditions would be unchanged from existing conditions.

(2) Background Intersection Analysis. Background traffic volumes were calculated by adding to the existing volumes the traffic reassignment resulting from the planned Autumn Street Extension and the estimated traffic from approved but not yet constructed developments in the vicinity of the site. Estimates of the added traffic from approved but not yet constructed developments were provided by the City in the form of the Approved Trips Inventory (ATI). The ATI data are included in Appendix C. Trips added from the above-described sources were added to the existing volumes and background traffic volumes were calculated.

The level of service calculations for the background scenarios (Table V.C-7) shows that the following two intersections would degrade to unacceptable levels during the 5:00 to 6:00 p.m time period: Delmas and Park (LOS F) and Delmas and San Fernando (LOS F). The reason for this degradation is the addition of trips, but not the associated mitigation measures, from the approved project on the San Jose Water Company site. The San Jose Water Company traffic study identified improvements for these LOS F intersections. However, since the intersections are exempt from the LOS Policy, the City may or may not require the improvements. All other study intersections, including the six CMP intersections, would operate at acceptable levels under background conditions.

Background traffic volumes are shown in Figure V.C-6.

Table V.C-7: Background Intersection Level of Service Summary: 5:00 to 6:00 p.m. – Single-Event Scenario

Intersection	Count Date	5:00 to 6:00 p.m.			
		Existing		Background	
		LOS	Average Delay	LOS	Average Delay
SR 87 & Julian St. (E)*	11/1/05	D	38.3	D	42.1
SR 87 & Julian St. (W)*	11/1/05	C	21.0	C	23.1
SR 87 & W. Santa Clara St.*	111/1/05	B	16.7	B	18.3
I-280 & Bird Ave. (N)*	11/1/05	C	26.2	C	32.4
I-280 & Bird Ave. (S)*	11/1/05	C	24.5	C	27.6
Autumn St. & W. Santa Clara St.*	11/1/05	B	18.3	C	32.2
Bird Ave. & W. San Carlos St.*	11/1/05	D	36.4	D	39.8
SR 87 & Woz Way	11/15/05	A	9.8	B	10.1
Autumn St. & San Fernando	11/1/05	B	10.4	B	11.3
Bird Ave. & Auzerais Ave.	11/1/05	C	24.5	C	33.5
Delmas Ave.& Auzerais Ave.	11/1/05	B	15.6	B	16.2
Woz Way & Auzerais Ave.	11/1/05	B	18.6	C	20.0
Delmas Ave.& Park Ave.	11/15/05	C	28.1	F	160.7
Delmas Ave. & W. San Carlos St.	11/1/05	C	20.1	C	25.1
Montgomery St. & Park Ave.	11/1/05	C	34.8	D	37.5
Woz Way & Park Ave.	11/1/05	B	18.4	C	21.4
Woz Way & W. San Carlos St.	11/1/05	C	20.4	C	22.3
Delmas Ave. & San Fernando St.	11/1/05	B	16.5	F	103.0

Note: **Bold** indicates a significant project impact. * Denotes CMP intersection.
Source: Hexagon Transportation Consultants, 2006.

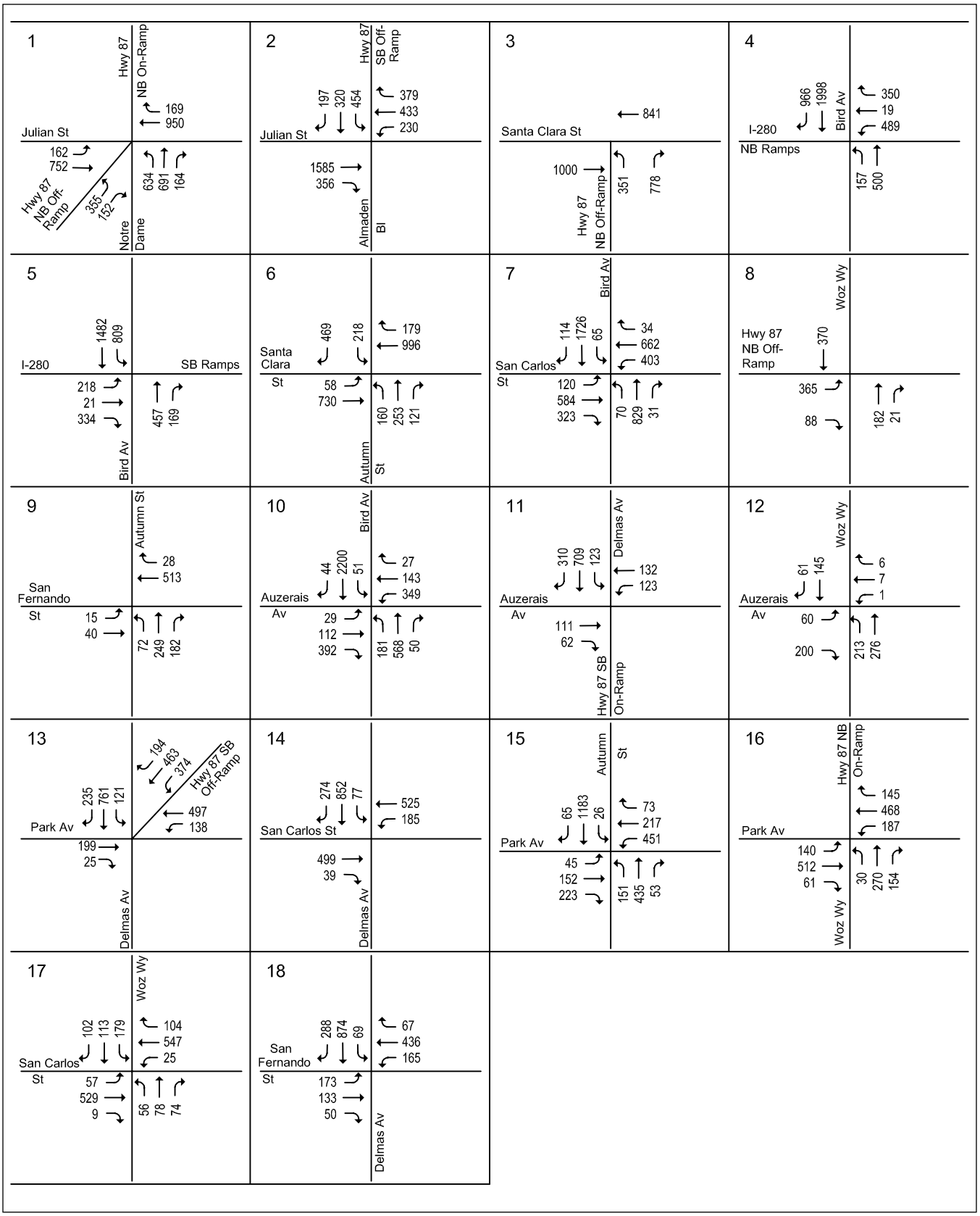

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FIGURE V.C-6

Baseball Stadium in the Diridon/Arena Area

Background Traffic Volumes

Single-Event Scenario

(5:00-6:00 P.M.)

SOURCE: HEXAGON TRANSPORTATION CONSULTANTS, INC., 2006

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2. Project Impacts and Mitigation Measures

This section describes significant project impacts, and measures that are recommended to mitigate project impacts. Included are descriptions of the significance criteria that define an impact, estimates of project-generated traffic, identification of the impacts, and descriptions of the mitigation measures. Project conditions are represented by background traffic conditions with the addition of traffic generated by the project.

a. Criteria of Significance. For the purposes of this EIR, the proposed project would be said to create a significant adverse impact if it were to exceed any of the thresholds described below.

(1) City of San Jose Definition of Significant Intersection Impacts. The project is said to create a significant adverse impact on traffic conditions at a study intersection in the City of San Jose if for either peak-hour:

1. The level of service at the intersection degrades from an acceptable LOS D or better under background conditions to an unacceptable LOS E or F under project conditions, or

2. The level of service at the intersection is an unacceptable LOS E or F under background conditions and the addition of project trips causes both the critical-movement delay at the intersection to increase by four or more seconds *and* the demand-to-capacity ratio (V/C) to increase by .01 or more.

All of the study intersections are located within the Greater Downtown Core (defined by the area formed by Coleman Avenue/Julian Street/St. James Street to the north, 4th Street and Civic Plaza to the east, I-280 to the south, and White Street/Stockton Avenue/Southern Pacific Railroad tracks to the west) which is exempt from the City of San Jose level of service policy. The policy states …the Downtown Core Area is exempted from traffic mitigation requirements. Intersections within and on the boundary of this area are also exempted from the LOS "D" Performance Criteria. Nevertheless, for this analysis, all the study intersections were evaluated following standard LOS Policy procedures in order to disclose the level of service of the surrounding signalized intersections under the project traffic conditions.

A significant freeway impact by City of San Jose standards is said to be satisfactorily mitigated when measures are implemented that would restore freeway conditions level of service to background conditions or better.

(2) CMP Definition of Conformance. A CMP intersection is out of conformance with the acceptable LOS standard when the level of service falls below LOS E. That is, a project is considered in violation of the CMP level of service standard when the addition of project traffic causes the intersection's level of service to deteriorate from an acceptable LOS E or better under background conditions to an unacceptable LOS F under project conditions or the level of service at the intersection is an unacceptable F under background conditions and the addition of project trips causes both the critical-movement delay at the intersection to increase by four or more seconds and the volume-to-capacity ratio (V/C) to increase by 0.01 or more. The CMP standard is said to be in conformance when measures are implemented that would restore intersection conditions to LOS E or better.

(3) CMP Definition of Significant Freeway Segment Impacts. According to the CMP, a project is said to create a significant adverse impact on traffic conditions on a CMP freeway segment if for either peak-hour:

1. The level of service on the freeway segment degrades from an acceptable LOS E or better under existing conditions to an unacceptable LOS F under project conditions, or

2. The level of service on the frewway segment is an unacceptable LOS F under project conditions, and the number of project trips on that segment constitutes at least one percent of capacity on that segment.

A significant freeway impact by CMP standards is said to be satisfactorily mitigated when measures are implemented that would restore freeway conditions to LOS E or better.

Additonal City of San Jose significance criteria follow:

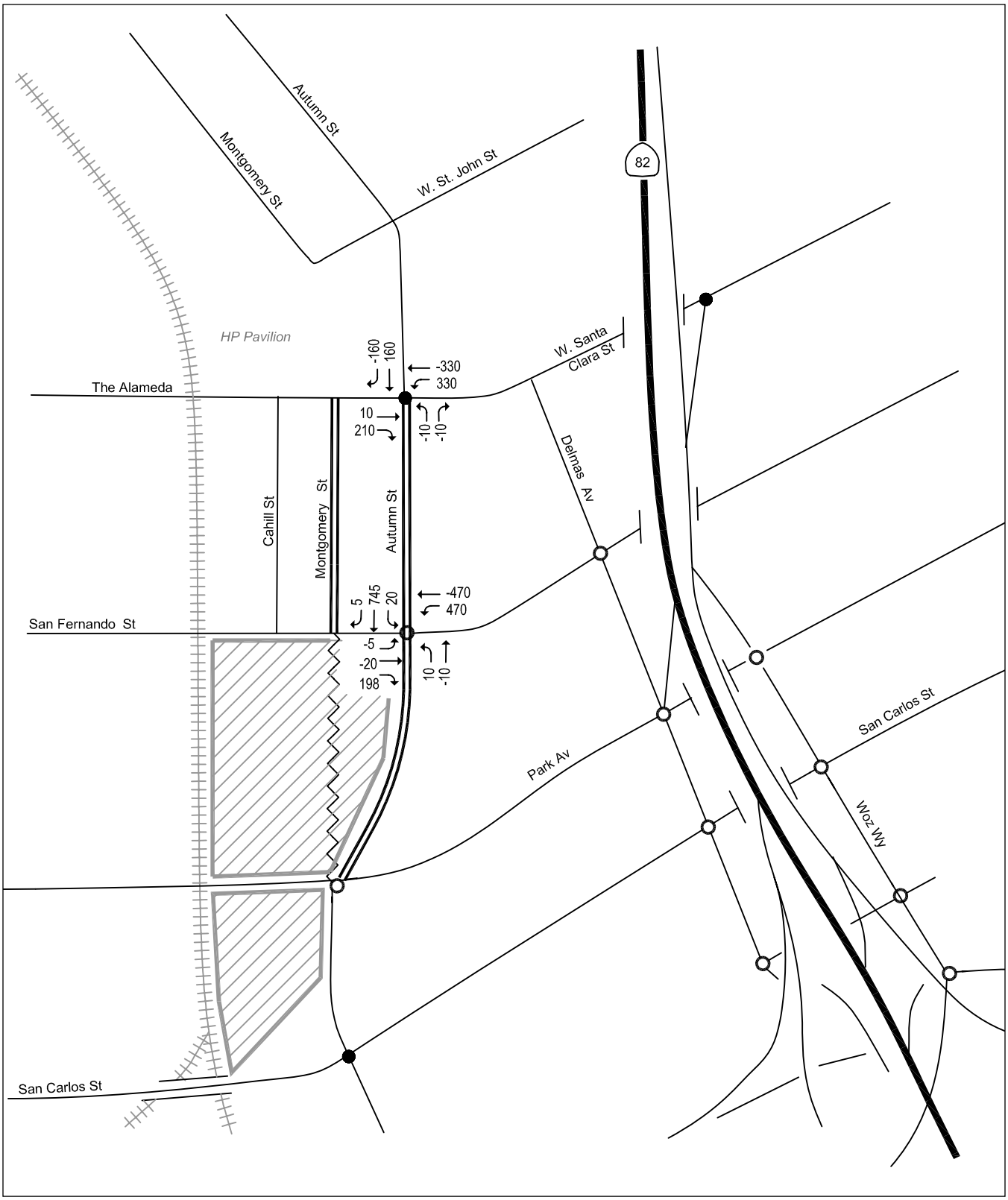
- Substantially increase hazards due to a design feature or incompatible uses;
- Conflict with adopted policies, plans or programs supporting alternative transportation (e.g. bus turnouts, bicycle racks, pedestrian paths or trails);
- Result in inadequate parking capacity; or
- Result in inadequate emergency access.

b. Transportation Network Under Project Conditions. The proposed project would include several changes to the existing transportation network that would affect existing traffic patterns in the study area. These improvements are necessary to accommodate the ballpark design and associated traffic.

- Montgomery Street, between W. San Fernando Street and Park Avenue would be abandoned;
- Otterson Street, west of Montgomery Street also would be abandoned;
- Autumn Street, between W. Santa Clara Street and Park Avenue would be converted from a one-way (northbound) street to a two-way street; and
- The remaining segment of Montgomery Street, between W. Santa Clara Street and W. San Fernando Street, would also be converted from a one-way (southbound) street to a two-way street.

The extension of Autumn Street north to Coleman Avenue was assumed as a background improvement. If it is not built prior to completion of the stadium, then the Autumn Street extension would need to be part of the stadium project.

The changes in vehicular traffic patterns associated with these network changes were estimated based on existing travel patterns in the vicinity. These changes are expected to affect traffic volumes at only the following two study intersections: Autumn Street at W. Santa Clara Street and Autumn Street at W. San Fernando Street. Figure V.C-7 presents the estimated change in background turning movement volumes at these intersections resulting from the proposed closure of a segment of Montgomery Street (and conversion to two-way flow on Autumn and Montgomery Streets). The volume summary sheets in Appendix C show the same information in tabular form.



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LEGEND

PROJECT SITE

PROPOSED ROAD CLOSURE

PROPOSED CONVERSION FROM ONE-WAY TO TWO-WAY OPERATION

N

FIGURE V.C-7

Baseball Stadium in the Diridon/Arena Area

Background Trip Reassignment for Montgomery Street Closure Single-Event Scenario (5:00-6:00 P.M.)

SOURCE: HEXAGON TRANSPORTATION CONSULTANTS, INC., 2006

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Project-sponsored improvements also include modifications to the Bird Avenue corridor from Park Avenue to I-280. The proposed Bird Avenue improvements include the addition of a second northbound left-turn lane at the Bird Avenue/San Carlos Street intersection and the conversion of the third southbound through lane to a second left-turn lane at the Bird Avenue/I-280 (S) intersection. These roadway improvements are not expected to change existing traffic patterns.

The transit network under project conditions is assumed to remain unchanged. The extension of BART to the Diridon Station is currently in the planning process, but the completion date is still 10-15 years away. Therefore, the BART extension is not assumed in the analysis.

c. Project Trip Estimates. The magnitude of traffic produced by a new development and the locations where that traffic would appear are estimated using a three-step process: (1) trip *generation*; (2) trip *distribution*; and (3) trip *assignment*. In determining project trip generation, the magnitude of traffic entering and exiting the site is estimated for the two analyses time periods. As part of the project trip distribution, an estimate is made of the directions to and from which the project trips would travel. In the project trip assignment, the project trips are assigned to specific streets and intersections. These procedures are described further in the following sections.

(1) Trip Generation. Project trip generation estimates were prepared based on the stadium capacity (45,000 seats) and a no-show rate of 6 percent. The no-show rate is consistent with the actual attendance observed at other baseball stadiums during a sell-out game. Including players, coaches, staff, concession employees, and media personnel (approximately 1,560 people), the total attendance for a sell-out game is estimated to be 43,860.

The travel characteristics of fans attending a weeknight Major League Baseball game at the proposed stadium are expected to be similar to that of fans attending a weeknight National Hockey League game at the HP Pavilion. In order to estimate the travel mode by which spectators would arrive and depart the stadium, the EIR's transportation subconsultant (Hexagon Transportation Consultants of San Jose) conducted an intercept survey of attendees at a San Jose Sharks hockey game (7:30 p.m. start time) on Wednesday, November 16, 2005. The survey identified the travel mode and auto occupancy (number of persons per vehicle) of over 1,400 hockey fans on their way to the game. A large majority of fans traveled to the game in private automobiles (91.1 percent). Of those traveling by private auto, the average auto occupancy was 2.3 people per vehicle. Private auto trips include fans who travel directly to the parking facility (89.5 percent), fans who are dropped off at the game by another fan before parking in an off-site location (1.0 percent), and fans who are dropped off at the game by someone not attending the game (0.6 percent). Public transit services (CalTrain and light rail) accounted for 4.5 percent of the inbound trips. Bus service accounted for a negligible number of trips. The remaining trips included fans walking to the game (3.2 percent), riding in a limousine or taxi (1.1 percent) or bicycling (0.1 percent).

The planned BART extension to San Jose would locate a station within one block of the HP Pavilion and the stadium. Although BART is not assumed in this analysis, the added rail service could be expected to significantly increase transit use.

Because the attendance at a sell-out Major Leage Baseball game would be several times that of a hockey game, the parking facilities used by baseball fans would need to include many downtown parking facilities that are more distant than those typically used by hockey fans arriving at the HP Pavilion. The longer walking times from these more distant parking facilities would encourage some fans to take public transit rather than driving. Thus, it is likely that with no change in transit services, a higher percentage of baseball fans would choose public transit than is currently observed for a hockey game. However, to be conservative (i.e., in order to insure that adverse impacts are not underestimated), the baseball stadium traffic analysis assumes the same mode split and vehicle occupancy as observed for a weekday evening hockey game. Table V.C-8 presents the project trip generation estimates during the pre-game arrival period for a weekday evening game. To be conservative, the trips generated by the existing uses on the project site that would be replaced by the baseball stadium and parking garage were not subtracted from the traffic that would be generated by the proposed stadium.

Table V.C-8: Project Trip Generation Estimates for a Weekday Evening Game (Arrivals)

Stadium Attendance by Mode[a]		Persons	Average Occupancy (Persons/ Vehicle)	Pre-Game Vehicle Trips	
				In	**Out**
Auto	90.5%	39,693	2.3	17,258	0
Public Transit	4.5%	1,974	–	–	–
Walk/Bicycle	3.3%	1,447	–	–	–
Charter Bus, Taxi & Limo	1.1%	482	3.0	161	161
Drop-Off/Pick-Up	0.6%	263	2.3	114	114
Total		**43,860**		**17,533**	**275**

[a] Total projected attendance for sold out weekday night game, including fans, team personnel, concessions employees, and media personnel.

Source: Hexagon Transportation Consultants, 2006.

The commercial space on the ground floor of the proposed new parking garage and/or at the stadium is assumed to be occupied by ancillary uses that on game nights would be entirely supported by game attendees. Thus, the commercial space is not expected to add to the number of vehicle trips generated by the project during the pre-game period.

The percentage of baseball fans arriving within a specific time period was determined based on the arrival pattern observed for a San Jose Sharks game. Intersection turning-movement counts along major access routes were compared on a day with no event at the HP Pavilion (11/1/05) and a day with a Sharks hockey game (11/2/05) to identify the number of trips at each location generated by the hockey game and the percentage of hockey trips occurring within each hour. Based on this arrival pattern observed for a weekday evening hockey game, it is estimated that 29 percent of the baseball game attendees would arrive one to two hours before the game start time (5:00 to 6:00 p.m.) and 59 percent of attendees would arrive less than one hour before the game start time (6:00 to 7:00 p.m.). The remaining attendees are expected to arrive more than two hours before the game start time (3 percent) or after the game start (9 percent). This arrival pattern is consistent with that observed at other baseball stadiums. For fans being dropped off at the game, the percentage of early arrivals (more than one hour before the game) is expected to be less than that of fans who drive and park. Conversely, it is assumed that 100 percent of players, coaches, staff, concession employees and media personnel would arrive more than two hours before the game.

(2) Trip Distribution. The distribution of trips generated by the proposed project was estimated based on the residence zip codes of existing San Jose Sharks season ticket holders and a comparison of the existing traffic volumes on weekday evenings without and with a hockey game at the HP Pavilion. A majority of project trips are expected to arrive and depart via I-280 and/or SR 87 (65 percent). It should be noted that the project trip distribution assumes completion of the Autumn Street

extension to Coleman Avenue, which provides direct access to and from I-880. The trip distribution patterns are shown graphically on Figure V.C-8.

(3) Trip Assignment. Project trips were assigned to the roadway system in accordance with the trip distribution patterns discussed above and based on the location and size of available parking facilities. It is assumed that the proposed new stadium parking garage would be accessed primarily via Bird Avenue with both left and right turns allowed for inbound movements and only right turns permitted for outbound traffic. The proposed parking garage would also have right-turn only access to and from Park Avenue. Passenger drop off and pick up activities are expected to occur within the on-street parking areas on Montgomery Street just north of the project site.

Table V.C-9 presents a breakdown of project trips by location and time period. The volume summary sheets provided in Appendix C show the resulting project trip assignment at each study intersection. Figure V.C-9 graphically presents the trips generated by the proposed baseball stadium at each study intersection.

d. Project Traffic Volumes. Project trips, as represented in the above project trip assignment, were added to background traffic volumes. The background traffic reassignment resulting from the roadway network changes included in the proposed project were also added to obtain traffic volumes under project conditions. Figure V.C-10 presents the estimated intersection turning-movement volumes at each study intersection under project conditions.

e. Project Intersection Level of Service Analysis. The intersection level of service results under existing, background and project scenarios for the hour from 5:00 to 6:00 p.m. are presented in Table V.C-10. The level of service calculation sheets are included in Appendix C.

(1) City of San Jose Level of Service Analysis. The results of the level of service analysis under project conditions show that two of the study intersections would be significantly impacted by the project, according to the significance criteria listed above.

<u>Impact TRANS-1</u>: The level of service at <u>Delmas Avenue and Park Avenue</u> would degrade from background LOS F conditions. This condition constitutes a significant impact by City of San Jose standards. (S)

This intersection is expected to operate at LOS F during the hour from 5:00 to 6:00 p.m. hour under background conditions. The added vehicular and pedestrian traffic resulting from the proposed project would cause the critical-movement delay to increase by four or more seconds. The critical V/C ratio calculated by TRAFFIX with the minimum pedestrian timing does not accurately reflect the increase in vehicular demand at this intersection. Based on the minimum vehicular green times, the critical V/C ratio would increase by 0.01 or more. The addition of project-generated trips during the hour from 6:00 to 7:00 p.m. would cause the intersection to degrade from LOS D under background conditions to LOS F under project conditions. Based on the City of San Jose's level of service impact criteria, the proposed baseball stadium would cause a significant impact at this intersection during both of the hours analyzed. However, as described previously, this study intersection is located within the Greater Downtown Core (defined by the area formed by Coleman Avenue/Julian Street/St. James Street to the north, 4th Street and Civic Plaza to the east, I-280 to the south, and White Street/Stock-

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NOT TO SCALE

FIGURE V.C-8

Baseball Stadium in the Diridon/Arena Area

Trip Distribution

SOURCE: HEXAGON TRANSPORTATION CONSULTANTS, INC., 2006

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Table V.C-9: Project Trip Estimates by Location and Time Period for a Weekday Evening Game (Arrivals) – Single-Event Scenario

Destination/Time Period		Pre-Game Vehicle Trips	
		In	Out
On-Site Stadium Parking	150 spaces		
Prior to 5 pm	100%	150	0
5 pm – 6 pm	0%	0	0
6 pm – 7 pm	0%	0	0
After 7 pm	0%	0	0
Stadium Parking Garage	1,200 spaces		
Prior to 5 pm	7%	89	0
5 pm – 6 pm	28%	332	0
6 pm – 7 pm	56%	676	0
After 7 pm	9%	103	0
HP Pavillion Main Lot	1,422 spaces		
Prior to 5 pm	3%	43	0
5 pm – 6 pm	29%	412	0
6 pm – 7 pm	59%	839	0
After 7 pm	9%	128	0
Cahill Lots 1-4	581 spaces		
Prior to 5 pm	3%	17	0
5 pm – 6 pm	29%	168	0
6 pm – 7 pm	59%	343	0
After 7 pm	9%	53	0
HP Pavillion Lot D + Private Lots	339 spaces		
Prior to 5 pm	3%	10	0
5 pm – 6 pm	29%	248	0
6 pm – 7 pm	59%	504	0
After 7 pm	9%	77	0
SJ Water Company Lots	855 spaces		
Prior to 5 pm	3%	26	0
5 pm – 6 pm	29%	248	0
6 pm – 7 pm	59%	504	0
After 7 pm	9%	77	0
Akatiff & Milligan Lots	568 spaces		
Prior to 5 pm	3%	17	0
5 pm – 6 pm	29%	165	0
6 pm – 7 pm	59%	335	0
After 7 pm	9%	51	0
Downtown parking east of SR 87	12,143 spaces		
Prior to 5 pm	3%	364	0
5 pm – 6 pm	29%	3,521	0
6 pm – 7 pm	59%	7,164	0
After 7 pm	9%	1,094	0
Passenger Loading Zone			
Prior to 5 pm	1%	3	3
5 pm – 6 pm	10%	28	28
6 pm – 7 pm	80%	220	220
After 7 pm	9%	25	25
Total Trips By Time Period			
Prior to 5 pm	4%	718	3
5 pm – 6 pm	28%	4,972	28
6 pm – 7 pm	59%	10,281	220
After 7 pm	9%	1,562	25
Total		**17,533**	**275**

Source: Hexagon Transportation Consultants, 2005.

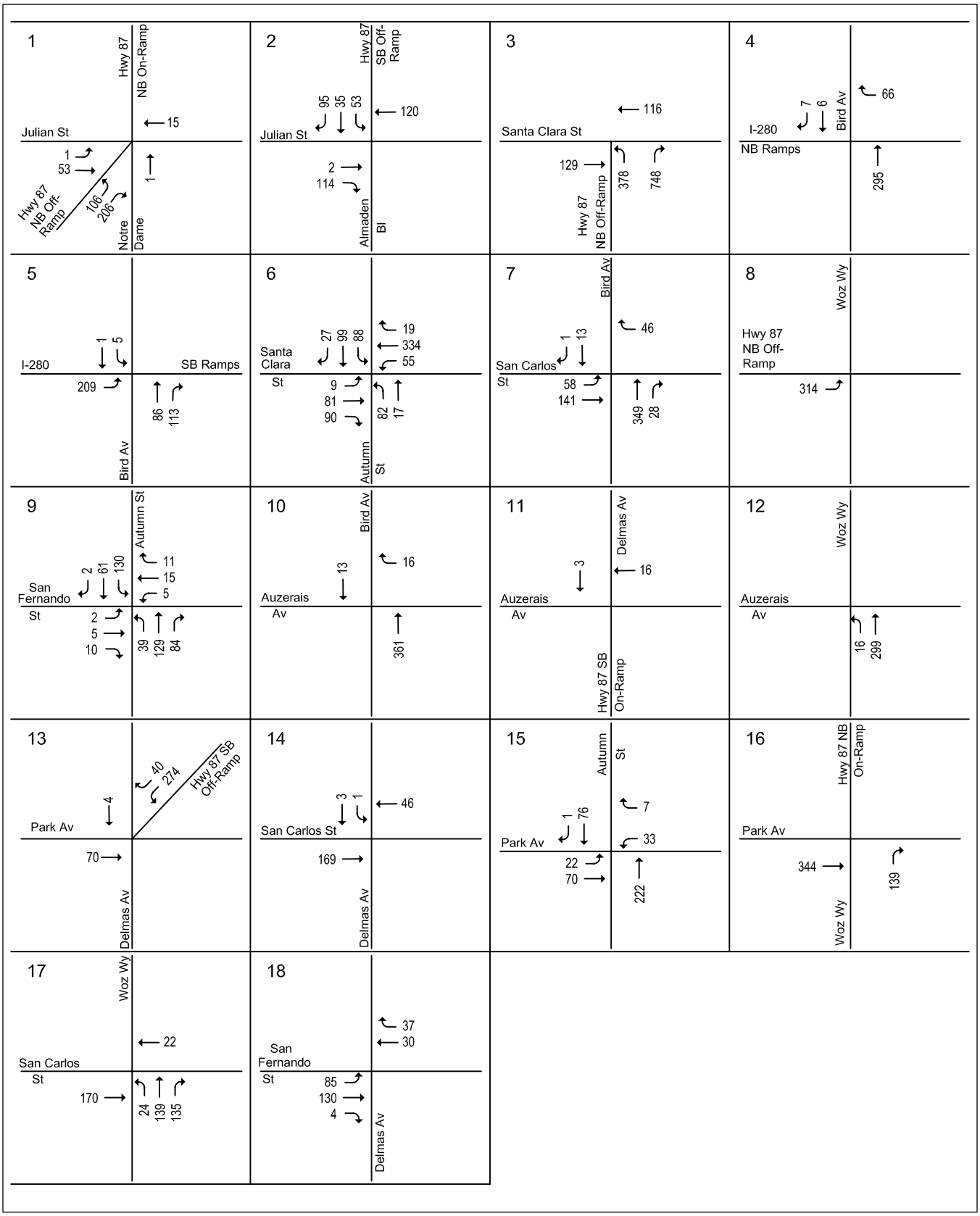

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FIGURE V.C-9

Baseball Stadium in the Diridon/Arena Area

Proposed Baseball Stadium-Generated Trips

Single-Event Scenario

(5:00-6:00 P.M.)

SOURCE: HEXAGON TRANSPORTATION CONSULTANTS, INC., 2006

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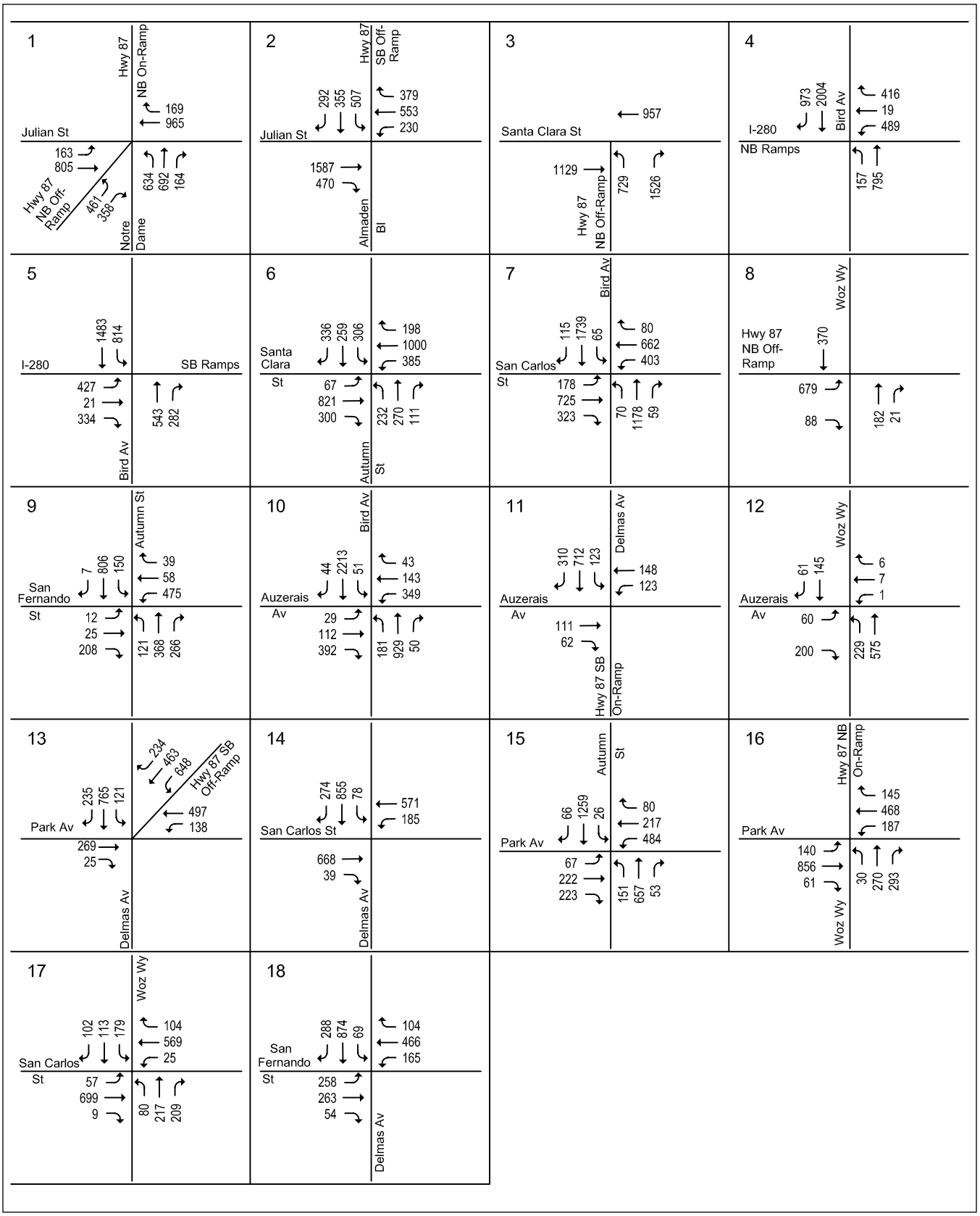

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FIGURE V.C-10

Baseball Stadium in the Diridon/Arena Area

Project Traffic Volumes

Single-Event Scenario

(5:00-6:00 P.M.)

SOURCE: HEXAGON TRANSPORTATION CONSULTANTS, INC., 2006

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Table V.C-10: Project Intersection Levels of Service – 5:00 to 6:00 p.m. – Single-Event Scenario

Intersection	Count Date	Existing		Background		Project Conditions				With Mitigation	
		LOS	Avg. Delay	LOS	Avg. Delay	LOS	Avg. Delay	Crit. V/C Change	Avg. Crit. Delay Change	LOS	Avg. Delay
SR 87 and Julian Street (E)*	11/1/2005	D	38.3	D	42.1	D	46.1	0.066	3.8		
SR 87 and Julian Street (W)*	11/1/2005	C	21.0	C	23.1	C	24.1	0.028	0.9		
SR 87 and W. Santa Clara Street*	111/1/2005	B	16.7	B	18.3	C	24.3	0.289	6.9		
I-280 and Bird Avenue (N)*	11/1/2005	C	26.2	C	32.4	C	33.6	0.025	6.0		
I-280 and Bird Avenue (S)*	11/1/2005	C	24.5	C	27.6	C	34.2	-0.007	3.1		
Autumn Street and W. Santa Clara Street*	11/1/2005	B	18.3	C	32.2	D	35.4	-.0.053	3.9		
Bird Avenue and W. San Carlos Street*	11/1/2005	D	36.4	D	39.8	D	41.2	0.044	3.6		
SR 87 and Woz Way	11/15/2005	A	9.8	B	10.1	B	10.3	0.111	-0.5		
Autumn Street and San Fernando	11/1/2005	B	10.4	B	11.3	C	32.4	0.237	20.3		
Bird Avenue and Auzerais Avenue	11/1/2005	C	24.5	C	33.5	C	33.0	0.012	1.0		
Delmas Avenue and Auzerais Avenue	11/1/2005	B	15.6	B	16.2	B	16.2	0.001	0.0		
Woz Way and Auzerais Avenue	11/1/2005	B	18.6	C	20.0	B	16.0	0.010	-0.1		
Delmas Avenue and Park Avenue	11/15/2005	C	28.1	F	160.7	**F**	**167.2**	**0.072**	**21.0**	E	62.8
Delmas Avenue and W. San Carlos Street	11/1/2005	C	20.1	C	25.1	C	26.4	0.050	2.2		
Autumn Street and Park Avenue	11/1/2005	C	34.8	D	37.5	D	38.5	0.056	2.0		
Woz Way and Park Avenue	11/1/2005	B	18.4	C	21.4	C	20.3	0.102	-1.2		
Woz Way and W. San Carlos Street	11/1/2005	C	20.4	C	22.3	C	23.7	0.115	2.0		
Delmas Avenue and San Fernando Street	11/1/2005	B	16.5	F	103.0	**F**	**117.9**	**0.019**	**8.0**	C	29.8

* Denotes CMP intersection.

Note: **Bold** indicates a significant project impact.

Source: Hexagon Transportation Consultants, 2006.

ton Avenue/Southern Pacific Railroad tracks to the west) which is exempt from the City of San Jose level of service policy.

> Mitigation Measure TRANS-1: The congestion at this intersection could be mitigated by adding a second southbound through lane on Delmas Avenue. The recommended lane addition would require widening the curb-to-curb roadway width by approximately 2 feet. This could be accomplished by acquiring additional right-of-way (ROW) along the east side of Delmas Avenue, or, if additional ROW cannot be acquired, by removing on-street parking on the east side of Delmas Avenue. It should be noted that the same improvement was identified as a mitigation measure for the San Jose Water Project. Based on the City's standards, the recommended improvements would satisfactorily mitigate the project impact. (LTS)

Impact TRANS-2: The level of service at Delmas Avenue and W. San Fernando Street would degrade from background LOS F conditions. This condition constitutes a significant impact by City of San Jose standards. (S)

This intersection is expected to operate at LOS F during the hour from 5:00 to 6:00 p.m. under background conditions. The added vehicular traffic resulting from the proposed project would cause the critical-movement delay to increase by four or more seconds and the critical V/C ratio would increase by 0.01 or more. However, as described previously, this study intersection is located within the Greater Downtown Core (defined by the area formed by Coleman Avenue/Julian Street/St. James Street to the north, 4th Street and Civic Plaza to the east, I-280 to the south, and White Street/Stockton Avenue/Southern Pacific Railroad tracks to the west) which is exempt from the City of San Jose level of service policy.

> Mitigation Measure TRANS-2: The congestion at this intersection could be mitigated by adding a second southbound through lane on Delmas Avenue. The recommended lane addition would require widening Delmas north of San Fernando by approximately 12 feet and south of San Fernando by two feet. It should be noted that the same improvement was identified as a mitigation measure for the San Jose Water Project, from which ROW dedication would be required. With the recommended improvement, the average vehicular delays at this intersection would be reduced to the LOS C range during the analysis period. Based on the City's standards, the recommended improvements would satisfactorily mitigate the project impact. (LTS)

(2) CMP Level of Service Analysis. Measured against the CMP standards, none of the CMP study intersections would be significantly impacted by the proposed project.

f. Project Freeway Segment Analysis. The study freeway segments were evaluated for only one hour: 5:00 to 6:00 p.m. Although project-generated traffic is expected to peak after 6:00 p.m., the overall traffic on the freeway system is expected to be greatest before 6:00 p.m. Traffic volumes on the study freeway segments between 5:00 and 6:00 p.m. were estimated for each project scenario by adding trips generated by the proposed project to existing volumes obtained from the 2004 CMP Annual Monitoring Report. The results of the analysis are summarized in Table V.C-11. The same freeway impacts would be experienced with or without a concurrent Sharks game at the HP Pavilion. This is true because a Sharks game does not add much traffic to the freeways between 5:00 p.m. and 6:00 p.m. (the games start at 7:30 p.m.). Also, project freeway impacts are based on an absolute volume increase, which is related to freeway capacity and not freeway volume.

Table V.C-11: Project Freeway Segment Levels of Service

Freeway	Location	Direction	Existing Plus Project Trips					Project Trips		
			Mixed-Flow						Mixed-Flow	
			Lanes	Speed	Volume	Density	LOS	Total Volume	Volume	% Capacity
SR 87	Julian Street to Coleman Avenue	NB	2	67	2,283	17.0	B	3	3	0.07
		SB	2	18	3,697	102.7	**F**	497	497	**11.30**
	I-280 to Julian Street	NB	2	67	2,477	18.5	C	597	597	13.57
		SB	2	9	2,474	137.4	**F**	314	314	**7.14**
	Alma Avenue to I-280	NB	2	65	4,627	35.6	D	597	597	13.57
		SB	2	16	2,983	93.2	F	3	3	0.07
I-280	Meridian Avenue to Bird Avenue	EB	4	26	8,573	82.4	**F**	1,193	1,193	**12.97**
		WB	4	36	8,067	56.0	E	7	7	0.08
	Bird Avenue to SR 87	EB	4	23	8,092	88.0	**F**	1,102	1,102	**11.98**
		WB	3	66	4,816	24.3	C	66	66	0,96
	SR 87 to 10th Street	EB	3	67	4,245	21.1	C	625	625	9.06
		WB	3	67	3,554	17.7	B	744	744	10.78
	10th Street to McLaughlin Avenue	EB	4	45	8,645	48.0	E	5	5	0.051
		WB	4	66	8,335	31.6	D	945	945	10.27

Note: **Bold** indicates a significant adverse impact.

Source: Santa Clara Valley Transportation Authority Congestion Management Program 2004 Monitoring and Conformance Report.

Impact TRANS-3: State Route 87 would experience a significant impact from project traffic along two of the analyzed segments; I-280 would experience a significant impact from project traffic along two of the analyzed segments. (S)

The analysis shows that the following four freeway segments would be impacted under project conditions:

- SR 87 southbound between Coleman Avenue and Julian Street
- SR 87 southbound between Julian Street and I-280
- I-280 eastbound between Meridian Avenue and Bird Avenue
- I-280 eastbound between Bird Avenue and SR 87

Mitigation Measure TRANS-3: Improvements to mitigate significant project impacts on freeway segments are infeasible due to right-of-way constraints and the land use impacts associated with acquiring additional right-of-way. These impacts are therefore considered significant and unavoidable. (SU)

g. Project Impacts on Transit Facilities. Potential impacts on transit facilities were evaluated based on the mode usage data provided in the survey of a Sharks game in November 2005. The survey showed that 2.6 percent of attendees arrived via Caltrain and 1.9 percent arrived via LRT. The survey did not find anyone who arrived by VTA bus. Using a sold-out attendance figure of 43,860 for the stadium, which includes staff, yields an estimate of 1,140 persons arriving by Caltrain and 833 persons arriving by LRT. While no bus riders were found in the HP Pavilion survey, it is reasonable to assume that some attendees would use a VTA bus. Caltrain can accommodate about 1,000 riders per train, and there would be three trains arriving in the one hour before a game. Therefore, it appears that sufficient Caltrain capacity is available. Caltrain has demonstrated the ability to add extra trains when the situation warrants, for example, to serve Giants games in San Francisco. Each LRT "train" can accommodate about 300 passengers, and there would be 8 trains arriving in the one hour before a game (counting both directions). Therefore, there should be no problem accommodating the projected ridership. In summary, given the capacities of the Caltrain, LRT, and bus systems, the project would have no adverse impact on transit service.

Although not included in the analysis, a BART station is planned for eventual construction adjacent to the stadium site. This is part of the planned BART extension from Fremont, through San Jose, to Santa Clara. BART service would provide another transit option for stadium patrons. The planned BART station is well advanced in the design stage. The station would be underground, parallel to Santa Clara Street and about one block south. A parking structure is planned adjacent to the HP Pavilion to be used jointly by BART and the Pavilion. The parking structure would include a pedestrian bridge over Santa Clara Street. A bus transit center is planned in conjunction with the BART station. There are two alternate locations being

Other Scenarios

The City of San Jose Transportation Policy (CSJTP) defines the peak travel period to be the hour between 5:00 and 6:00 p.m. The analysis of potential adverse traffic impacts of the proposed stadium presented above is based on a single event at the stadium occurring during that peak hour. Two other scenarios have been analyzed by Hexagon Transportation Consultants and are presented in Chapters 6 and 7 of the transportation technical background report (provided as Appendix C of this EIR). Those scenarios are referred to as the "Project Peak Hour (6:00 – 7:00 p.m.)" scenario and the "Simultaneous Events" scenario.

While these two scenarios are not required to be analyzed under the CSJTP and would not result in impacts that require mitigation in the EIR, the following discussions briefly summarize the findings of those analyses. Please see Chapters 6 and 7 of Appendix C for detailed presentations of these scenarios.

Project Peak Hour (6:00 – 7:00 p.m.) Scenario. This scenario represents the period of highest trips for the proposed stadium project (but not the surrounding transportation network, which, by definition in the CSJTP, occurs between 5:00 and 6:00 p.m.) Similar trip generation, trip assignment and trip distribution steps were taken for this scenario as for the proposed project in the 5:00 to 6:00 p.m. peak hour. Study intersections were analyzed in terms of their levels of service. The results of that analysis show that four intersections would exhibit operational deficiencies under this scenario:

Autumn Street and San Fernando Street
Delmas Avenue and Park Avenue
Autumn Street and Park Avenue
Delmas Avenue and San Fernando Street

Simultaneous Events Scenario. The major league baseball season and the regular national hockey league season have two weeks overlap in April and 1 to 2 weeks overlap in September/October. Taking in account the potential for playoff games and other large (non-San Jose Sharks) events at the HP Pavilion, the number of large events occurring simultaneously can be calculated. This scenario examines the effects on traffic based upon the occurrence of a weekday evening baseball game with a simultaneous event at the HP Pavilion. It was determined that because of the typical arrival times, the 6:00 – 7:00 p.m. time period would experience the greatest impact from stadium traffic. Therefore, for the simultaneous-events scenario, only the 6:00 – 7:00 p.m. time period was analyzed. The results of that analysis show that the same four intersections would exhibit operational deficiencies under this scenario as under the single-event Project Peak Hour (6:00 – 7:00) scenario.

considered for the transit center: opposite the entrance to Diridon Station, or south of Diridon Station. The alternative south of the station would be precluded by the stadium, but the location near the entrance to Diridon Station would work well with the stadium. It would be immediately across the street from the stadium entrance. Based on a survey of other ballparks serviced by commuter rail, the transit mode split with BART can be estimated at approximately 15 percent. This mode split could be expected to come directly out of the auto share, thereby reducing total auto trips approximately 11 percent. The effect on pedestrian traffic would be to shift pedestrians from sidewalks east of the ballpark to the area to the north of the ballpark.

h. Project Impacts on Bicycle Facilities. The stadium event schedule is projected to include mostly night games, hence the percentage of attendees arriving by bicycle is estimated to be very low. Nevertheless, bicycle racks should be provided. The proposed changes to Bird Avenue may incorporate bicycle lanes, but otherwise there is estimated to be no impact on bicycle facilities from the project.

i. Project Impacts on Parking Facilities. The proposed baseball stadium would include limited on-site parking (approximately 150 spaces) for players and staff. The project also includes the construction of a new parking garage on an adjacent parcel (south of Park Avenue) with up to 1,200 spaces. Aside from these new parking facilities, stadium patrons are expected to utilize existing parking garages and lots in the Diridon/Arena area and parking facilities within the Downtown Core Area east of SR 87. The adequacy of the proposed and existing parking facilities was evaluated for a sell-out weekday evening baseball game. The analysis assumes no concurrent event at the HP Pavilion.

The parking demand generated by the proposed baseball stadium was estimated based on a survey of San Jose Sharks fans attending a weekday evening hockey game at the HP Pavilion. Table V.C-12 presents a detailed summary of how the projections were derived. Based on these travel characteristics, the total parking demand generated by the proposed stadium is estimated to be 17,258 spaces.

Table V.C-12: Project Parking Generation Estimates

Mode Share	Percent	Person
Public Transit	4.5	1,974
Charter Bus, Taxi, and Limo	1.1	482
Walk/Bicycle	3.3	1,447
Drop-off/Pick-up	0.6	263
Auto	90.5	39,693
Average Vehicle Occupancy	2.3 persons/vehicle	
Ballpark Vehicle Parking Demand		17,258
Projected Ballpark Attendance[1]		43,860

[a] Total projected Attendance for sold out weekday night game, including fans, team personnel, concessions, emplyees, and media personel

Source: Hexagon Transportation Consultants.

Subtracting the number of parking spaces at the proposed stadium (150) and at the proposed new stadium parking garage (1,200) from the total stadium parking demand (17,258 spaces) yields an estimated off-site parking demand of 15,908 spaces. A parking management plan will be implemented to prevent stadium patrons from seeking parking in the residential area west of the site.

It should be noted that some of the surface parking lots east of the project site are approved for redevelopment with other uses. This could increase or decrease the availability of parking, although in most cases, the parking is likely to increase. For example, the San Jose Water Company lots now provide 800 spaces, and the approved office and residential complex would provide 3,000 spaces.

Within ¾ miles from the stadium, a total supply of 19,722 parking spaces currently exist to the north and east of the project site. Assuming these spaces normally are 25 percent occupied in the evening without an event at the HP Pavilion, there are an estimated 14,791 available spaces for the stadium.

(1) Single-Event Scenario. Existing parking facilities in the Diridon/Arena area as well as garages and lots in the Downtown Core Area east of SR 87 would be short 1,117 spaces, or 7 percent of off-site demand. These patrons would have to seek parking outside of the ¾-mile distance from the ballpark. There are an additional 10,009 spaces in this area. Under such circumstances it might be desirable to operate a shuttle bus from outlying parking areas to the ballpark. Alternatively, the City may wish to encourage transit usage and carpooling as a way to reduce the number of cars brought downtown.

(2) Simulataneous-Events Scenario. A concurrent HP Pavilion event would reduce the amount of parking available to the patrons of the stadium. The HP Pavilion has an agreement with the City of San Jose to make available a sufficient number of parking spaces near the arena. In order to maintain this availability, it would be necessary to monitor the parking lots and garages nearest the HP Pavilion so that no stadium attendees would park there. This could be accomplished by supplying special parking passes with HP Pavilion tickets or by having patrons show tickets to parking operators in order to access the lots and garages made availablefor the HP Pavilion under the agreement.

The HP Pavilion agreement with the City of San Jose requires that there be 6,650 spaces (6,350 patron and 300 employee) available to the arena within ½-mile, and that 3,475 of these spaces be within ⅓-mile. The parking lots nearest the HP Pavilion are the HP Pavilion main lot, HP Pavilion Lot D, Cahill Lots 1-4, SJ Water Company lots, and the Akatiff & Milligan lots. These all are within ⅓-mile and have a combined capacity of 3,791 spaces (see Table V.C-6). To satisfy the agreement, another 2,859 spaces would need to be available. These spaces could be found in the following lots and garages: Market/San Pedro garage (1,392 spaces), Comerica garage (736 spaces), and Park Center Plaza III garage (1,320 spaces).

The reduction of parking available to the ballpark in the simultaneous-events scenario will mean the utilization of space in lots and garages farther than ¾-mile from the ballpark. Counting parking facilities outside this radius, but still within downtown San Jose, adds another 10,009 spaces to the inventory (see Table V.C-6). The combined parking demand of the HP Pavilion and the ballpark would be about 24,000 spaces, assuming no shift in travel mode or vehicle occupancy. This demand essentially could be met within downtown San Jose, where there are about 23,300 spaces available (75 percent of 31,081). The 700-space calculated shortfall would be a very small proportion of the total demand and, in response to this demand, it is expected that transit usage and car-pooling would increase slightly, and other private lots would be pressed into service. In that event, some ballpark patrons would experience walk times of 20 to 30 minutes. Under such circumstances, it might be desirable to operate a shuttle bus from outlying parking areas to the ballpark. Alternatively, the City might wish to encourage transit usage and carpooling as a way to reduce the number of cars brought downtown.

It is not the intent of the City to rely on any on-street parking, especially west of Bird Avenue, to serve the stadium. To prevent parking in the neighborhoods, the City may need to implement time limit or permit parking. (Figure V.C-11 shows the numerous existing zones where permit parking has been instituted.) Nevertheless, patrons new to the area might think that there is parking available west of Bird Avenue and drive through the neighborhoods looking for parking. Therefore, initially the City

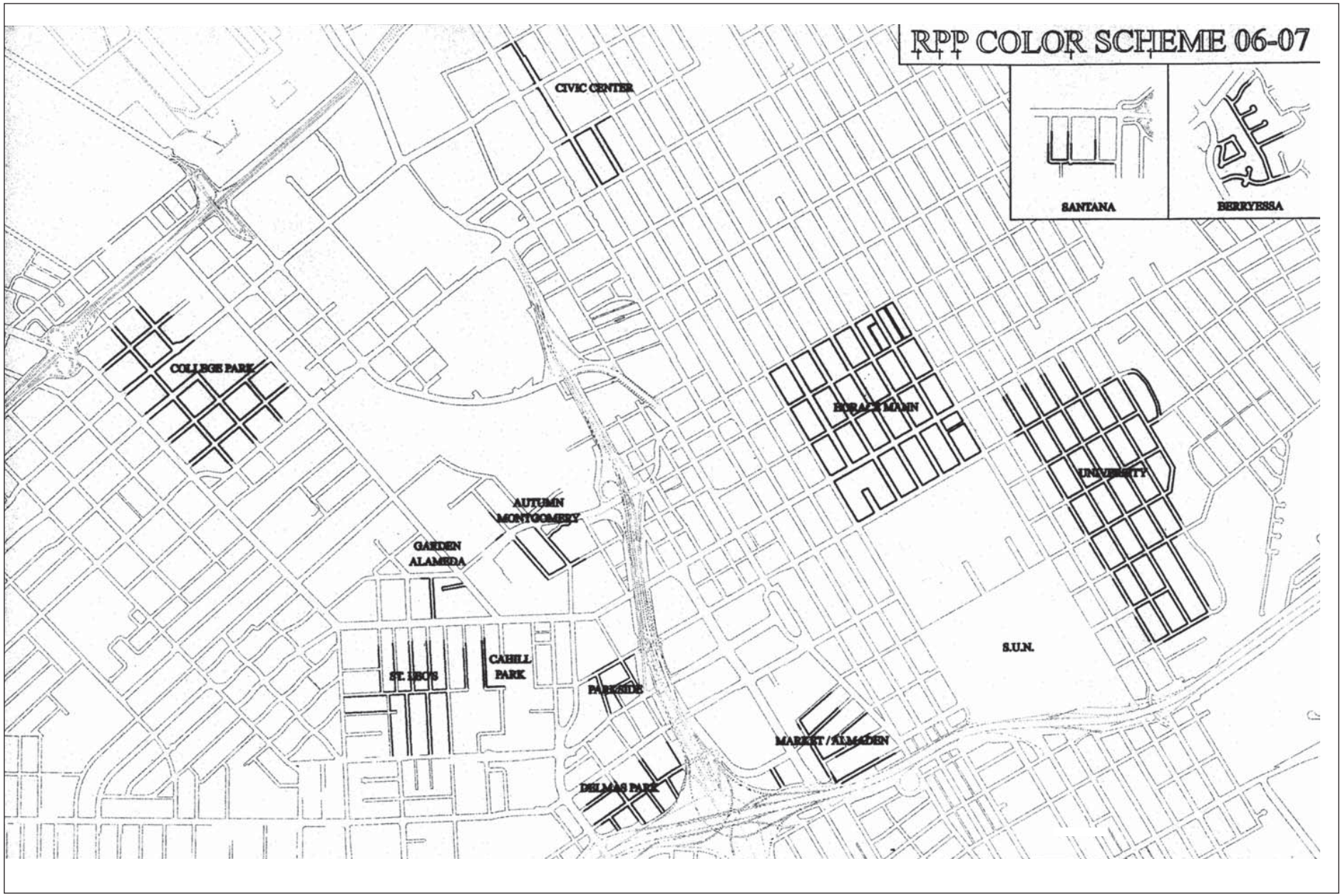
could place temporary barricades at neighborhood street entrances and signs directing vehicles to parking garages to control parking and traffic in this area. Once stadium patrons learn that parking is not available west of Bird Avenue, it may be possible to dispense with the barricades. However, it still will be necessary to continue parking enforcement to ensure that the permits and time limits are being observed. A detailed Traffic and Parking Management Plan (TPMP) should be prepared that describes initial short-term traffic controls as well as the long term traffic management. This is the same procedure that was followed for the opening of the Arena. The Arena TPMP has been refined over the years, and now Arena events do not result in substantial, recurring traffic or parking impacts.

j. Project Impacts on Pedestrian Facilities. A pedestrian analysis was undertaken to determine whether the existing sidewalks and street crossings would be adequate to serve the levels of pedestrian activity expected during arrival at and departure from sold-out events at the stadium. Pedestrian routes to the stadium were analyzed for the peak hour, which was determined to be the hour before the start of the game (based on counts at the HP Pavilion). Based on the survey of HP Pavilion patrons, it was estimated that 91 percent of stadium patrons would arrive by car, with the majority parking in the existing lots and garages in the greater downtown area. Because the number of pedestrian trips and the routes would be determined by the locations of parking areas, this pedestrian analysis focuses on the pedestrian flows between the parking areas and the proposed stadium. The pedestrian analysis was undertaken both with and without a simultaneous HP Pavilion event. Although existing and planned multiuse pedestrian and bike trails would be located very near the stadium, it is not expected that many ballpark patrons would use those facilities.

To identify the routes of park-and-walk trips, the downtown parking facilities and their capacities were identified. The number of cars entering each lot or garage was estimated. Without a simultaneous HP Pavilion event, it was assumed that all the parking lots west of SR 87 could be used for the stadium. With a simultaneous event, it was assumed that all parking west of SR 87 would be taken by HP Pavilion patrons (except for the stadium garage on Park Avenue). Thus, ballpark patrons would need to park in the lots and garages east of SR 87. Based on the HP Pavilion survey, the vehicle occupancy was assumed to average 2.3 persons per car. From that information the number of stadium attendees for each parking garage was derived. Then the pedestrian routes were determined. It was assumed that the pedestrians would take the shortest route to the stadium, and that they would walk directly from the garage to the stadium. The resulting assignment of pedestrian trips at critical locations is shown in Figures V.C-12 and V.C-13. The pedestrian routes for an event at the stadium can be described as follows:

1. The stadium plans to develop a parking structure of about 1,200 spaces on Bird Avenue at Park Avenue. This would generate approximately 1,555 peak hour pedestrian trips between the new garage and the stadium. These pedestrians would utilize the proposed pedestrian bridge crossing Park Avenue. These pedestrians are not shown on Figures V.C-12 and V.C.-13, as they would not impact traffic on the surface streets.

2. There are five parking areas west of SR 87 and east of the project site: the HP Pavilion main lot, Cahill lots, HP Pavilion lot D, SJ Water Company lot, and Akatiff and Milligan lots. If there is no event at the HP Pavilion, these lots could be used for stadium parking. These lots have a combined total of nearly 3,800 parking spaces and would generate approximately 5,110 peak hour pedestrian trips. The 1,000 pedestrians from the Akatiff and Milligan lots were assumed to walk down Autumn Street; the 1,160 pedestrians from the Water Company lots



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NOT TO SCALE

FIGURE V.C-11

Baseball Stadium in the Diridon/Arena Area

Permit Parking Areas

SOURCE: HEXAGON TRANSPORTATION CONSULTANTS, INC., 2006

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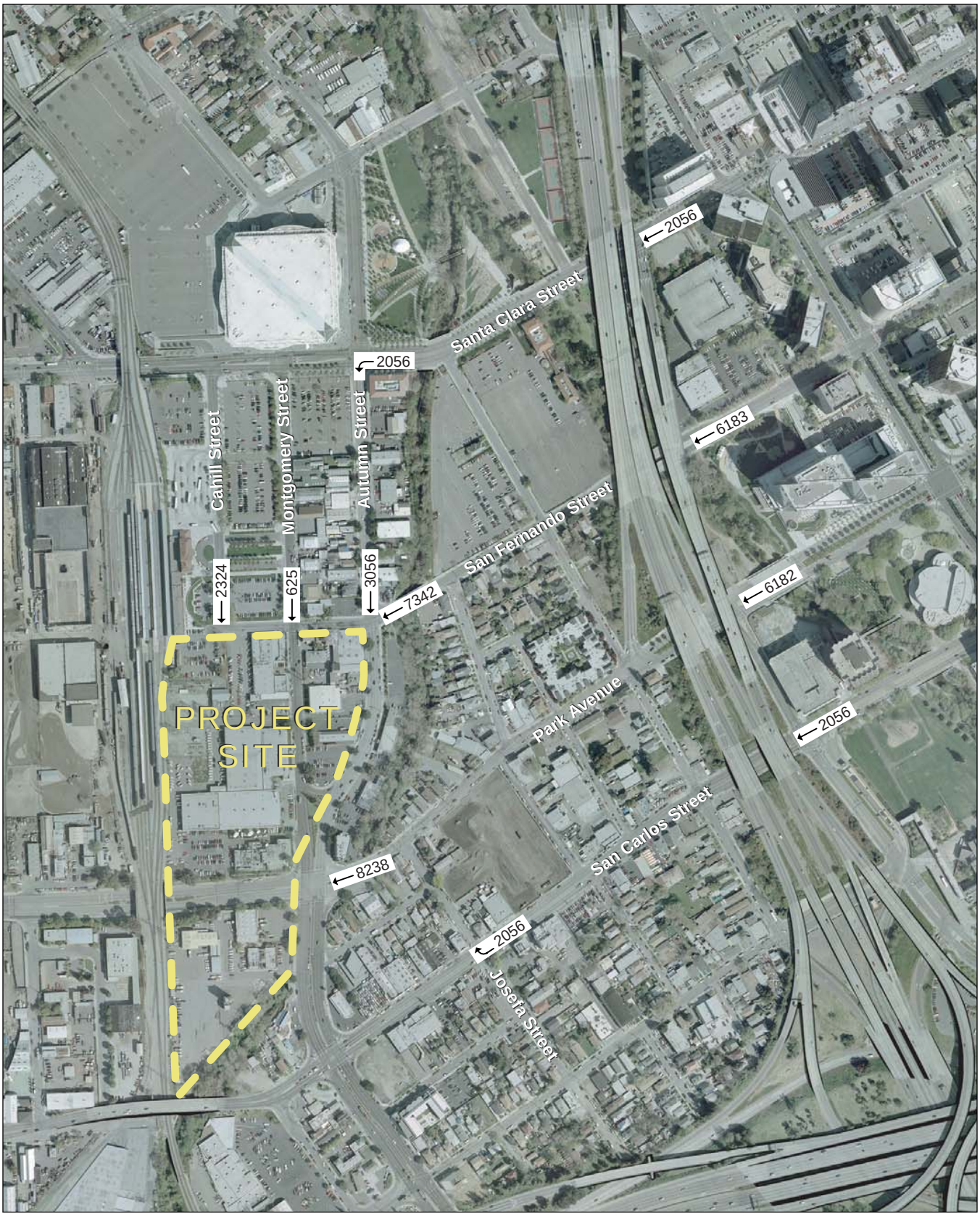

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FIGURE V.C-12

Baseball Stadium in the Diridon/Arena Area
Estimated Pedestrian Volumes
Generated by the Baseball Stadium
(Single-Event Scenario)

SOURCE: HEXAGON TRANSPORTATION CONSULTANTS, INC., 2006

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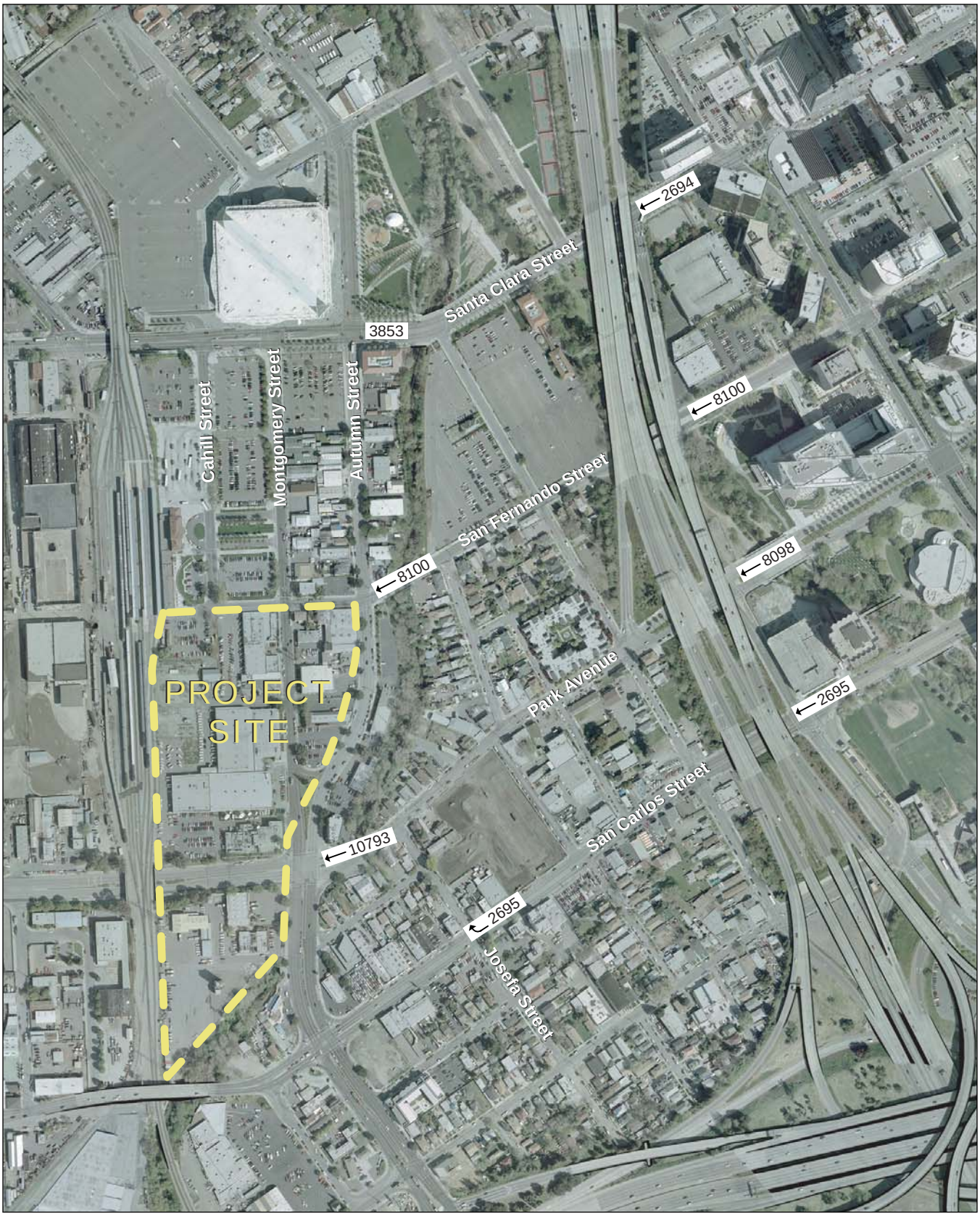

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FIGURE V.C-13

Baseball Stadium in the Diridon/Arena Area

Estimated Pedestrian Volumes Generated by the Baseball Stadium and HP Pavilion (Simultaneous-Events Scenario)

SOURCE: HEXAGON TRANSPORTATION CONSULTANTS, INC., 2006

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were assigned to W. San Fernando Street. The 2,950 pedestrians from the two HP Pavilion lots and the Cahill lots were assigned to Cahill, Montgomery and Autumn Streets. If there are simultaneous events, then all of the parking west of SR 87 will be used for the HP Pavilion patrons. Therefore, for the simultaneous-events scenario the 5,110 peak hour pedestrian trips normally generated from the parking garages west of SR 87 would be coming from parking garages east of SR 87.

The bulk of the peak hour pedestrian trips, approximately 16,480, would be walking from parking garages and lots east of SR 87 during a single event at the stadium. Under the simultaneous-events scenario, there would be 21,590 peak hour pedestrian trips from east of SR 87. There are four main roads that pedestrians could use to walk from east of SR 87 to the stadium: W. Santa Clara Street, W. San Fernando Street, Park Street, and San Carlos Street. The majority of the garages and lots are near W. San Fernando Street and Park Avenue. These two streets also lead directly to the stadium, so it was assumed that the majority of the pedestrians would use those two streets.

To determine the impacts of these pedestrian trips, a pedestrian flow rate of 14.94 pedestrians per minute per foot of sidewalk width was assumed. The space per pedestrian was assumed to be approximately 15 square feet. These numbers were selected from the *2000 Highway Capacity Manual* and represent the uppermost limit of LOS D for pedestrian facilities. Using these assumptions, a 5-foot-wide sidewalk would have a capacity of approximately 4,480 pedestrians per hour.

Table V.C-13: Sidewalk Pedestrian Flows

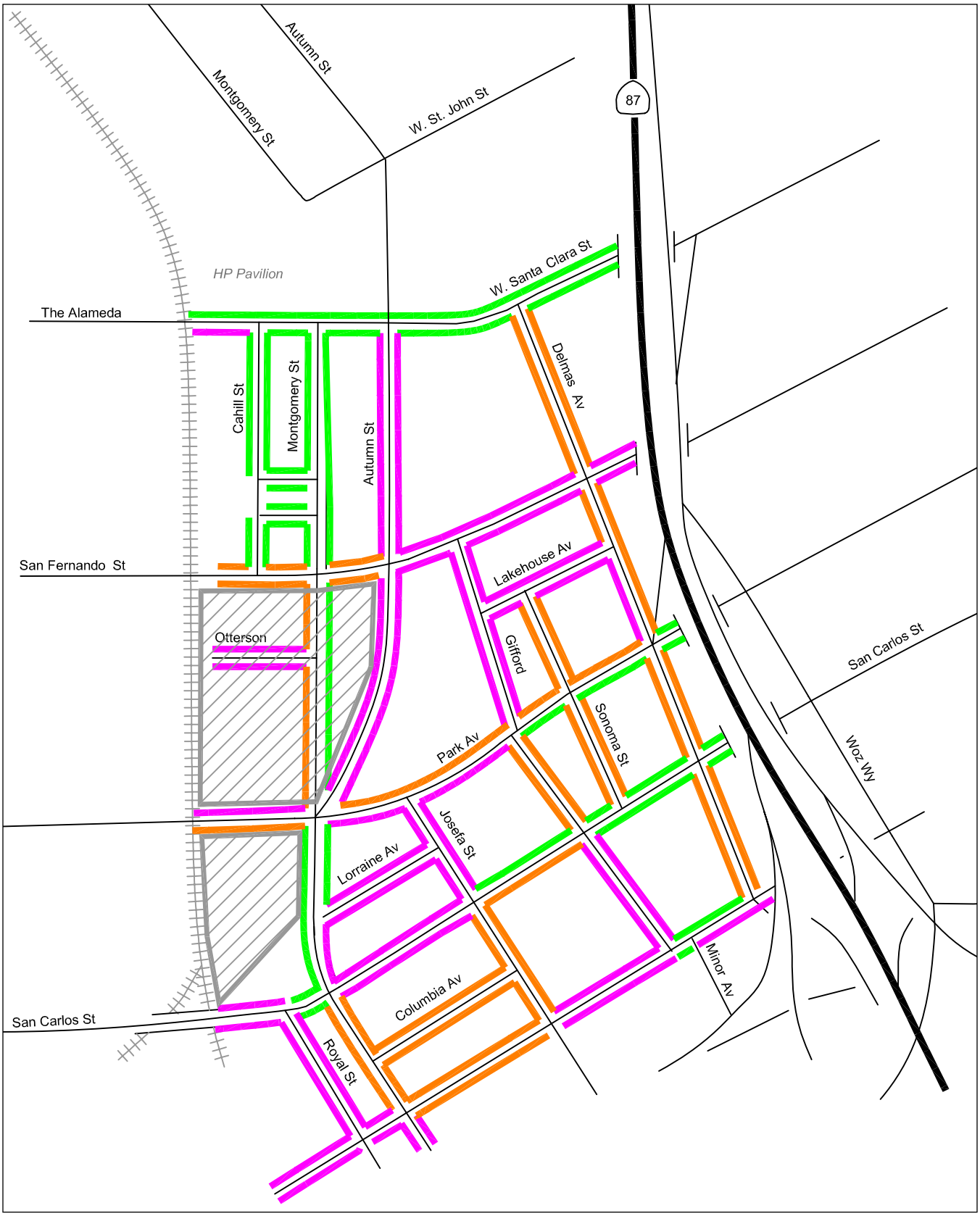
Street	Peak Pedestrian Volume	Approx. Sidewalk Width (Ft)*	Sidewalk Capacity at LOS D* (ped/hr)	Widening Required?
W. Santa Clara St.	2,056	18	16,134	No
Cahill St.	2,324	24	21,512	No
Montgomery St.	625	16	14,341	No
Autumn St.	3,056	10	8,963	No
W. San Fernando St., west of Delmas St.	7,342	10	8,963	No
W. San Fernando St., east of Delmas St.	6,183	10	8,963	No
Park Ave., west of Josefa St.	8,238	14	12,549	No
Park Ave., east of Josefa St.	6,182	10	8,963	No
San Carlos St.	2,056	15	13,445	No

* Total existing sidewalk width on both sides of the street.

Source: Hexagon Transportation Consultants, 2005.

The results of the pedestrian analysis for sidewalks are presented in Table V.C-13, which shows the peak hourly pedestrian flow for a given street, the total width of sidewalk on both sides of the street, and the capacity of the sidewalks on both sides of the street at LOS D. The sidewalk widths by street are shown on Figure V.C-14. Sidewalks on streets east of SR 87 or north of Santa Clara Street are not expected to experience any pedestrian impacts because either the sidewalks are wider, or the stadium pedestrians will be more dispersed, or both.

The results of the sidewalk analysis showed that the sidewalk width on most streets is adequate to handle the anticipated pedestrian flows. The exception is on Park Avenue between Autumn Street and Josefa Street. The south side of the street does not have a sidewalk. A sidewalk of at least six feet of unobstructed width should be built on this section of Park Avenue in order to accommodate the expected pedestrian volume. None of the other sidewalks would need to be widened due to the increased pedestrian flows to or from the ballpark. While the sidewalk widths are adequate, it should be noted that the pedestrian flows could be fairly continuous in the one hour before a game and the one hour after a game. Therefore, vehicles could have difficulty accessing cross-streets and driveways along Park Avenue and San Fernando Street between Autumn Street and SR 87.



LSA

LEGEND

Project Site

< 6'

6'-7'

≥ 8'

FIGURE V.C-14

Baseball Stadium in the Diridon/Arena Area

Existing Sidewalk Widths

SOURCE: HEXAGON TRANSPORTATION CONSULTANTS, INC., 2006

I:/SJO530 ballpark/figures/Fig_VC14.ai (02/13/06)

The increased pedestrian flows from the proposed stadium also would affect operations at nearby intersections. To achieve the mitigated intersection levels of service described previously in this report, a Traffic and Parking Management Plan would be developed and changes would be required to: (1) pedestrian phase green times, (2) crosswalk widths, and (3) the size of pedestrian queuing area at corners. There are four intersections where pedestrian improvements are recommended to accommodate the increased pedestrian demand. These are described below.

- **Autumn Street and Park Avenue.** Total pedestrian crossing times (pedestrian walk time plus pedestrian clearance time) should be extended to between 41 seconds and 73 seconds, depending on the approach. All four crosswalks should to be widened to 20 feet. The northeast and northwest corners should provide approximately 3,600 square feet and 4,800 square feet of sidewalk space, respectively, to accommodate pedestrians waiting to cross the street. The southeast and southwest corners should provide approximately 2,400 square feet of sidewalk space to accommodate pedestrians waiting to cross the street. The recommended pedestrian queuing space on all corners could be provided by either removing the existing "pork-chop" islands for right turns or incorporating the space into the stadium and parking garage sites.

  The above improvements would be sufficient for the single ballpark event. For simultaneous events with the HP Pavilion, pedestrian flows would be higher, and further changes would be necessary. To increase the length of pedestrian greentime during simultaneous events, all left turns should be prohibited and left turn signal phases eliminated. This would require coning-off the left turn pockets and police control of the signal operations.

- **Autumn Street and W. San Fernando Street.** Total pedestrian crossing times should be extended to between 21 seconds and 49 seconds, depending on the approach. All four crosswalks should be widened to 20 feet. The northeast, northwest, and southeast corners should provide approximately 2,600 square feet of sidewalk space to accommodate pedestrians waiting to cross the street. The southwest corner should provide approximately 5,200 square feet of sidewalk space to accommodate pedestrians waiting to cross the street. On the southwest corner, the recommended pedestrian queuing space can be provided within the stadium site. Removing the "pork-chop" island on the northeast corner would yield the recommended pedestrian space. On the southeast and northwest corners, the recommended pedestrian space could be gained by modifying the west and south intersection legs in conjunction with the stadium design. This may require additional land from the stadium site. These improvements would be sufficient for both the single stadium event and simultaneous events.

- **Delmas Street and Park Avenue.** Total pedestrian crossing times should be extended to between 26 seconds and 46 seconds, depending on the approach. The crosswalks on the north and south legs should to be widened to 20 feet. All four corners should provide approximately 1,600 square feet of sidewalk space to accommodate pedestrians waiting to cross the street. On the northeast and southeast corners, there is ample open space to accommodate the estimated pedestrian queuing area. On the northwest and southwest corners, providing the recommended pedestrian space would require the removal of on-street parking and widening of the sidewalk areas.

  The above improvements would be sufficient for the single ballpark event. For simultaneous events with the HP Pavilion, pedestrian flows would be higher, and further changes would be necessary. To increase the length of pedestrian greentime during simultaneous events, left turns from westbound Park to southbound Delmas should be prohibited and that left turn signal phase eliminated. This would require coning-off the left turn pocket and police control of the signal operations.

- **Delmas Street and W. San Fernando Street.** Total pedestrian crossing times should be extended to between 16 seconds and 54 seconds, depending on the approach. Wider crosswalks are not required. The existing sidewalks provide adequate space to accommodate pedestrians waiting to cross the street (approximately 1,600 square feet on all four corners). These improvements would be sufficient for both the single stadium event and simultaneous events.

It should be noted that estimation of pedestrian trips to/from the parking areas east of SR 87 has utilized worst-case assumptions. As previously described, the mode split data used to determine the number of project vehicle, transit, and pedestrian trips were derived from patron surveys at the HP Pavilion. However, the HP Pavilion is considerably smaller than the proposed stadium. The proposed stadium would require more available parking spaces and, correspondingly, would draw from a larger number of parking garages within the downtown area. While there is sufficient parking available in the downtown area to accommodate the 91 percent drive mode share assumed for the proposed stadium, the resulting walking distances between the parking areas and the stadium would increase considerably from those of the HP Pavilion survey. As walking distances increase, it is possible that some stadium patrons would find it quicker to ride transit. For this reason, it is anticipated that the mode share for transit associated with the proposed stadium might turn out to be greater than that observed in the HP Pavilion survey. The general effect of an increase in transit mode share would be to: (1) reduce the number of stadium vehicle trips in the downtown area; (2) reduce the numner of patrons walking from the east and crossing Autumn Street; and (3) increase the number of pedestrian trips between the Diridon CalTrain/LRT station and the stadium. The latter could be accommodated on the sidewalks of Cahill Street, Montgomery Street, and Autumn Street, which have the capacity to handle greater than 30,000 additional pedestrian trips per hour.

Bird Avenue is used by school children who live north of I-280 to access Gardner Elementary School, which is located south of I-280. The ballpark would add some traffic to Bird Avenue during school hours for events that occur during the day. The stadium project includes improvements to Bird Avenue that would benefit pedestrian safety on Bird Avenue. These include eliminating free right turns at the intersections, tightening corner radii to decrease vehicle speeds and decrease pedestrian crossing distances, and upgrading the sidewalks and landscaping. Also, there is an option to add bike lanes to Bird Avenue.

k. Analysis on Neighborhood Streets. Neighborhood streets near the future stadium area have been analyzed for potential traffic or parking impacts. Most stadium patrons will use the freeway system to access downtown, rather than surface streets, because they will be coming from relatively long distances. The freeway exits generally lead to major arterials rather than to neighborhood streets. Nevertheless, some patrons living in nearby neighborhoods to the south or west would use city streets to get to the stadium. The two neighborhood streets that have potential for increased traffic are Auzerais Avenue and Park Avenue. The other surface streets near the future stadium, San Carlos Street, Bird Avenue and The Alameda, are major throughways and not considered neighborhood streets. The stadium would have the same effect on surrounding neighborhoods with or without a concurrent event at the HP Pavilion.

(1) Park AvenueAnalysis. Because the proposed new parking garage to be built along with the stadium would have an entrance on Park Avenue, a portion of the traffic entering the garage could be expected to use Park Avenue. The garage entrance on Park Avenue is planned to accommodate only right turns; therefore, it would be accessed by cars traveling eastbound. Park also would be used

by other stadium patrons traveling to other parking lots and garages in the greater downtown area. The estimated increase in traffic volume on this portion of Park Avenue is 300 vehicles before a game and 300 vehicles after a game, for a total daily traffic increase of 600 on game days (see Table IV.C-14). This represents about an eight percent increase in traffic. This is likely to represent people coming into the area on Meridian Avenue, Lincoln Avenue, West San Carlos Street, and Park Avenue. Some of these patrons would return home via West San Carlos Street because only right turns will be allowed out of the proposed Park Avenue parking garage.

Table V.C-14: Traffic Volumes on Neighborhood Streets

Street	Segment	Existing ADT	Added By Project
Park Avenue	West of Bird Avenue	7,100	600
	East of Bird Avenue	5,800	690
Auzerais Avenue	West of Bird Avenue	4,900	0
	East of Bird Avenue	3,700	100

Source: Hexagon Transportation Consultants, 2005.

The portion of Park Avenue east of Bird Avenue would be used by people exiting southbound SR 87 and driving to the proposed new parking garage, as well as people accessing the greater downtown area from neighborhoods to the south and west. It is estimated that about 345 cars would use this section of Park Avenue before a game, and the same number leaving at the end of a game.

(2) Auzerais Avenue. Auzerais Avenue west of Bird Avenue is not expected to have an increase in project traffic. This section of Auzerais Avenue does not provide access to any of the existing or planned parking facilities. It is possible that stadium patrons new to the area might think there is parking down Auzerais (or down other neighborhood streets), and they might drive down the street searching for it. To prevent this from happening, it is recommended that barricades or other forms of traffic control be implemented for the first few months of stadium operation.

There would be some stadium traffic using the section of Auzerais Avenue east of Bird Avenue. Vehicles that exit to Woz Way from northbound SR 87 could use Auzerais Avenue to get to Bird Avenue and then to the parking garage, although this is not their only route option.

l. Bird Avenue/Autumn Street Design. A series of transportation-related changes are planned for the Bird Avenue/Autumn Street corridor, either as background improvements (something already planned without the stadium) or as part of the stadium project. The changes include the extension of Autumn Street to Coleman Avenue, the realignment of Autumn Street (and abandonment of Montgomery Street) along the eastern side of the stadium site, and transportation operations improvements on Bird Avenue between I-280 and Park Avenue. These improvements are described in detail in the transportation technical background report (Appendix C of the EIR).

D. AIR QUALITY

This section has been prepared using methodologies and assumptions recommended in the air quality impact assessment guidelines of the Bay Area Air Quality Management District (BAAQMD).[1] In keeping with these guidelines, this chapter addresses existing air quality impacts of future traffic on local carbon monoxide levels; potential impacts related to odor and toxic air contaminants; construction period dust and vehicular emissions; and impacts of land use related vehicular emissions that have regional effects. Mitigation measures to reduce or eliminate potentially significant air quality impacts are identified, where appropriate.

1. Setting

The following discussion provides an overview of air quality conditions in the region and the Emeryville area. Climate, air quality conditions, and typical air pollutant types and sources are described. Ambient standards and the regulatory framework relating to air quality are summarized.

a. Air Pollution Climatology. The amount of a given pollutant in the atmosphere is determined by the amount of pollutant released and the atmosphere's ability to transport and dilute the pollutant. The major determinants of transport and dilution are wind, atmospheric stability, terrain, and, for photochemical pollutants, sunshine.

Northwesterly and northerly winds are most common in the project area, reflecting the orientation of the Bay and the San Francisco Peninsula. Winds from these directions carry pollutants released by autos and factories from upwind areas of the Peninsula toward San Jose, particularly during the summer months. Winds are lightest on the average in fall and winter at which time local pollutants tend to build up in the atmosphere.

Pollutants can be diluted by mixing in the atmosphere both vertically and horizontally. Vertical mixing and dilution of pollutants are often suppressed by inversion conditions, when a warm layer of air traps cooler air close to the surface. During the summer, inversions are generally elevated above ground level, but are present over 90 percent of both the morning and afternoon hours. In winter, surface-based inversions dominate in the morning hours, but frequently dissipate by afternoon.

Topography can restrict horizontal dilution and mixing of pollutants by creating a barrier to air movement. The South Bay has significant terrain features that affect air quality. The Santa Cruz Mountains and Diablo Range on either side of the South Bay restrict horizontal dilution, and this alignment of the terrain also channels winds from the north to south, carrying air pollution from the northern Peninsula toward San Jose.

The combined effects of moderate ventilation, frequent inversions that restrict vertical dilution, and terrain that restricts horizontal dilution give San Jose a relatively high atmospheric potential for air pollution compared to other parts of the San Francisco Bay Air Basin.

b. Regulatory Framework. The Bay Area Air Quality Management District (BAAQMD) is primarily responsible for regulating air pollution emissions from stationary sources (e.g., factories) and indirect sources (e.g., traffic associated with new development), as well as for monitoring ambi-

[1] Bay Area Air Quality Management District, 1999. *BAAQMD CEQA Guidelines.*

ent pollutant concentrations. BAAQMD's jurisdiction encompasses seven Bay Area counties—Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara and Napa—and portions of Solano and Sonoma counties. The California Air Resources Board (ARB) and the U.S. Environmental Protection Agency (EPA) regulate direct emissions from motor vehicles.

Federal Clean Air Act. The 1970 Federal Clean Air Act authorized the establishment of national health-based air quality standards and also set deadlines for their attainment. The Federal Clean Air Act Amendments of 1990 changed deadlines for attaining national standards as well as the remedial actions required of areas of the nation that exceed the standards. Under the Clean Air Act, State and local agencies in areas that exceed the national standards are required to develop State Implementation Plans to demonstrate how they will achieve the national standards for ozone (O_3) by specified dates.

The Clean Air Act requires that projects receiving federal funds demonstrate conformity to the approved State Implementation Plan and local air quality attainment plan for the region. Conformity with the State Implementation Plan requirements also satisfies the Clean Air Act requirements.

California Clean Air Act. In 1988, the California Clean Air Act required that all air districts in the State endeavor to achieve and maintain California Ambient Air Quality Standards for carbon monoxide (CO), ozone (O_3), sulfur dioxide (SO_2) and nitrogen dioxide (NO_2) by the earliest practical date. The California Clean Air Act provides districts with new authority to regulate indirect sources and mandates that air quality districts focus particular attention on reducing emissions from transportation and area-wide emission sources. Each district plan is to achieve a 5 percent annual reduction, averaged over consecutive 3-year periods, in district-wide emissions of each nonattainment pollutant or its precursors. Additional physical or economic development within the region would tend to impede the emissions reduction goals of the California Clean Air Act. Generally, the State standards for these pollutants are more stringent than the national standards.

The most recent BAAQMD plan for attaining California Ambient Air Quality Standards, the Bay Area 2005 Ozone Strategy, was adopted by the Board of Directors of the Bay Area Air Quality Management District on January 4, 2006. The 2005 Ozone Strategy is the fourth triennial update of the BAAQMD's original 1991 CAP. The 2005 Ozone Strategy demonstrates how the San Francisco Bay Area will achieve compliance with the State one-hour air quality standard for ozone and how the region will reduce transport of ozone and ozone precursors to neighboring air basins. The Ozone Strategy also includes stationary source control measures, mobile source control measures and transportation control measures.

c. Ambient Air Quality Standards. Both the U.S. Environmental Protection Agency and the California Air Resources Board (ARB) have established ambient air quality standards for common pollutants. These ambient air quality standards are levels of contaminants which represent safe levels that avoid specific adverse health effects associated with each pollutant. The ambient air quality standards cover what are called "criteria" pollutants because the health and other effects of each pollutant are described in criteria documents.

The federal and State ambient air quality standards are summarized in Table V.D-1 for criteria pollutants. Health effects of these pollutants are described in Table V.D-2. The federal and State ambient standards were developed independently with differing purposes and methods, although both aim to prevent health-related effects of air pollution. As a result, the federal and State standards differ in some cases. In general, the State standards are more stringent. This is particularly true for ozone and particulate matter.

Table V.D-1: Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	Federal Primary Standard	State Standard
Ozone	1-Hour	–	0.09 ppm
	8-Hour	0.08 ppm	0.07 ppm
Carbon Monoxide	8-Hour	9.0 ppm	9.0 ppm
	1-Hour	35.0 ppm	20.0 ppm
Nitrogen Dioxide	Annual	0.05 ppm	–
	1-Hour	–	0.25 ppm
Sulfur Dioxide	Annual	0.03 ppm	–
	24-Hour	0.14 ppm	0.04 ppm
	1-Hour	–	0.25 ppm
PM_{10}	Annual	50 $\mu g/m^3$	20 $\mu g/m^3$
	24-Hour	150 $\mu g/m^3$	50 $\mu g/m^3$
$PM_{2.5}$	Annual	15 $\mu g/m^3$	12 $\mu g/m^3$
	24-Hour	65 $\mu g/m^3$	–

Notes: ppm = parts per million
$\mu g/m^3$ = micrograms per cubic meter

Source: California Air Resources Board, 2005, *Ambient Air Quality Standards*.

The U.S. Environmental Protection Agency established new national air quality standards for ground-level ozone and for fine particulate matter in 1997. The 1-hour ozone standard was phased out and replaced by an 8-hour standard of 0.08 ppm. Implementation of the 8-hour standard became effective in July 2005. New national standards for fine Particulate Matter (diameter 2.5 microns or less) were adopted for 24-hour and annual averaging periods.

In addition to the criteria pollutants discussed above, toxic air contaminants (TACs) are another group of pollutants of concern. TACs are injurious in small quantities and are regulated despite the absence of criteria documents. The identification, regulation and monitoring of TACs is relatively recent compared to that for criteria pollutants.

d. Current Air Quality. The BAAQMD monitors air quality at several locations within the San Francisco Bay Air Basin. The closest multi-pollutant monitoring site to the project area with complete data is located in San Jose at 935 Piedmont Road. Table V.D-3 and Table V.D-4 summarize monitoring data and the number of days over the State and federal standards at this monitoring site during the period 2002-2004. Table V.D-3 shows that ozone and PM_{10} exceed the State standards in the South Bay.

Ozone and PM_{10} are considered regional pollutants in that concentrations are not determined by proximity to individual sources, but show a relative uniformity over a region. Thus, the data shown in Table V.D-3 for ozone and PM_{10} provide a good characterization of levels of these pollutants on the project area.

Carbon monoxide is a local pollutant (i.e., high concentrations are normally only found very near sources). The major source of carbon monoxide—a colorless, odorless, poisonous gas—is automobile traffic. Elevated concentrations, therefore, are usually only found near areas of high traffic volumes.

e. Attainment Status. The federal Clean Air Act and the California Clean Air Act of 1988 require that the State Air Resources Board, based on air quality monitoring data, designate portions of the State where the federal or State ambient air quality standards are not met as "nonattainment areas". Because of the differences between the national and State standards, the designation of non-attainment areas is different under the federal and State legislation.

Table V.D-2: Health Effects of Major Criteria Pollutants

Pollutants	Sources	Primary Effects
Carbon Monoxide (CO)	• Incomplete combustion of fuels and other carbon-containing substances, such as motor exhaust. • Natural events, such as decomposition of organic matter.	• Reduced tolerance for exercise. • Impairment of mental function. • Impairment of fetal development. • Death at high levels of exposure. • Aggravation of some heart diseases (angina).
Nitrogen Dioxide (NO_2)	• Motor vehicle exhaust. • High temperature stationary combustion. • Atmospheric reactions.	• Aggravation of respiratory illness. • Reduced visibility. • Reduced plant growth. • Formation of acid rain.
Ozone (O_3)	• Atmospheric reaction of organic gases with nitrogen oxides in sunlight.	• Aggravation of respiratory and cardiovascular diseases. • Irritation of eyes. • Impairment of cardiopulmonary function. • Plant leaf injury.
Lead (Pb)	• Contaminated soil.	• Impairment of blood functions and nerve construction. • Behavioral and hearing problems in children.
Suspended Particulate Matter ($PM_{2.5}$ and PM_{10})	• Stationary combustion of solid fuels. • Construction activities. • Industrial processes. • Atmospheric chemical reactions.	• Reduced lung function. • Aggravation of the effects of gaseous pollutants. • Aggravation of respiratory and cardio respiratory diseases. • Increased cough and chest discomfort. • Soiling. • Reduced visibility.
Sulfur Dioxide (SO_2)	• Combustion of sulfur-containing fossil fuels. • Smelting of sulfur-bearing metal ores. • Industrial processes.	• Aggravation of respiratory diseases (asthma, emphysema). • Reduced lung function. • Irritation of eyes. • Reduced visibility. • Plant injury. • Deterioration of metals, textiles, leather, finishes, coatings, etc.

Source: ARB, 2004.

The City of San Jose is within the jurisdiction of the Bay Area Air Quality Management District (BAAQMD), which regulates air quality in the San Francisco Bay Area. Air quality conditions in the San Francisco Bay Area have improved significantly since the BAAQMD was created in 1955. Ambient concentrations of air pollutants and the number of days during which the region exceeds air quality standards have fallen dramatically. Exceedances of air quality standards occur primarily during meteorological conditions conducive to high pollution levels, such as cold, windless winter nights or hot, sunny summer afternoons.

Table V.D-3: Results from the San Jose Ambient Air Quality Monitoring Station and Days Over Standards, 2002 to 2004

Year	Ozone			Carbon Monoxide		Nitrogen Dioxide		PM_{10}		
	Max. 1-Hour (ppm)	National D-O-S	California D-O-S	Max. 1-Hour (ppm)	California D-O-S	Max. 1-Hour (ppm)	California D-O-S	Max. 24-Hour (mg/m^3)	National D-O-S	California D-O-S
2002	0.090	NA	5	5.9	0	0.069	0	69.7	0	2
2003	0.083	NA	5	5.5	0	ND	ND	56.8	0	3
2004	0.093	NA	1	4.4	0	0.073	0	55.4	0	4

D-O-S = Days Over Standard ppm = parts per million NA = Not Applicable. No federal standard.
ppb = parts per billion mg/m^3 = milligrams per cubic meter ND = No Data Available

Source: U.S. EPA and ARB, 2002 to 2004.

Table V.D-4: Results from the San Jose Ambient Air Quality Monitoring Station and Days Over Standards, 2002 to 2004

Year	Ozone		Carbon Monoxide		Sulfur Dioxide		$PM_{2.5}$		
	Max. 8-Hour (ppm)	National D-O-S	Max. 8-Hour (ppm)	California D-O-S	Max. 24-Hour (ppm)	California D-O-S	Max. 24-Hour (mg/m^3)	National D-O-S	California D-O-S
2002	0.068	0	4.49	0	0.007	0	57.6	0	NA
2003	0.070	0	4.04	0	0.003	0	56.1	0	NA
2004	0.074	0	2.96	0	0.010	0	51.5	0	NA

D-O-S = Days Over Standard ppm = parts per million
mg/m^3 = milligrams per cubic meter NA = Not Applicable. No State Standard.
Source: U.S. EPA and ARB, 2002 to 2004.

Ozone levels, as measured by peak concentrations and the number of days over the State one-hour standard, have declined substantially as a result of aggressive programs by the BAAQMD and other regional, State and federal agencies. The reduction of peak concentrations represents progress in improving public health; however the Bay Area still exceeds the State standard for one-hour ozone. Levels of PM_{10} in the Bay Area have exceeded State standards at least two times per year the last three years. The area is considered a nonattainment area for this pollutant relative to the State standards. The Bay Area is an unclassified area for the federal PM_{10} standard.

No exceedances of the State or federal CO standards have been recorded at any of the region's monitoring stations since 1991. The Bay Area is currently considered a maintenance area for State and federal CO standards.

f. San Jose 2020 General Plan Policies. Three key General Plan policies specifically address air quality.

Natural Resources

- *Air Quality Policy 1:* The City should take into consideration the cumulative air quality impacts from proposed developments and should establish and enforce appropriate land uses and regulations to reduce air pollution consistent with the region's Clean Air Plan and State law.
- *Air Quality Policy 2:* Expansion and improvement of public transportation services and facilities should be promoted, where appropriate, to both encourage energy conservation and reduce air pollution.

- *Air Quality Policy 5:* In order to reduce vehicle miles traveled and traffic congestion, new development within 1,000 feet of an existing or planned transit station should be designed to encourage the usage of public transit and minimize the dependence on the automobile through the application of site design guidelines.

2. Impacts and Mitigation Measures

The project would affect air quality both during construction and operation. Operational impacts would be mainly indirect (related to attracted vehicle trips).

a. Criteria of Significance. The document *BAAQMD CEQA Guidelines*[2] provides the following definitions of a significant air quality impact:

- Conflict with or obstruct implementation of an applicable air quality plan;
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);
- Expose sensitive receptors to substantial pollutant concentrations;
- Create objectionable odors affecting a substantial number of people: or
- Expose sensitive receptors or the general public to substantial levels of toxic air contaminants.

The BAAQMD provides various quantitative thresholds that can be used to better define the above criteria. For ROG[3], NO_X, and PM_{10}, a net increase of 80 pounds per day or 15 tons per year is considered significant, while for CO, and increase of 550 pounds per day would be considered significant if it leads to or contributes to CO concentrations exceeding the State Ambient Air Quality Standard of 9 ppm averaged over 8 hours and 20 ppm for 1 hour (i.e., if it creates a "hot spot"). Generally, if a project would individually have a significant air quality impact, would also be considered to contribute considerably to a significant cumulative effect. For projects that would not lead to a significant increase of ROG, NO_X, or PM_{10} emissions, the cumulative effect is evaluated based on a determination of the consistency of the project with the regional Clean Air Plan.

Impacts from $PM_{2.5}$ have not been analyzed quantitatively as there are no recommended significance thresholds from the BAAQMD. Also, the air quality models that are used to estimate emissions of ROG, NO_X, CO and PM_{10} currently do not have the capability to estimate $PM_{2.5}$ separately. Therefore, impacts from $PM_{2.5}$ emissions from the implementation of the proposed project (particularly the diesel particulate matter) have been analyzed qualitatively.

It should be noted that the emission thresholds were established based on the attainment status of the air basin in regard to air quality standards for specific criteria pollutants. Because the concentration standards were set at a level that protects public health with an adequate margin of safety, these emission thresholds are regarded as conservative and would overstate an individual project's contribution to health risks.

[2] Ibid.

[3] Reactive Organic Gases (ROG) are classes of organic compounds that transform with heat and sunlight to form smog or ozone.

b. Less-Than-Significant Impacts. Four less-than-significant impacts are discussed below.

(1) Carbon Monoxide Effects of Traffic. Traffic generated by new development would emit carbon monoxide (CO), the pollutant of greatest interest at the localized level. Vehicular traffic associated with the project would emit carbon monoxide (CO) into the air along roadway segments and near intersections. Because CO does not readily disperse, areas of vehicle congestion can create pockets of high CO concentrations, called "hot spots." Typically, high CO concentrations are associated with roadways or intersections operating at deficient levels of service (LOS) or with extremely high traffic volumes. Intersection traffic volumes from the corresponding traffic impact analysis by Hexagon Transportation Consultants, Inc. (December 2005) were used as inputs to the CALINE-4 air quality model. The results of the CALINE-4 modeling for the eighteen selected intersections are shown in Table V.D-5. Concentrations are shown for the existing (2005) traffic and existing plus project traffic conditions.

Comparing the projected 1-hour CO concentrations in Table V.D-5 to the State and federal ambient 1-hour standards of 20 ppm and 35 ppm, respectively, and the 8-hour concentrations to the State and federal 8-hour standards of 9 ppm, shows that existing concentrations are well below the standards. In the future, despite increasing traffic, CO concentrations would be equal to or lower than existing concentrations, due to gradual reductions in emission rates for vehicles resulting from State-mandated emission control programs. Concentrations in 2025 would remain well below the applicable standards. The impact of the proposed project on local CO concentrations would therefore be less than significant.

(2) Odor Emissions. The project would not contain any major sources of odor, and would not be located in an area with existing objectionable odors. The food preparation and cooking facilities would be dispersed widely throughout the stadium and their odors would not be considered objectionable to off-site receptors. It therefore would have a less-than-significant impact in this region.

(3) Toxic Air Contaminants. Operation of the proposed project would not result in any significant new sources of TACs and the project would not be located near any existing major sources of such contaminants. While standard cleaning solvents and paints would occasionally be used on-site, the emissions from such materials would not be toxic at the concentrations that would result. The project would therefore have a less-than-significant impact for toxic air contaminants. Construction period generation of diesel engine emissions (one form of TAC) is evaluated below as part of Impact AIR-1.

The proposed project will likely include emergency generators. Diesel emissions from generators are a form of toxic air contaminants. The State of California has issued a regulation order titled Airborne Toxic Control Measure (ATCM) for stationary compression ignition engines with a purpose to reduce diesel particulate matter and criteria pollutant emissions from stationary diesel-fueled compression ignition engines. The ATCM is designed to minimize the public's exposure to diesel PM by establishing stringent operational requirements and emission limits for these engines. The BAAQMD administers this regulation and all generators are required to obtain permits from the BAAQMD. Compliance with the ATCM and the BAAQMD permitting process would reduce emergency generator emissions to a less than significant level.

Toxic air contaminants associated with fireworks displays are discussed below.

Table V.D-5: Worst-Case Carbon Monoxide Concentrations With and Without the Project[a]

Intersection	Receptor Distance to Road Centerline (Meters)	Project Related Increase 1-hr/8-hr (ppm)	Without/With Project 1-Hour CO Concentration (ppm)	Without/With Project 8-Hour CO Concentration (ppm)	Exceeds State Standards	
					1-Hr	8-Hr
SR 87 NB & Julian	17 / 17	1.1 / 0.7	8.4 / 9.5	5.5 / 6.2	No	No
	14 / 14	1.2 / 0.8	8.3 / 9.5	5.4 / 6.2	No	No
	14 / 14	1.3 / 1.0	8.1 / 9.4	5.2 / 6.2	No	No
	12 / 12	0.9 / 0.6	8.0 / 8.9	5.2 / 5.8	No	No
SR 87 NB & Julian	17 / 17	0.7 / 0.5	8.9 / 9.6	5.8 / 6.3	No	No
	17 / 17	0.9 / 0.6	8.7 / 9.6	5.7 / 6.3	No	No
	15 / 15	0.8 / 0.5	8.4 / 9.2	5.5 / 6.0	No	No
	15 / 15	0.9 / 0.6	8.3 / 9.2	5.4 / 6.0	No	No
SR 87 NB & Santa Clara	17 / 17	2.6 / 1.8	8.2 / 10.8	5.3 / 7.1	No	No
	17 / 17	2.5 / 1.8	8.1 / 10.6	5.2 / 7.0	No	No
	17 / 10	2.6 / 1.8	7.9 / 10.5	5.1 / 6.9	No	No
	10 / 10	2.1 / 1.5	7.8 / 9.9	5.0 / 6.5	No	No
SR 280 & Bird (N)	12 / 12	1.6 / 1.1	10.0 / 11.6	6.6 / 7.7	No	No
	10 / 10	1.5 / 1.1	9.9 / 11.4	6.5 / 7.6	No	No
	10 / 10	1.5 / 1.0	9.6 / 11.1	6.3 / 7.3	No	No
	10 / 10	1.0 / 0.7	8.9 / 9.9	5.8 / 6.5	No	No
SR 280 & Bird (S)	17 / 17	1.4 / 1.0	8.6 / 10.0	5.6 / 6.6	No	No
	17 / 17	1.4 / 1.0	8.5 / 9.9	5.5 / 6.5	No	No
	17 / 17	1.0 / 0.7	8.3 / 9.3	5.4 / 6.1	No	No
	17 / 17	1.1 / 0.7	8.0 / 9.1	5.2 / 5.9	No	No
Autumn N & Santa Clara	21 / 14	1.8 / 1.3	7.5 / 9.3	4.8 / 6.1	No	No
	19 / 14	1.5 / 1.0	7.4 / 8.9	4.8 / 5.8	No	No
	17 / 12	1.5 / 1.0	7.4 / 8.9	4.8 / 5.8	No	No
	15 / 12	1.4 / 0.9	7.4 / 8.8	4.8 / 5.7	No	No
Bird & San Carlos	21 / 21	1.4 / 0.9	8.7 / 10.1	5.7 / 6.6	No	No
	21 / 21	1.3 / 0.9	8.4 / 9.7	5.5 / 6.4	No	No
	19 / 19	1.1 / 0.7	8.4 / 9.5	5.5 / 6.2	No	No
	19 / 17	1.1 / 0.8	8.3 / 9.4	5.4 / 6.2	No	No
SR 87 NB & Woz	15 / 15	0.9 / 0.7	6.8 / 7.7	4.3 / 5.0	No	No
	15 / 15	0.8 / 0.5	6.7 / 7.5	4.3 / 4.8	No	No
	12 / 12	0.8 / 0.6	6.6 / 7.4	4.2 / 4.8	No	No
	10 / 10	0.6 / 0.4	6.6 / 7.2	4.2 / 4.6	No	No
Autumn & San Fernando	14 / 11	1.9 / 1.4	6.5 / 8.4	4.1 / 5.5	No	No
	14 / 10	1.7 / 1.2	6.5 / 8.2	4.1 / 5.3	No	No
	14 / 10	1.6 / 1.1	6.5 / 8.1	4.1 / 5.2	No	No
	14 / 10	1.6 / 1.1	6.4 / 8.0	4.1 / 5.2	No	No
Bird & Auzerais	21 / 21	1.3 / 0.9	8.7 / 10.0	5.7 / 6.6	No	No
	21 / 21	1.5 / 1.0	8.4 / 9.9	5.5 / 6.5	No	No
	19 / 19	1.3 / 0.9	8.4 / 9.7	5.5 / 6.4	No	No
	19 / 19	1.4 / 1.0	8.2 / 9.6	5.3 / 6.3	No	No

Table V.D-5 *continued*

Intersection	Receptor Distance to Road Centerline (Meters)	Project Related Increase 1-hr/8-hr (ppm)	Without/With Project 1-Hour CO Concentration (ppm)	Without/With Project 8-Hour CO Concentration (ppm)	Exceeds State Standards	
					1-Hr	8-Hr
Delmas & Auzerais	13 / 13	1.0 / 0.7	6.9 / 7.9	4.4 / 5.1	No	No
	13 / 13	1.0 / 0.7	6.8 / 7.8	4.3 / 5.0	No	No
	12 / 12	0.9 / 0.7	6.8 / 7.7	4.3 / 5.0	No	No
	8 / 8	0.7 / 0.5	6.7 / 7.4	4.3 / 4.8	No	No
Woz & Auzerais	14 / 14	0.7 / 0.5	6.7 / 7.4	4.3 / 4.8	No	No
	14 / 14	0.8 / 0.6	6.6 / 7.4	4.2 / 4.8	No	No
	14 / 13	0.7 / 0.5	6.6 / 7.3	4.2 / 4.7	No	No
	8 / 8	0.8 / 0.6	6.5 / 7.3	4.1 / 4.7	No	No
Delmas & Park	14 / 14	1.8 / 1.2	8.0 / 9.8	5.2 / 6.4	No	No
	14 / 14	2.0 / 1.4	7.7 / 9.7	5.0 / 6.4	No	No
	13 / 13	1.9 / 1.3	7.6 / 9.5	4.9 / 6.2	No	No
	8 / 13	1.8 / 1.3	7.6 / 9.4	4.9 / 6.2	No	No
Delmas & San Carlos	14 / 14	1.2 / 0.8	7.6 / 8.8	4.9 / 5.7	No	No
	10 / 14	1.2 / 0.8	7.3 / 8.5	4.7 / 5.5	No	No
	10 / 10	1.2 / 0.8	7.3 / 8.5	4.7 / 5.5	No	No
	8 / 10	1.1 / 0.8	7.3 / 8.4	4.7 / 5.5	No	No
Montgomery & Park	21 / 21	0.9 / 0.7	7.5 / 8.4	4.8 / 5.5	No	No
	19 / 21	0.8 / 0.6	7.5 / 8.3	4.8 / 5.4	No	No
	19 / 19	0.9 / 0.6	7.4 / 8.3	4.8 / 5.4	No	No
	17 / 19	0.9 / 0.6	7.3 / 8.2	4.7 / 5.3	No	No
Woz & Park	17 / 17	1.1 / 0.8	7.1 / 8.2	4.5 / 5.3	No	No
	17 / 17	0.9 / 0.7	7.1 / 8.0	4.5 / 5.2	No	No
	15 / 15	0.8 / 0.5	7.0 / 7.8	4.5 / 5.0	No	No
	15 / 15	0.8 / 0.5	7.0 / 7.8	4.5 / 5.0	No	No
Santa Clara & Woz	15 / 15	0.8 / 0.5	7.0 / 7.8	4.5 / 5.0	No	No
	14 / 14	0.7 / 0.5	7.0 / 7.7	4.5 / 5.0	No	No
	14 / 14	0.8 / 0.6	6.9 / 7.7	4.4 / 5.0	No	No
	14 / 14	0.7 / 0.5	6.9 / 7.6	4.4 / 4.9	No	No
Delmas & San Fernando	10 / 10	2.5 / 1.7	6.7 / 9.2	4.3 / 6.0	No	No
	8 / 10	2.3 / 1.6	6.6 / 8.9	4.2 / 5.8	No	No
	8 / 8	2.2 / 1.5	6.6 / 8.8	4.2 / 5.7	No	No
	8 / 8	2.1 / 1.5	6.6 / 8.7	4.2 / 5.7	No	No

[a] Includes ambient one-hour concentration of 5.9 ppm and ambient eight-hour concentration of 3.7 ppm. Measured at the 935 Piedmont Avenue.

Source: LSA Associates, December 2005.

(4) Bay Area 2005 Ozone Strategy. The proposed project is the development of a major league stadium and related parking areas at a location with unsurpassed existing and potential future public transit facilities. The project is considered a public project, and responds to the need for additional recreational and entertainment facilities in the greater San Jose area. In this way, the proposed project is consistent with growth anticipated under the City's General Plan and falls within the popu-

lation projections prepared by the Association of Bay Area Governments (ABAG). No direct population growth would result from the proposed project. As a result, it will not conflict with the Bay Area 2005 Ozone Strategy.

c. Significant Air Quality Impacts. The following significant air quality impacts related to construction period emissions and operational regional emissions would result from implementation of the project.

Impact AIR-1: Construction period activities could generate significant dust, exhaust, and organic emissions. (S)

Construction activities such as excavation and grading operations, construction vehicle traffic and wind blowing over exposed earth would generate exhaust emissions and fugitive dust that would affect local air quality and impact nearby sensitive receptors.

The proposed project would require demolition of existing buildings and excavation/removal of substantial amounts of soil from the site. The physical demolition of existing structures, excavation of soil and other existing infrastructure improvements are construction activities with a high potential for creating air pollutants. In addition to the dust created during demolition and excavation, substantial dust emissions could be created as debris and soil are loaded into trucks for disposal.

After removal of existing structures, construction dust would also continue to affect local air quality during construction of the project. Construction activities are also a source of organic gas emissions. Solvents in adhesives, non-waterbase paints, thinners, some insulating materials and caulking materials would evaporate into the atmosphere and would participate in the photochemical reaction that creates urban ozone. Asphalt used in paving is also a source of organic gases for a short time after its application.

During construction, various diesel-powered vehicles and equipment would be in use. In 1998 the CARB identified particulate matter from diesel-fueled engines as a toxic air contaminant (TAC). CARB has completed a risk management process that identified potential cancer risks for a range of activities using diesel-fueled engines.[4] High volume freeways, stationary diesel engines and facilities attracting heavy and constant diesel vehicle traffic (distribution centers, truckstop) were identified as having the highest associated risk.

Health risks from TACs are a function of both concentration and duration of exposure. Unlike freeways or land uses with constant diesel vehicle traffic, construction diesel emissions are temporary, affecting an area for a period of days or perhaps weeks. Additionally, construction related sources are mobile and transient in nature, and the bulk of the emission occurs within the project area at a substantial distance from nearby receptors. Because of its short duration, health risks from construction emissions of diesel particulate would be a less-than-significant impact.[5]

[4] California Air Resources Board, *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*, October 2000.

[5] The recognized health effects of diesel exhaust are long-term chronic and carcinogenic; exposure is characterized over a 70-year period. Project construction period is expected to be two years.

Construction dust would affect local air quality at various times during construction of the proposed project. The dry, windy climate of the area during the summer months creates a high potential for dust generation when and if underlying soils are exposed. Clearing, grading and earthmoving activities have a high potential to general dust whenever soil moisture is low and particularly when the wind is blowing.

The effects of construction activities would be increased dustfall and locally elevated levels of particulates in areas surrounding the project site. Construction dust has the potential to create a nuisance at nearby properties. In addition to nuisance effects, excess dustfall can increase maintenance and cleaning requirements and could adversely affect sensitive electronic devices.

Emissions of particulate matter or visible emissions are regulated by the BAAQMD under Regulation 6 "Particulate Matter and Visible Emissions." Specifically, visible particulate emissions are prohibited where the visible particulates are deposited on real property other than that of the person responsible for the emissions and cause annoyance.

The following mitigation measures include all feasible measures for construction emissions identified by the BAAQMD. According to the District's threshold of significance for construction impacts, implementation of the measures would reduce construction impacts of the project to a less-than-significant level.

Mitigation Measure AIR-1: Implementation of the following steps would reduce the construction period air quality impacts to a less-than-significant level.

(a) The following multi-part mitigation shall be incorporated into the construction plans and implemented for the proposed project. The City shall review the construction plans to ensure these measures have been incorporated:

- Water all active construction areas at least twice daily and more often during windy periods to prevent visible dust from leaving the site; active areas adjacent to windy periods; active areas adjacent to existing land uses shall be kept damp at all times, or shall be treated with non-toxic stabilizers or dust palliatives;
- Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least 2 feet of freeboard;
- Pave, apply water at least three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites;
- Sweep daily (or more often if necessary) to prevent visible dust from leaving the site (preferably with water sweepers) all paved access roads, parking areas, and staging areas at construction sites; water sweepers shall vacuum up excess water to avoid runoff-related impacts to water quality;
- Sweep streets daily, or more often if necessary (preferably with water sweepers) if visible soil material is carried onto adjacent public streets;
- Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (previously graded areas inactive for ten days or more);
- Enclose, cover, water at least twice daily, or apply not-toxic soil binders to exposed stockpiles (dirt, sand, etc,) to prevent visible dust from leaving the site;

- Limit traffic speed on unpaved roads to 15 mph;
- Install sandbags or other erosion control measures to prevent silt runoff to public roadways;
- Replant vegetation in disturbed areas as quickly as possible;
- Install wheel washers for all existing trucks, or wash off the tires or tracks of all trucks and equipment leaving the site;
- Install wind breaks, or plant trees/vegetative wind breaks at windward side(s) of construction areas;
- Suspend excavation and grading activities when winds instantaneous gusts exceed 25 mph; and
- Limit the area subject to excavation grading, and other construction activity at any one time.

(b) Any temporary haul roads to soils stockpiles areas used during construction of projects shall be routed away from existing neighboring land uses. Any temporary haul roads shall be surfaced with gravel and regularly watered to control dust or treated with an appropriate dust suppressant.

(c) Water sprays shall be utilized to control dust when material is being added or removed from soils stockpiles. If a soils stockpile is undisturbed for more than one week, it shall be treated with a dust suppressant or crusting agent to eliminate wind-blown dust generation.

(d) All neighboring properties located within 1,000 feet of property lines of a construction site shall be provided with the name and phone number of a designated construction dust control coordinator who will respond to complaints within 24 hours by suspending dust-producing activities or providing additional personnel or equipment for dust control as deemed necessary. The phone number of the BAAQMD pollution complaints contact shall also be provided. The dust control coordinator shall be on-call during construction hours. The coordinator shall keep a log of complaints received and remedial actions taken in response. This log shall be made available to City staff upon its request.

(e) In order to address particulate emissions from diesel-powered equipment and vehicles, the following measures shall be implemented: (i) properly maintain vehicle and equipment engines; (ii) minimize the idling time of diesel powered construction equipment; (iii) consider requiring construction equipment that is fueled by alternative energy sources; and (iv) consider requiring add-on control devices such as particulate traps. (LTS)

<u>Impact AIR-2</u>: Regional emissions of criteria air pollutants from new development would exceed BAAQMD thresholds. (S)

Long-term air emission impacts would be those associated with changes in permanent usage of the project site. Mobile source emissions would result from vehicle trips associated with the proposed project. The Urban Emission Model (URBEMIS 2002) computer program, which is the most current air quality model available in California for estimating emissions associated with land use and development projects, was used to calculate long-term mobile source emissions associated with the pro-

posed project. The PG&E substation relocation would not result in an increase in regional emissions. Increases in long-term stationary emissions from natural gas and electricity use within the project site are expected to be negligible when compared with mobile source emissions. Therefore, these emissions were not included in the calculation. The traffic analysis prepared by Hexagon Transportation Consultants, Inc. (December 2005) provided trip generation data associated with the proposed project, which was used in the URBEMIS 2002 model.

The daily emission increase associated with project operational trip generation is identified in Table V.D-6 for reactive organic gases (ROG) and nitrogen oxides (NO_X) (two precursors of ozone) and coarse particulate matter (PM_{10}). The BAAQMD has established thresholds of significance for ozone precursors and fugitive dust of 80 pounds per day or 15 tons per year. Proposed project emissions shown in Table V.D-6 would not exceed the yearly threshold, however the project would exceed the daily thresholds of significance for ROG, NO_X, and PM_{10}. Therefore, the proposed project's impact on regional air quality would be considered significant.

Table V.D-6: Project Regional Emissions

	Reactive Organic Gases ton/year	Nitrogen Oxides ton/year	PM_{10} ton/year	Reactive Organic Gases lb/day	Nitrogen Oxides lb/day	PM_{10} lb/day
Regional Emissions	13.55	14.31	12.52	238.08	291.96	271.39
BAAQMD Significance Threshold	15.0	15.0	15.0	80.0	80.0	80.0
Exceed?	No	No	No	Yes	Yes	Yes

Source: LSA Associates, Inc. 2005.

The following multi-part mitigation measure is recommended to reduce regional emissions:

Mitigation Measure AIR-2: The *BAAQMD CEQA Guidelines* document identifies potential mitigation measures for various types of projects. The following are considered to be feasible and effective in further reducing vehicle trip generation and resulting emissions from the Downtown Stadium project:

- Maximize the use of existing transit facilities and incorporate additional facilities (e.g., bus bulbs/turnouts, benches, shelters) into the project's design.
- Provide bicycle lanes and/or paths, connected to community-wide network.
- Provide sidewalks and/or paths, connected to adjacent land uses, transit stops, and/or community-wide network.
- Provide secure and conveniently located bicycle storage.
- Implement feasible transportation demand management (TDM) measures including a ride-matching program, coordination with regional ridesharing organizations and provision of transit information.

The implementation of an aggressive trip reduction program with the appropriate incentives for non-auto travel can reduce project impacts by approximately 10 to 15 percent. A reduction of this magnitude would provide a reduction in emissions, however project emissions would still exceed the significance threshold. There is no mitigation available with currently feasible technology to reduce the project's regional air quality impact by an additional 75 percent to a less-than-significant level. Therefore, the project's regional air quality impacts would remain significant and unavoidable. (SU)

Impact AIR-3: Fireworks displays may cause spikes in air pollution. (S)

Materials used in fireworks displays could contain lead nitrate, barium, copper compounds, aluminum, ammonium perchlorate, cadmium and sulfur dioxide, which, at high enough concentrations or exposure durations, would be toxic to humans or wildlife. In addition, air pollution created in the course of periodic firework displays could include both the smoke and particulates that remain in the air after the fireworks are detonated. Fireworks displays have been shown to create temporary spikes in air pollution. Air quality standards for particulate matter, the criteria pollutant that results from firework explosions, are based on 24-hour measurements and spikes in air pollution associated with fireworks would average to normal levels over a 24-hour period. However, temporary spikes in particulate matter could impact individuals with a known sensitivity to pollutants.

Fallout from fireworks displays could contain toxic elements; however, this limited exposure would not be considered a health risk. The recognized health effects of toxic exposure are chronic and carcinogenic and arise only over long term exposure (characterized over a 70-year period). Fireworks displays at the proposed project would not expose nearby residents or event spectators to levels of toxic air pollution or particulate matter that would pose a significant health risk. To reduce impacts to a less-than-significant level, the following mitigation measure shall be implemented.

> Mitigation Measure AIR-3: The City shall require that the point of launch and the fallout area for fireworks be located so as to ensure the safety of the public from the discharge of pyrotechnic devices, exposure to toxic air pollutants or any other hazard from fireworks displays. (LTS)

d. Criteria Pollutants and Public Health. Despite great progress in air quality improvement, approximately 146 million people nationwide lived in counties with pollution levels above NAAQS in 2002. Out of the 230 nonattainment areas identified during the 1990 Clean Air Act Amendment designation process, 124 areas remain as nonattainment today. In these nonattainment areas, however, the severity of air pollution episodes has decreased. Air quality in the San Francisco Bay Area Air Basin in the past 20 years has improved steadily and dramatically, even with the tremendous increase in population and vehicles and other sources of air pollution.

As shown in Table V.D-2, long-term exposure to elevated levels of criteria pollutants could result in potential health effects. However, as stated in the thresholds of significance, emission thresholds established by the air district are used to manage total regional emissions within an air basin, based on the air basin attainment status for criteria pollutants. These emission thresholds were established for individual projects that would contribute to regional emissions and pollutant concentrations that may affect or delay the projected attainment target year for certain criteria pollutants.

Because of the conservative nature of the thresholds and the basin-wide context of individual project emissions, there is no direct correlation of a single project to localized health effects. One individual project having emissions exceeding a threshold does not necessarily result in adverse health effects for residents in the project vicinity. This condition is especially true when the criteria pollutants exceeding thresholds are those with regional effects, such as ozone precursors like NO_X and ROG. Based on the above discussion, the potential for an individual project to contribute to significant health risk is small, even if the emission thresholds are exceeded by the project. Because of the overall improvement trend on air quality in the air basin, it is unlikely the regional air quality or health risk would worsen from the current condition due to emissions from an individual project.

E. NOISE

This section describes existing noise conditions, criteria for determining the significance of noise impacts, and estimates the likely noise that would result from the project including construction activities, vehicular traffic, and noise from events at the proposed baseball stadium. Where appropriate, mitigation measures are recommended to reduce project-related noise impacts to a less-than-significant level.

Existing setting information is drawn from several sources. Noise measurements taken at similar baseball stadiums and field measurements taken at the project site by LSA staff were also used. This noise assessment follows the City of San Jose's guidelines for the preparation of noise studies, outlined in the City's Noise Element and Municipal Code Noise Control Ordinance.

1. Setting

This section describes the characteristics of sound, the federal, State and City regulations related to noise, and the existing noise sources in and adjacent to the project area.

a. Characteristics of Sound. To the human ear, sound has two significant characteristics: pitch and loudness. A specific pitch can be an annoyance, while loudness can affect our ability to hear. Pitch is the number of complete vibrations or cycles per second of a wave that results in the range of tone from high to low. Loudness is the strength of a sound that describes a noisy or quiet environment, and it is measured by the amplitude of the sound wave. Loudness is determined by the intensity of the sound waves combined with the reception characteristics of the human ear. Sound intensity refers to how hard the sound wave strikes an object, which in turn produces the sound's effect. This characteristic of sound can be precisely measured with instruments.

Noise is usually defined as unwanted sound. Noise consists of any sound that may produce physiological or psychological damage and/or interfere with communication, work, rest, recreation or sleep.

Several noise measurement scales exist which are used to describe noise in a particular location. A *decibel* (dB) is a unit of measurement which indicates the relative intensity of a sound. The 0 point on the dB scale is based on the lowest sound level that the healthy, unimpaired human ear can detect. Changes of 3 dB or less are only perceptible in laboratory environments. Audible increases in noise levels generally refer to a change of 3 dB or more, as this level has been found to be barely perceptible to the human ear in outdoor environments. Sound levels in dB are calculated on a logarithmic basis. An increase of 10 dB represents a 10-fold increase in acoustic energy, while 20 dB is 100 times more intense, 30 dB is 1,000 times more intense. Each 10-dB increase in sound level is perceived as approximately a doubling of loudness. Sound intensity is normally measured through the *A-weighted sound level* (dBA). This scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. Table IV.E-1 shows representative outdoor and indoor noise levels in units of dBA.

As noise spreads from a source, it loses energy so that the farther away the noise receiver is from the noise source, the lower the perceived noise level would be. Geometric spreading causes the sound level to attenuate or be reduced, resulting in a 6-dB reduction in the noise level for each doubling of distance from a single point source of noise to the noise sensitive receptor of concern.

Table V.E-1: Typical A-Weighted Sound Levels

Noise Source	A-Weighted Sound Level in Decibels	Noise Environments	Subjective Evaluations
Near Jet Engine	140	Deafening	128 times as loud
Civil Defense Siren	130	Threshold of Pain	64 times as loud
Hard Rock Band	120	Threshold of Feeling	32 times as loud
Accelerating Motorcycle at a few feet away	110	Very Loud	16 times as loud
Pile Driver; Noisy Urban Street/Heavy City Traffic	100	Very Loud	8 times as loud
Ambulance Siren; Food Blender	95	Very Loud	
Garbage Disposal	90	Very Loud	4 times as loud
Freight Cars; Living Room Music	85	Loud	
Pneumatic Drill; Vacuum Cleaner	80	Loud	2 times as loud
Busy Restaurant	75	Moderately Loud	
Near Freeway Auto Traffic	70	Moderately Loud	Reference Level
Average Office	60	Moderate	1/2 as loud
Suburban Street	55	Moderate	
Light Traffic; Soft Radio Music in Apartment	50	Quiet	1/4 as loud
Large Transformer	45	Quiet	
Average Residence Without Stereo Playing	40	Faint	1/8 as loud
Soft Whisper	30	Faint	
Rustling Leaves	20	Very Faint	
Human Breathing	10	Very Faint	Threshold of Hearing

Source: Compiled by LSA Associates, Inc., 2004.

b. Fundamentals of Noise. Based on the adverse effects of noise, the federal government, the State of California, and many local governments have established maximum allowed noise levels to protect public health and safety and to prevent disruption of certain activities.

Various noise measurements are used to assess the level and the annoyance potential of community noise such as that generated by aircraft activity and arterial traffic. They include:

(1) A-Weighted Sound Level (dBA). The A-weighted sound pressure level is commonly abbreviated dBA. The dB refers to a measurement in decibels. The "A" identifies a particular setting of the measurement instrument, the sound level meter. The A-weighted sound level provides a scale with the range and characteristics most consistent with human hearing ability. The dBA measures sound over a period of time, typically 1 hour, to identify the minimum and maximum levels and the statistical variation of fluctuating sounds.

(2) Continuous Equivalent (Average) Noise Level (L_{eq}). The continuous equivalent (average) noise level is an energy equivalent level of fluctuating noise for a measured time period. Data from this measurement are applied to the 24-hour measurement of noise.

(3) Community Noise Equivalent Noise Level (CNEL) or Day-Night Sound Level (L_{dn}). A given level of noise may be more or less tolerable depending on the time of day and duration of exposure experienced by an individual. The U.S. Department of Housing and Urban Development

(HUD) and the Environmental Protection Agency (EPA) have adopted the L_{dn} as their standard unit of measurement for noise levels. This measure increases the average noise level (L_{eq}) for late evening and early morning hours (10:00 p.m. to 7:00 a.m.) by 10 dBA. The daytime noise levels (7:01 a.m. to 9:59 p.m.) are then combined with these weighted levels and are averaged to obtain a 24-hour averaged noise level. A similar noise scale, the CNEL, which weights noise events in the late evening through early morning (as done for the L_{dn}), as well as noise events occurring between 7:00 p.m. and 10:00 p.m. (increasing them by 5 dBA), is also widely used by jurisdictions concerned with noise. These two noise scales are considered interchangeable in general (if not mathematically).

Noise levels that are less than 40 dBA CNEL/L_{dn} are not considered significant. This threshold is commonly used to assess noise impacts in environmental impact documents. In addition, generally established regulatory standards throughout California do not typically address noise levels that are less than 40 dBA. However, even low levels of noise can be annoying to people when concurrent background noise is very low.

b. Noise Regulatory Framework. The following section provides brief discussions of the federal, State and City regulatory framework related to noise.

(1) U.S. Environmental Protection Agency (EPA). In 1972 Congress enacted the Noise Control Act. This act authorized the EPA to publish descriptive data on the effects of noise and establish levels of sound "requisite to protect the public welfare with an adequate margin of safety." These levels are separated into health (hearing loss levels) and welfare (annoyance levels) as shown in Table V.E-2. The EPA cautions that these identified levels are not standards because they do not take into account the cost or feasibility of the levels. For protection against hearing loss, 96 percent of the population would be protected if sound levels are less than or equal to a $L_{eq}(24)$ of 70 dBA. The "(24)" signifies a L_{eq} duration of 24 hours. The EPA activity and interference guidelines are designed to ensure reliable speech communication at about 5 feet in the outdoor environment. For outdoor and indoor environments, interference with activity and annoyance should not occur if levels do not exceed 55 dBA and 45 dBA, respectively.

The noise effects associated with an outdoor L_{dn} of 55 dBA are summarized in Table V.E-3. At 55 dBA L_{dn}, 95 percent sentence clarity (intelligibility) may be expected at 3.5 meters, and no community reaction would result. However, 1 percent of the population may complain about noise at this level and 17 percent may indicate annoyance.

For the purposes of this EIR, the EPA findings provide a more complete understanding of the issue of noise as well as a context in which to evaluate the proposed project.

(2) State of California. The State of California has established regulations that help prevent adverse impacts to occupants of buildings located near noise sources. Referred to as the "State Noise Insulation Standard," it requires buildings to meet performance standards through design or building materials that would offset any noise source in the vicinity of the receptor. State regulations include requirements for the construction of new hotels, motels, apartment houses, and dwellings other than detached single-family dwellings that are intended to limit the extent of noise transmitted into habitable spaces. These requirements are found in the California Code of Regulations, Title 24 (known as the Building Standards Administrative Code), Part 2 (known as the California Building Code), Appendix Chapters 12 and 12A. For limiting noise transmitted between adjacent dwelling units, the

Table V.E-2: Summary of EPA Noise Levels for Protection of Public Health and Welfare with an Adequate Margin of Safety

Effect	Level	Area
Hearing loss	70 dBA L_{eq}(24)	All areas
Outdoor activity interference and annoyance	55 dBA L_{dn}.	Outdoors in residential areas and farms and other outdoor areas where people spend wildly varying amounts of time and other places in which quiet is a basis for use.
	55 dBA L_{eq}(24)	Outdoor areas where people spend limited amounts of time, such as school yards, playgrounds, etc.
Indoor activity interference and annoy-ance	45 dBA L_{eq}	Indoor residential areas.
	45 dBA L_{eq}(24)	Other indoor areas with human activities such as schools, etc.

Source: U.S. Environmental Protection Agency, "Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety," March 1974.

Table V.E-3: Summary of Human Effects in Areas Exposed to 55 dBA Ldn

Type of Effects	Magnitude of Effect
Speech – Indoors	100 percent sentence intelligibility (average) with a 5 dBA margin of safety.
Speech – Outdoors	100 percent sentence intelligibility (average) at 0.35 meters. 99 percent sentence intelligibility (average) at 1.0 meters. 95 percent sentence intelligibility (average) at 3.5 meters.
Average Community Reaction	None evident; 7 dBA below level of significant complaints and threats of legal action and at least 16 dBA below "vigorous action."
Complaints	1 percent dependent on attitude and other non-level related factors.
Annoyance	17 percent dependent on attitude and other non-level related factors.
Attitude Towards Area	Noise essentially the least important of various factors.

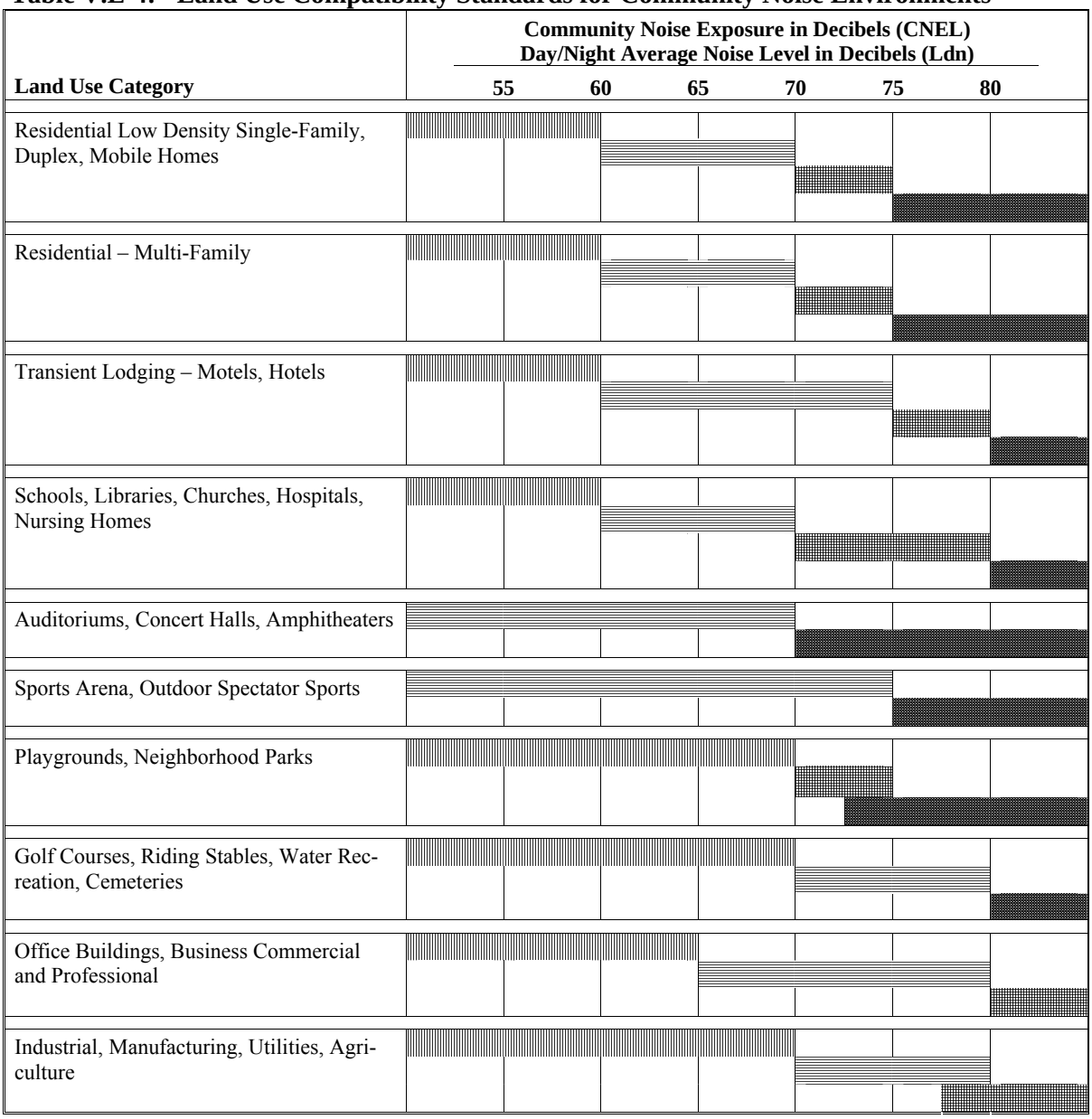
Source: U.S. Environmental Protection Agency, "Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety," March 1974.

noise insulation standards specify the extent to which walls, doors, and floor ceiling assemblies must block or absorb sound. For limiting noise from exterior noise sources, the noise insulation standards set an interior standard of 45 dBA CNEL in any habitable room with all doors and windows closed. In addition, the standards require preparation of an acoustical analysis demonstrating the manner in which dwelling units have been designed to meet this interior standard, where such units are proposed in area with exterior noise levels greater than 60 dBA CNEL.

The State has also established land use compatibility guidelines for determining acceptable noise levels for specified land uses, as shown in Table V.E-4 below.1 This bar chart also recommends steps to be taken if one of the specified land uses (e.g., a school or church) is proposed for an area exposed

[1] State of California, Governor's Office of Planning and Research, *General Plan Guidelines, 1998* (Appendix A, Figure 2).

Table V.E-4: Land Use Compatibility Standards for Community Noise Environments



NORMALLY ACCEPTABLE
Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

NORMALLY UNACCEPTABLE
New construction or development should be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

CONDITIONALLY ACCEPTABLE
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.

CLEARLY UNACCEPTABLE
New construction or development clearly should not be undertaken.

Source: Modified from State of California General Plan Guidelines, June 1987.

to a high noise level (e.g., >85 dBA): "Clearly unacceptable. New construction or development should generally not be undertaken."

(3) City of San Jose. The standards within the San Jose 2020 General Plan Noise Element determine the acceptable noise environment for each land use. For commercial or business office buildings, noise levels up to 60 dBA L_{dn} are acceptable. In areas with noise levels from 60 dBA to 76 dBA L_{dn}, construction of commercial buildings would require acoustic analysis to determine the insulation needed to maintain an indoor level of 45 dBA L_{dn}. A maximum exterior noise level of 76 dBA L_{dn} has been established as the maximum exterior noise level necessary to avoid significant adverse health effects. An interior noise level of 45 dBA L_{dn} has been established for all uses. The Noise Element recognizes that full attainment of noise standards may not be achievable in the environs of the San Jose International Airport, the Downtown Core Area and along major roadways.

c. Sensitive Land Uses in the Project Vicinity. Land uses surrounding the project site consist of residences, commercial buildings/light industrial buildings and railroad lines. The closest sensitive receptors are residential uses located approximately 200 feet to the east of the project boundary. Other residential uses are located west of the project. The construction and operation of the proposed project could significantly affect these surrounding land uses.

d. Existing Noise Environment. The project is located in an urban area and is, therefore influenced by several surrounding noise sources. Primary noise sources that affect the baseline noise level of the area include the following:

- Aircraft noise from the San Jose International Airport located approximately 2.5 miles northeast of the project site.
- Railroad noise from railroad tracks adjacent to the western boundary of the project site as well as the light rail line.
- Vehicle traffic on State Route 87 (SR 87), State Route 280 (SR 280), W. San Carlos Street, Park Avenue and W. San Fernando Street.

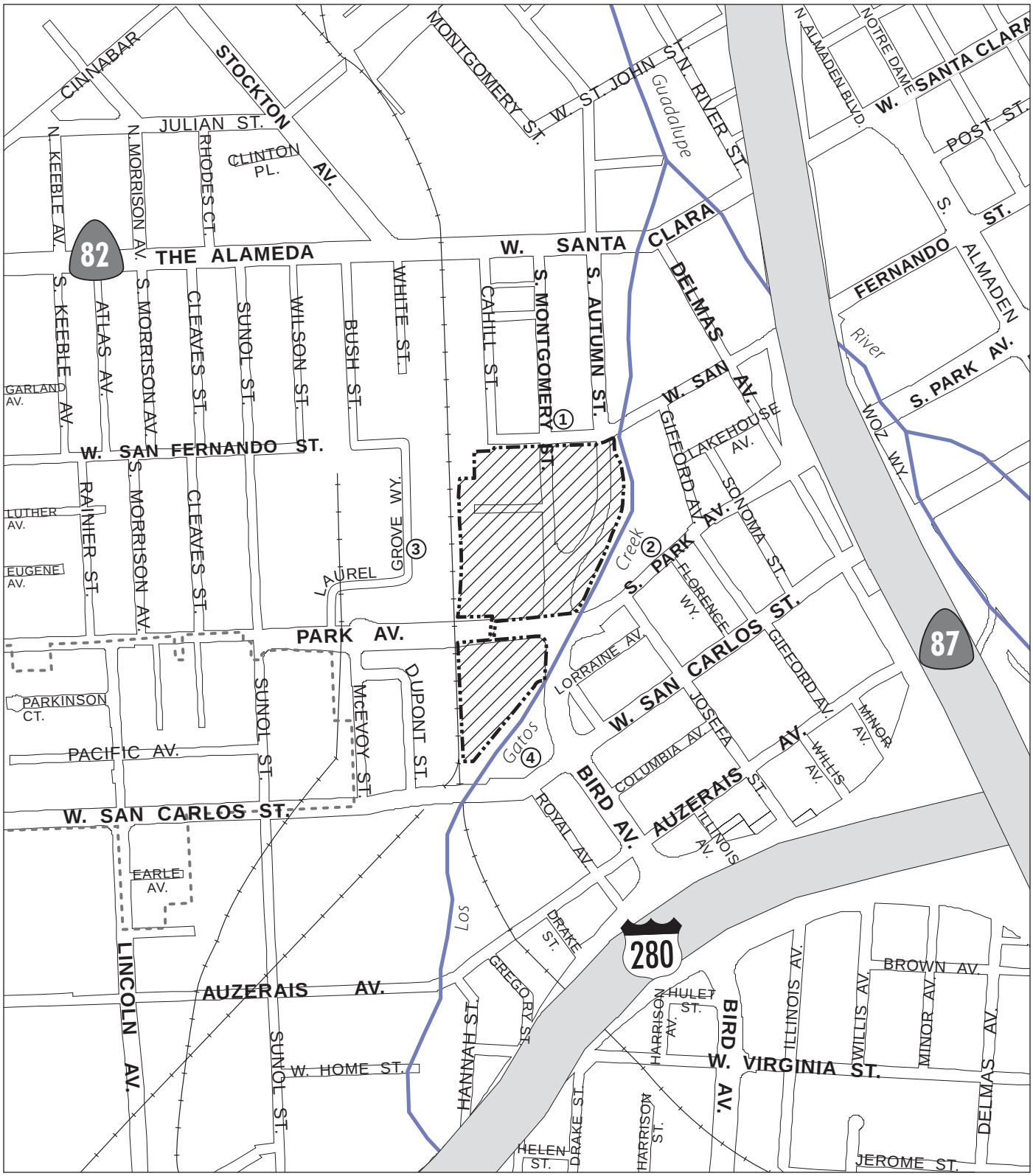
(1) Existing Ambient Noise. To document the existing noise environment in the project area and in the vicinity, noise measurements were taken at representative locations. The measurement locations are shown in Figure V.E-1. The measurement data are presented in Table V.E-5.

Table V.E-5: Ambient Noise Monitoring Results Weekday/Weekend

Receptor Location	L_{eq}		L_{min}		L_{max}		Location
1	67.4	60.6	53.7	53.7	81.9	68.9	Four-plex located on Montgomery St.
2	65.7	63.5	50.8	47.6	79.4	81.7	490 Park Avenue
3	67.5	62.9	59.0	51.2	79.4	72.1	193 Laurel Grove Lane
4	70.1	63.7	57.1	49.1	83.2	77.4	691 W. San Carlos St.

Source: LSA Associates, Inc., 2005.

Short term monitoring was used for the analysis of the project to allow for the most accurate comparison of potential stadium events. Monitoring experience has shown that evening short-term L_{eq} measurements are approximately 2-3 dB less than weighted 24-hour L_{dn} measurements. The noise measurements were taken on Monday, December 19th between 2:00-6:00 p.m. and Saturday, January 7, 2006 from 7:00-10:00 p.m. and were made for a period of 15 continuous minutes at each location. The descriptors shown in the tables are maximum (L_{max}) and minimum (L_{min}) levels and the continuous equivalent noise level (L_{eq}).



LSA

FIGURE V.E-1

N

0 400 800
FEET

① NOISE MONITORING LOCATIONS

PROJECT SITE

CITY LIMITS

Baseball Stadium in the Diridon/Arena Area

Noise Monitoring Locations

SOURCE: LSA ASSOCIATES, INC., 2005.

I:/SJO530 ballpark/figures/Fig_VE1.ai (02/13/06)

Results of the monitoring indicate noise levels at the project site fall within the acceptable range of up to 75 dBA L_{dn} for outdoor spectator sports as established by the City of San Jose. The residential areas surrounding the project area are generally above normally acceptable noise levels for residential uses established in the General Plan. All monitor sites currently have a L_{max} level that exceed 55 dB due to existing noise sources observed to be airplane flyovers; bus, truck and vehicle traffic on surrounding roadways; and trains on the railroad tracks west of the project site. Additional sources of noise observed during the evening measurements include dogs barking in the residential neighborhoods. Live music from the bar located adjacent to the four-plex located on Montgomery Street affected the results on noise monitoring at that location.

(2) Existing Aircraft Noise Levels. San Jose International Airport is located approximately 2.5-miles northwest of the project site. Noise exposure information in the community is developed for airport operations by the City of San Jose on a quarterly basis, based on current airport operations data and continuously measured noise levels. The project site is located ¼ mile outside of the 65 CNEL contour line from the latest noise monitoring report.[2]

(3) Existing Rail Noise Levels. The rail line used for commuter trains and trolleys borders the project site to the west. Existing noise level from train operations on the project site nearby residential units west of the rail line reach 79 L_{max} based on measurements taken by LSA. Average noise levels measured near rail noise sources were 67.5 L_{eq} dBA.

(4) Existing Traffic Noise Levels. Existing traffic noise levels were calculated using the Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model. Traffic data used in the model were obtained from the traffic impact analysis prepared by Hexagon Transportation Consultants, Inc. (December 2005). Table V.E-6 lists the calculated traffic noise levels in the project study area under the existing (2005) baseline conditions. Traffic noise in the project vicinity is generally moderate. Peak traffic noise occurs on W. Santa Clara Street between White Street and Delmas Avenue and also Bird Street between W. San Carlos Street and Auzerais Street where traffic noise exceeds 65 dBA L_{dn} at 50 feet from the centerline of the outermost lane. The traffic noise model printouts are included in Appendix E.

2. Impacts and Mitigation Measures

a. Criteria of Significance. A project would normally have a significant effect on the environment related to noise if it would substantially increase the ambient noise levels for adjoining areas or conflict with adopted environmental plans and goals of the community in which it is located. The applicable noise standards governing the project area are the criteria in the City's Noise Element of the General Plan. For the purposes of this project, a noise impact is considered significant if the project results in:

- Exposure of persons to or generation of noise levels in excess of standards established in the San Jose Zoning Ordinance Performance Standards for Noise, San Jose General Plan, or applicable standards of other agencies;

[2] The most recent measurements posted on the Airport Department website are excerpted from the First Quarter Noise Monitoring Report, ending March 31, 2005.

Table V.E-6: Existing Year (2005) Baseline No Project Traffic Noise Levels

Roadway Segment	ADT	Center-line to 70 L_{dn} (feet)	Center-line to 65 L_{dn} (feet)	Center-line to 60 L_{dn} (feet)	L_{dn} (dBA) 50 Feet From Outermost Lane
W. Santa Clara St. between White St. and Autumn St.	16,400	<50[a]	87	184	66.7
W. Santa Clara St. between Autumn St. and Delmas Ave.	15,200	<50	83	175	66.4
Autumn St. between W. San Fernando St. and W. Santa Clara St.	2,400	<50	<50	52	58.8
W. San Fernando St. between Autumn St. and Delmas Ave.	2,800	<50	<50	<50	57.1
Park Ave. between Autumn St. and Sunol St.	6,900	<50	<50	67	59.9
Park Ave. between Autumn St. and Delmas Ave.	7,000	<50	<50	68	60.0
Montgomery St./Bird Ave. btwn. Park Ave. and W. San Carlos St.	16,700	<50	65	122	62.6
Bird Avenue between W. San Carlos St. and Auzerais Ave.	21,800	<50	109	224	66.8
Auzerais Ave. between Bird Ave. and Sunol St.	6,400	<50	<50	62	60.6
Auzerais Ave, between Bird Ave. and Josefa St.	4,500	<50	<50	<50	59.1
W. San Carlos St., between Dupont St. and Bird Ave.	16,000	<50	55	114	63.6
W. San Carlos St. Between Bird Avenue and Josefa St.	14,700	<50	<50	108	63.2
Delmas Ave. between Park and Auzerias Avenue	11,300	<50	<50	90	63.1
Delmas Ave. between Park and W. San Carlos St.	6,500	<50	<50	63	60.1

[a] Traffic noise within 50 feet of roadway centerline requires site specific analysis.

Source: LSA Associates, Inc., December 2005.

- Exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels;
- A substantial temporary, periodic, or permanent increase in ambient noise levels in the project vicinity above levels existing without the project; or
- For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels.

b. Less-Than-Significant Noise Impacts. Less-than-significant impacts of the proposed project are discussed below.

(1) Aircraft Noise. The project is located approximately 2.5 miles south of the Norman Y. Mineta San Jose International Airport. The Airport Master Plan 2010 Noise Contour Map indicates the project site is located approximately ¼ -mile outside the 65 dBA CNEL contour line. Aircraft noise levels of less than 65 dBA are not considered excessive noise, therefore, the exposure impact to persons on the project site from aircraft noise would be less than significant.

c. Significant Noise Impacts. Significant noise impacts from the proposed project are discussed below.

<u>Impact NOISE-1</u>: Increases in traffic noise to surrounding roadways would be significant. (S)

The FHWA highway traffic noise prediction model (FHWA RD-77-108) was used to evaluate highway traffic-related noise conditions in the vicinity of the project area. Traffic data with the proposed project were obtained from the traffic impact analysis prepared by Hexagon Transportation Consultants, Inc. (December 2005) and used in the noise prediction model. The resultant noise levels were weighted and summed over a 24-hour period in order to determine the L_{dn} values. L_{dn} contours are derived through a series of computerized iterations to isolate the 60, 65, and 70 dBA L_{dn} contour for traffic noise levels in the project area. The traffic noise levels with the project are show in Table V.E-7.

Table V.E-7 shows that all areas of the project area will be exposed to traffic noise levels exceeding the City's normally acceptable range. Results of noise modeling indicate that traffic associated with the project will increase noise on the surrounding roadways from 0.2 dBA to 5.3 dBA. Roadway segments that exceed the 3 dBA threshold (detectable by the human ear) include W. San Fernando Street from Autumn Street to Delmas Avenue and Autumn Street from W. San Fernando Street to W. Santa Clara Street. The traffic noise increases on W. San Fernando Street and Autumn Street represent a significant increase in noise levels.

Mitigation measures typically used to address increases in noise caused by traffic including berms and soundwalls. However, exterior noise mitigation measures would not be feasible along these roadways due to driveway openings and safety concerns. Impacts to exterior areas of residential units along W. San Fernando Street from Autumn Street to Delmas Avenue and Autumn Street from W. San Fernando Street to W. Santa Clara Street would be significant. Implementation of Impact NOISE-1 would reduce the interior noise impacts for residences located along W. San Fernando Street and Autumn Street.

> Mitigation Measure NOISE-1: With affected property owner's consent, prior to opening day of the stadium, the City shall implement measures to reduce significant noise impacts associated with increased traffic for residences located along W. San Fernando Street from Autumn Street to Delmas Avenue or Autumn Street from W. San Fernando Street to W. Santa Clara Street which may include, but are not limited to installation of dual-pane windows, mechanical air conditioning and improved ceiling and wall insulation. (SU)

Impact NOISE-2: Baseball game events could result in noise impacts on adjacent residential uses. (S)

During the baseball game events at the proposed stadium, potential noise impacts would be created. Sources of noise would include the sounds of the crowd cheering, the public address systems, music and firework displays. These are considered isolated peak noises and are not an averaged calculation, such as CNEL measurements. Rather, these types of noise impacts would be most appropriately measured and reported in terms of dBA L_{max} or L_{eq}.

The potential noise impacts from baseball game events would be primarily from the crowd noise from within the proposed stadium. Such noise was evaluated by referencing previous noise analyses that were performed for similar projects. Baseball stadium event noise has been monitored for a number

Table V.E-7: Existing Year (2005) Plus Project Traffic Noise Levels

Roadway Segment	ADT With Project	Change in ADT	Center-line to 70 CNEL (feet)	Center-line to 65 CNEL (feet)	Center-line to 60 CNEL (feet)	CNEL (dBA) 50 Feet From Outermost Lane	Increase From Baseline Conditions
W. Santa Clara St. between White St. and Autumn St.	22,100	4,600	<50[a]	105	224	68.0	1.3
W. Santa Clara St. between Autumn St. and Delmas Ave.	21,300	6,100	<50	103	219	67.8	1.4
Autumn St. between W. San Fernando St. and W. Santa Clara St.	8,000	5,600	<50	54	114	64.1	5.3
W. San Fernando St. between Autumn St. and Delmas Ave.	6,100	3,300	<50	<50	60	60.4	3.3
Park Ave. between Autumn St. and Sunol St.	7,800	900	<50	<50	72	60.4	0.5
Park Ave. between Autumn St. and Delmas Ave.	8,200	1,200	<50	<50	75	60.6	0.6
Montgomery St./Bird Ave. between Park Ave. and W. San Carlos St.	21,800	5,100	<50	74	143	63.7	1.1
Bird Ave. between W. San Carlos St. and Auzerais Ave.	25,200	3,400	64	118	246	67.4	0.6
Auzerais Ave. between Bird Ave. and Sunol St.	7,300	900	<50	<50	67	61.2	0.6
Auzerais Ave. between Bird Ave. and Josefa St.	5,600	1,100	<50	<50	57	60.1	1.0
W. San Carlos St., between Dupont St. and Bird Ave.	17,100	1,100	<50	58	120	63.8	.2
W. San Carlos St. Between Bird Avenue and Josefa St.	16,400	1,700	<50	56	116	63.7	.5
Delmas Ave. between Park and Auzerias Avenue	13,700	2,400	<50	<50	102	64.0	.9
Delmas Ave. between Park and W. San Carlos St.	8,100	1,600	<50	<50	73	61.1	1.0

[a] Traffic noise within 50 feet of roadway centerline requires site specific analysis.

Source: LSA Associates, Inc., December 2005.

of facilities that are similar to the proposed project. Specific noise estimates for the new ballpark are based on measurements taken at Qualcomm Stadium[3] at a baseball game with an attendance of approximately 40,000 (slightly less than the design capacity of the propose project at 45,000). Base-ball event noise would general both peak noise and ambient noise.

Peak Baseball Game Noise Analysis (L_{max}). Crowd noise from the project was analyzed using a L_{max}, rather than the 24-hour L_{dn}, because baseball games last approximately three hours and would not occur on a daily basis. Monitoring at Qualcomm was performed during a baseball game in the parking

[3] San Diego, California

lot opposite a break in the outfield barrier that maximized event noise. Results of monitoring are shown in Table V.E-8. Discounting the noise reading that was distorted by a car horn honking, maximum noise from crowd cheering and public address (P.A.) announcements ranged from 71-77 dB L_{max} at approximately 400 feet from the center of the baseball diamond. The average noise or L_{eq} for the game was 64.4 dB. These results also indicate that the ballpark has peak noise events 10 percent of the time, with the remaining 90 percent of the event generating substantially less noise.

Table V.E-8: Summary of Noise Monitoring for Baseball Game, Qualcomm Stadium

Descriptor	dB
Leq	64.4
Lmax	77.0*
Lmin	54.9
L10	64.5
L33	60.8
L50	58.4
L90	56.0

*Maximum noise source due to crowd cheering and PA system.
Source: Giroux & Associates.

The proposed stadium would be relatively open in the outfield portion of the site. To account for the additional 5,000 seat capacity and increased openness which provides direct line of site over the sample data, the peak noise from baseball events at the proposed project is estimated to be approximately 5 dB higher, or 82 dB, 400 feet from the center of the baseball diamond.

As noise spreads from a source, it loses energy so that the farther away the noise receiver is from the noise source, the lower the perceived noise level would be. Geometric spreading causes the sound level to attenuate, resulting in a six-decibel reduction in the noise level for each doubling of distance from a single point source of noise to the noise receptor. Other factors influence sound attenuation with distance from a source including atmospheric conditions, background noise levels and buildings located within the line-of-sight from the source.

The closest sensitive receptors are located at a distance of approximately 200 feet from the boundary of the project site, or 750 feet from the center of the baseball diamond. Assuming direct line-of-sight conditions for this receptor and a distance divergence factor (i.e., the diminution of noise resulting from the distance between the source and the receptor) of 5.5 dB, maximum noise levels at this residence would be 76.5 dBA.

For residential receptors located west of the stadium, direct line-of-sight to the stadium will be blocked due to the stadium seating and spectator noise would be projected away from the residential uses to the west. For receptors located west of the stadium, L_{max} would be 68.5 dBA.

P.A. system noise is included in the peak noise estimates. Previous noise analysis for 3Com Park[4] and PETCO Stadium,[5] indicate that P.A. system noise is less than the crowd noise. The P.A. system for the downtown stadium is proposed to be a distributed speaker system, which would utilize speakers located around each section of the park to minimize the need for extra-loud and high-mounted units. Therefore, crowd noise is determined to be the peak noise source from baseball events.

An increase in peak noise sources of 3 dBA or more would be considered a significant impact. As shown in monitoring results from the surrounding residential uses, existing noise at residential uses adjacent to the property currently range from 79.4 dBA to 83.2 dBA due to existing noise sources

[4] San Francisco, California

[5] San Diego, California

such as planes, trains and automobiles. The proposed project would generate peak noises during baseball game events that are lower than existing peak noises from other sources.

Ambient Baseball Game Noise Analysis (L_{eq}). A significant impact would occur if a substantial temporary, periodic, or permanent increase in ambient noise levels in the project vicinity were to be created above levels existing without the project. Existing ambient noise measurements, in terms of L_{eq} were measured for both weekday late afternoon conditions and weekend evening conditions. A comparison of existing and project conditions shown in Table IV.E-9. Results indicate that predicted L_{eq} will be considered significantly higher than the prevailing ambient noise during the weekend evening baseball game events at Receptors 1 and 2. As shown in Figure V.E-1, Receptor 1 represents a multi-family housing unit located north of the project site, while Receptor 2 represents housing units located along S. Park Avenue.

Referencing Table V-E-2, the interior noise level established by the EPA required to protect public health is 45 dBA L_{eq} for residential uses. Standard residential structures in northern California provide an exterior-to-interior noise reduction of 25 dBA with windows closed and 15 dBA with windows open. Based on the analysis, several residential sites in the project area would be exposed to noise levels that would exceed the criteria with windows open. Therefore, in order for residential uses located within the 60 dBA L_{eq} contour line shown in Figure V.E-2, windows and doors would need to remain closed to meet the interior noise standard.

The project shall implement the following mitigation measure to reduce the impact of ambient noise sources from stadium events.

> Mitigation Measure NOISE-2a: The stadium public address system shall be comprised of a distributed speaker system on-site, which would locate speakers around each section of the park to minimize the need for extra-loud and high-mounted units.
>
> Mitigation Measure NOISE-2b: Prior to the first ballpark event, a detailed acoustic study shall be conducted by the City of San Jose to confirm the predictions of the long-term noise levels at noise sensitive uses within the 60 dBA L_{eq} contour line shown in Figure V.E-2 of the ballpark, which have been made in this EIR. The study shall be used to determine noise attenuation measures to achieve a 45 dBA L_{eq} interior noise level at nearby residences. Attenuation measures at the stadium shall include, but not be limited to, distributed speakers for the public address system and limitations placed on sound levels associated with various activities. Measures taken with affected property owner's consent, at receptor locations may include, but are not limited to installation of dual-pane windows, mechanical air conditioning, sound walls and improved ceiling and wall insulation.
>
> Necessary remedial measures shall be implemented, or otherwise assured to be implemented within one year to the satisfaction of the City Manager. Implementation of mitigation measures NOISE-1a and NOISE-1b would reduce impacts associated with baseball games. However, impacts would remain significant and unavoidable. (SU)

Impact NOISE-3: Proposed on-site concert events could result in noise impacts on adjacent residential uses. (S)

Table V.E-9: Existing and With Project Ballgame Event Noise Levels

Receptor	Location	Existing L_{eq}	Existing L_{max}	Project Noise Level (dBA)		Project & Existing Noise Level (dBA)	
				Hourly L_{eq}	Maximum Level	Hourly L_{eq}	Change From Existing Hourly L_{eq}
1	Four-plex located on Montgomery St.	60.6	68.9	64.4	76.5	65.4	4.8
2	490 Park Avenue	63.5	81.7	64.4	76.5	67.4	3.9
3	193 Laurel Grove Lane	62.9	72.1	56.4	68.5	63.9	1.0
4	691 W. San Carlos Street	63.7	77.4	40.4	58.5	63.7	0.0

Source: LSA Associates, Inc., 2005.

The proposed stadium is expected to have two event seating configurations. One configuration would be for ballgames the other would be for concerts. Concert configuration would not necessarily increase the number of seats as seating in the grandstands would be eliminated due to the limited views of the stage. The stage would potentially be located in the outfield and speakers would be oriented towards the southwest. It is anticipated that twelve concert events would occur at the stadium each year. Anticipated crowd levels would vary with event. Some concerts would be held using less than the stadium's full seating capacity, while others could potentially use the maximum seating capacity. The noise effects of amplified music would be noticeably different from baseball game event noise.

Peak Noise During Concert Events. For outdoor concerts for which the attraction is rock or other popular music, typical noise levels for a mixing board located approximately 100 feet from the stage is 95 dB. Amplifiers for concerts would be located at field level. Concerts at the proposed downtown stadium would be unique for outdoor music in that the stadium would provide a barrier behind the audience that would reduce the speaker volume needed to achieve the same sound effect in a completely open outdoor environment and would reduce off-site sound migration. Under this concert configuration the stadium stands and the people in them would absorb a substantial amount of the acoustic energy. However, noise would spill over to the surrounding areas.

Using a 10 dBA reduction to account for attenuation from the ballpark structure and other noise absorption and a distance divergence factor (the reduction in noise due loss of energy from the source with distance) of 12 dB, music noise and the nearest residence with a direct line-of-sight (Receptor 2) would be 73 dB L_{max}, which is less than the maximum noise level for a baseball game.

Ambient Noise During Concert Events. Based on monitoring results from baseball games (and reiterating that baseball games are quiet 90 percent of the time) noise peaks are caused by public address system announcements or crowd cheering. Unlike baseball events, concert noise typically has a higher hourly L_{eq} because music from the speaker system is louder and more continuous than crowd cheers. Based on results of the Environmental Noise Model (ENM) for the San Francisco Giants Ballpark which proposed open air concerts with similar crowd capacity, the hourly L_{eq} would be 6 dB less than the L_{max} for concert noise.[6]

[6] San Francisco Giants Ballpark at China Basin, Draft Environmental Impact Report. City of San Francisco. 1997.

Figure V.E-2 shows the distribution of average concert noise into the surrounding area. The figure illustrates how noise from events at the downtown stadium would be a function of the intensity of the noise and the design factors, such as attenuation from the stadium itself. The nearest residence (Receptor 2) located east of the project site would experience an hourly L_{eq} from concert noise of 67 dBA. This represents a 3.5 dBA increase over existing L_{eq} conditions measured between the hours of 7:00 p.m. to 10:00 p.m.

One criterion of significance for the proposed stadium would define a significant impact to exist if the project would increase the ambient noise levels in the project vicinity more than 3 dBA over levels existing without the project. Existing noise during evening hours in the project area as documented by field surveys ranges from 60.6 to 63.7 dBA L_{eq}. Baseball games at the proposed stadium significantly increase the L_{eq} in the surrounding neighborhoods located directly north and east of the project site. Potential noise from concerts at the stadium could also significantly increase the noise levels in the area particularly during the hours of 7:00 p.m. to midnight which are considered noise sensitive hours.

> Mitigation Measure NOISE-3: A maximum sound level of 95 dB L_{eq} shall be maintained at the sound board for concerts.
>
> Implementation of the multipart mitigation measures NOISE-1 and NOISE-2 would reduce impacts from concert noise. However, noise impacts would be significant and unavoidable. (SU)

Impact NOISE-4: Explosions associated with fireworks displays at the proposed project would create significant peak noise impacts. (S)

Fireworks require a City permit and are exempt from noise ordinance standards (as they are such short term events). General Plan Noise Standards are based on 24-hour averages and therefore fireworks are exempt from noise element standards. However, explosive noise sources such as fireworks can be disturbing to residents. Because the explosions associated with firework displays occur in high in the air, explosions can be heard from five to ten miles from the source, depending on the type of fireworks. In general, explosions from fireworks would be very short in duration, however they would be louder than other sources of noise from the stadium such as concert noise or crowd noise.

The proposed stadium currently does not have a proposed schedule for firework displays. However, ballparks typically have a three minute mini-display at the end of each ballgame, several longer shows for special nights that do not exceed ten minutes, and an occasional major show that may last for up to 30 minutes, such as might occur on the 4th of July. Fireworks display *time of occurrence* is generally more intrusive than the *magnitude of the noise*. Typically, the larger shows would be conducted in conjunction with earlier ballgame starting times and noise events after 10:00 p.m. would be infrequent and of reasonably short duration. However, because firework displays are often shown at the end of a ballgame or events, it is not possible to determine the exact timing of the displays due to the possibility of extra inning games. Isolated explosive noise associated with fireworks displays could occur and would constitute a significant noise impact.

Implementation Mitigation Measure NOISE-2b would reduce impacts from firework displays for residences located adjacent to the proposed stadium. Implementation of the Mitigation Measure NOISE-2b would help to minimize this impact but not reduce it to a less-than-significant level. (SU)

(1) Short-Term Construction Noise. Noise levels from construction activities such as grading and building erection for the proposed project may range up to 91 dBA L_{max} at 50 feet from the active construction area for a limited time period.

The transport of workers and construction equipment and materials to the project area would incrementally increase noise levels on existing access roads leading to the area. Noise from passing trucks (87 dBA L_{max} at 50 feet) would be similar to existing truck-generated noise. Short-term intermittent noise from trucks would be minor and less than significant when averaged over a longer time period. In addition, noise associated with on-road vehicles is regulated by the federal and State governments and is exempt from local government regulations.

Noise generated during excavation, grading, and building erection on the project area would result in potential noise impacts to off-site uses and to on-site uses if they were to occupy a site while later phases of construction were continuing. Existing tenants in the project vicinity may also experience short-term noise generated by construction equipment and activities in the project area when construction occurs near the project boundary.

Construction is performed in discrete steps, each of which has its own mix of equipment and, consequently, its own noise characteristics. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction-related noise ranges to be categorized by work phase. Table V.E-8 lists typical construction equipment noise levels recommended for use in noise impact assessments, based on a distance of 50 feet between the equipment and a noise receptor. Typical construction noise levels vary up to a maximum of 91 dBA L_{max} at 50 feet during the noisiest construction phases. The site preparation phase, which includes excavation and grading of a site, tends to generate the highest noise levels because the noisiest construction equipment is earthmoving equipment. Earthmoving equipment includes excavating machinery such as backhoes, bulldozers, draglines, and front loaders and earthmoving and compacting equipment, which includes compactors, scrapers, and graders. Typical operating cycles for these types of construction equipment may involve one or two minutes of full power operation followed by 3 to 4 minutes at lower power settings.

Table V.E-10: Typical Construction Equipment Noise Level

Type of Equipment	Range of Sound Levels Measured (dBA at 50 feet)	Suggested Sound Levels for Analysis (dBA at 50 feet)
Pile Drivers	81 to 96	93
Rock Drills	83 to 99	96
Jackhammers	75 to 85	82
Pneumatic Tools	78 to 88	85
Pumps	68 to 80	77
Dozers	85 to 90	88
Tractors	77 to 82	80
Front-End Loaders	86 to 90	88
Hydraulic Backhoe	81 to 90	86
Hydraulic Excavators	81 to 90	86
Graders	79 to 89	86
Air Compressors	76 to 86	86
Trucks	81 to 87	86

Source: Bolt, Beranek & Newman 1987. Noise Control for Buildings and Manufacturing Plants.

Construction of the proposed project is expected to require the use of earthmovers such as bulldozers and scrapers, loaders and graders, water trucks, and pickup trucks. As shown in Table V.E-10, the typical maximum noise level

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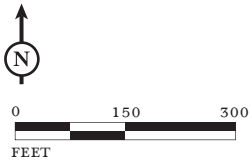
FIGURE V.E-2



= CONCERT 60 dBA L_{eq}

= BALLGAME 60 dBA L_{eq}

Baseball Stadium in the Diridon/Arena Area

Stadium Event Noise Contour

SOURCE: CITY OF SAN JOSE, REDEVELOPMENT AGENCY, 11/14/2005

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generated by each earthmover on a proposed project site is assumed to be 88 dBA L_{max} at 50 feet from the operating earthmover. The maximum noise level generated by water and pickup trucks is approximately 86 dBA L_{max} at 50 feet from these vehicles. Each doubling of the sound sources with equal strength would increase the noise level by 3 dBA. Assuming each piece of construction equipment operates at some distance apart from the other equipment, the worst-case combined noise level at the nearest residences during this phase of construction would be 91 dBA L_{max} at a distance of 50 feet from an active construction area.

Pile driving may be required, which could generate noise levels above 90 dBA L_{max} and ground vibration. Noise associated with pile driving is a very loud and impulsive sound, resulting from a large hammer that drops on steel or reinforced concrete piles. Individual noise impacts are of short duration (under one second), but the noise is repetitive, occurring about once every two seconds. Pile driving also generates vibration that is perceptible at a distance of 100 feet but would not generally be expected to cause damage to other properties. (The potential exception to this rule would be historic structures, as discussed in this chapter, in Section J, Cultural Resources.)

Impact NOISE-5: Construction period activities could create significant short-term noise impacts. (S)

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

Mitigation Measure NOISE-5a: The following measures shall be implemented during construction of the proposed project:

- All construction vehicles or equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers.
- City will develop a Construction Impact Mitigation Plan with input from neighbors to determine a construction activity schedule including construction days and hours of construction.
- Unnecessary idling of internal combustion engines will be prohibited.
- All stationary noise generating construction equipment, such as air compressors and portable power generators, will be located as far as practical from existing residences.

Mitigation Measure NOISE-5b: In the event that pile-driving and/or other extreme noise generating construction vehicles or equipment are required, a set of site-specific noise attenuation measures shall be completed under the supervision of a qualified acoustical consultant. These attenuation measures shall include as many of the following control strategies as feasible and shall be implemented prior to any pile-driving or extreme noise generating activities:

- Implement "quiet" pile-driving technology, where feasible, in consideration of geotechnical and structural requirements and conditions;
- Utilize noise control blankets on the building structure as it is erected to reduce noise emission from the site;
- Evaluate the feasibility of noise control at the receptor(s) by temporarily improving the noise reduction capability of those buildings; and

- Monitor the effectiveness of noise attenuation measures by taking noise measurements once the measures are in place.
- Residents within 1,000 feet of the pile-driving activity will be notified of the schedule for their use while they are in use. Portable acoustical barriers will be installed around pile driving equipment.
- A name, address, and phone number of a contact person will be posted on the site to handle noise complaints.

Implementing the basic measures required by Mitigation Measure NOISE-5a would reduce potential impacts from construction activities. In addition, Mitigation Measure NOISE-5b will further reduce the potential impacts from pile driving activities and other extreme noise generating construction activities in the vicinity of the construction site. However, even with the implementation of these mitigation measures, noise associated with the construction of the proposed project would be considered significant and unavoidable. (SU)

F. BIOLOGICAL RESOURCES

This section describes existing biological resources in the project area, the regulatory context for addressing biological resource issues on the site, and evaluates potential impacts to biological resources that could result from implementation of the proposed project. Mitigation measures are also recommended to avoid or minimize potential impacts.

1. Setting

This section discusses the existing vegetation and urban wildlife in and around the project site. The discussion includes: vegetation and habitats; wildlife values; potential wetlands; ordinance-size trees; sensitive communities; and special-status species. It begins with a brief summary of methods used and background materials relied upon.

2. Methods

To determine which special-status plant and animal species could potentially occur on or in vicinity of the Project, the California Natural Diversity Database (CNDDB)[1] was searched for records of special-status species and sensitive communities in the San Jose East and San Jose West 7.5 minute U.S. Geological Survey quadrangles. The California Native Plant Society's (CNPS)[2] online database of special-status plants was also searched for special-status plant and sensitive plant community records in the selected quadrangles. Based on results of these database searches, a list of special-status plant (see Table V.F-1) and animal species (see Table V.F-2) that are known to occur in the general San Jose area were compiled. Tables V.F-1 and V.F-2 describe the species' status, habitat and potential for occurrence on the project site.

Field reconnaissance data were collected during a site visit on December 6, 2005.[3] The site visit consisted of traversing the site while recording information on the vegetation communities and wildlife present, and searching for evidence of special-status species or habitats that could support them. Plants and animals observed during the survey were recorded in field notes. Additional sources of information include the following:

- *San Jose Downtown Strategy 2000 Environmental Impact Report*, City of San Jose, May 2005
- *San Jose MarketCenter Environmental Impact Report*, City of San Jose, December 2004

Plant taxonomy and nomenclature follows *The Jepson Manual*.[4] Nomenclature for common amphibians and reptiles conforms to Crother et al.,[5] while nomenclature for mammals conforms to Baker et

[1] California Natural Diversity Database (CNDDB), 2005. Special-status species occurrences within the San Jose West and San Jose East 7.5-minute USGS quadrangles. Wildlife and Habitat Data Analysis Branch, California Department of Fish and Game, Sacramento.

[2] California Native Plant Society (CNPS), 2005. Inventory of Rare and Endangered Plants (online edition v. 6-05d 9-28-05). California Native Plant Society, Sacramento. http://www.cnps.org/inventory.

[3] LSA botanist/wetland ecologist Michele Lee and wildlife biologist Matt Ricketts.

[4] Hickman, J.C., ed., 1993. *The Jepson Manual: Higher Plants of California.* University of California Press, Berkeley. 1400 pp.

[5] Crother, B.I. et al., 2000. Scientific and Standard English Names of Amphibians and Reptiles of North American North of Mexico, with Comments Regarding Confidence in our Understanding. Herpetological Circular 29:1–82.

al.[6] Scientific names for bird species are not provided in the text since common names of birds are standardized in the American Ornithologists' Union (AOU) *Check-list of North American Birds*[7] and supplements.

a. Existing Conditions. The entire 23.1-acre site is developed for light industrial and commercial use, with two roads (Montgomery Street and Autumn Street) running through the northern part of the site. Landscaped trees and shrubs have been planted around most of the buildings. Most of the site is unvegetated and consists of asphalt pavement, concrete surfaces, or gravel parking lots. Los Gatos Creek flows south to north along the eastern and southeastern site boundary, with the Amtrak Railroad Yard forming the western site boundary.

(1) Vegetation and Habitats. Most of the site is developed and unvegetated except for ornamental trees and shrubs. A tree survey conducted on December 13, 2005[8] compiled data on a total of 170 trees in the project area, 45 of which are ordinance-sized trees (Figure V.F-1). The results from the tree survey are summarized below in a separate discussion of ordinance-sized trees and a copy of the detailed Arborist Report is provided in Appendix F. Besides the landscaped trees and shrubs, the only vegetation observed in the project area was ruderal vegetation, including mallow (*Malva* sp.) and smilo grass (*Piptatherum miliaceum*) that grows in the cracks of pavement and in a small bare area near a group of trees in the northwestern portion of the site.

Two reaches of Los Gatos Creek are immediately adjacent to the eastern boundary of the project area (Figure V.F-1). The creekbed substrate consists of fines, gravel and cobbles. The channel from Ordinary High Water Mark to Ordinary High Water Mark is approximately 35 feet wide and water was flowing in it during the December site visit. The channel lacked any associated aquatic or emergent vegetation, but the creek supports a riparian corridor that is dominated by a fairly dense canopy cover of cottonwood trees (*Populus fremontii* ssp. *fremonti*). Other associated trees include red willow (*Salix laevigata*), arroyo willow (*Salix lasiolepis*), box elder (*Acer negundo* var. *californicum*), edible fig (*Ficus carica*), weeping willow (*Salix babylonica*) and Peruvian pepper tree (*Schinus molle*). The understory is primarily leaf litter where canopy cover is dense and more open areas support non-native species such as English ivy (*Hedra helix*), smilo grass, and small patches of Himalayan blackberry (*Rubus discolor*). Along the upland edges near the top of the bank were non-native grasses such as ripgut brome (*Bromus diandrus*), foxtail barley (*Hordeum murinum* ssp. *leporinum*), fennel (*Foeniculum vulgare*), and mallow.

(2) Wildlife Values. Wildlife species that occur on the site are typical of urban areas and have adapted well to human-modified landscapes. Many of the bird species were observed in the riparian vegetation along Los Gatos Creek, which contains the best available habitat for urban wildlife in the site vicinity. Bird species observed during the field reconnaissance (on December 6, 2005) include the following: Cooper's hawk, California gull, rock pigeon, Anna's hummingbird, black

[6] Baker, R.J., L.C. Bradley, R.D. Bradley, J.W. Dragoo, M.D. Engstrom, R.S. Hoffmann, C.A. Jones, F. Reid, D.W. Rice, and C. Jones. 2003. *Revised Checklist of North American Mammals North of Mexico, 2003.* Museum of Texas Tech University. Occasional Papers 229.

[7] American Ornithologists' Union, 1998. A.O.U. *Checklist of North American Birds*, Seventh Edition. American Ornithologists' Union, Washington, D.C.

[8] LSA botanist/arborist Tim Milliken.

LSA

FIGURE V.F-1

PROJECT BOUNDARY

GENERAL LOCATIONS OF ORDINANCE SIZE TREES

N

0 150 300

FEET

Baseball Stadium in the Diridon/Arena Area

Ordinance Size Trees on the Project Site

SOURCE: GLOBEXPLORER; LSA ASSOCIATES, INC., 2005.

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phoebe, western scrub-jay, chestnut-backed chickadee, bushtit, ruby-crowned kinglet, northern mockingbird, European starling, yellow-rumped warbler, Townsend's warbler, house finch, and house sparrow. Only two mammal species, fox squirrel (*Sciurus niger*) and eastern gray squirrel (*Sciurus carolinensis*), were observed in the site vicinity; both were observed in the trees along Los Gatos Creek. Black-tailed deer (*Odicoileus hemionus*), raccoon (*Procyon lotor*), and Virginia opossum (*Didelphis virginiana*) are other common mammals that likely occur within the riparian corridor. No amphibians or reptiles were observed during the site visit, although the riparian habitat along the creek likely supports common species such as California slender salamander (*Batrachoseps attenuatus*), arboreal salamander (*Aneides lugubris*), Pacific treefrog (*Pseudacris regilla*), American bullfrog (*Rana catesbeiana*), Pacific (western) pond turtle (*Actinemys marmorata*), western fence lizard (*Sceloporus occidentalis*), southern alligator lizard (*Elgaria multicarinatus*), and common gartersnake (*Thamnophis sirtalis*). With the exception of the ornamental trees and shrubs planted for landscaping, the developed portions of the site provide little habitat for native wildlife.

(3) Potential Jurisdictional Wetlands or Waters of the U.S. No potential jurisdictional wetlands or non-wetland waters of the United States were observed in the project area during the October 2005 reconnaissance survey. The channel of Los Gatos Creek is regulated by the Corps, RWQCB and CDFG. CDFG jurisdiction typically extends to the dripline of the riparian trees and vegetation along the creek. The proposed project would provide an average 50-foot setback from the top of the bank of Los Gatos Creek, which is outside the dripline of riparian vegetation and construction will be implemented according to Best Management Practices to protect the creek's water quality and riparian habitat; therefore, permits are not required from the Corps, RWQCB, or CDFG for impacts to jurisdictional features.

(4) Santa Clara Valley Water District. The proposed project would provide an average 50-foot setback from the top of the bank of Los Gatos Creek. A permit is required by the Water District to: place any structure within 50 feet of the top of a creek bank; trespass in any manner on district property; excavate, fill or grade within 50 feet of a creek bank; place an outlet for discharging drainage waters into a creek; or, landscape, remove plants, or irrigate next to a creek.

(5) Ordinance-Size Trees. A tree survey was conducted in the project area on December 13, 2005.[9] The results from the tree survey are summarized below and a copy of the detailed Arborist Report is provided in Appendix F. A total of 170 trees are located in the project area, and 45 of these are ordinance-sized trees (Figure V.F-1). An ordinance-size tree is one that is equal to or greater than 18 inches in diameter (56-inch circumference) at 24 inches above the natural grade. Results from the tree survey indicate that 45 ordinance-size trees occur on the site, and include four Chinese pistachio (*Pistacia chinensis*), five California fan palm (*Washingtonia filifera*), four tree of heaven (*Ailanthus altissima*), four Peruvian pepper tree (*Schinus molle*), one box elder (*Acer negundo* var. *californicum*), one common olive (*Olea europaea*), one southern magnolia (*Magnolia grandiflora*), one black locust (*Robinia pseudoacacia*), one coast redwood (*Sequoia sempervirens*), two sweetgum (*Liquidambar styraciflua*), three red ironbark (*Eucalyptus sideroxylon*), one privet (*Ligustrum* sp.), one blue elderberry (*Sambucus mexicana*), three Chinese elm (*Ulmus parvifolia*), eight carob (*Ceratonia siliqua*), one Podocarpus (*Podocarpus* sp.), one Monterey pine (*Pinus radiata*), one Australian willow (*Geijera parviflora*), one Japanese maple (*Acer palmatum*), and one edible fig (*Ficus carica*). All of these ordinance-sized trees are non-native species or non-local native species

[9] Ibid.

except for the one blue elderberry and one box elder. All 45 ordinance-size trees are listed for removal (see Arborist Report).

(6) Sensitive Terrestrial Natural Communities. The CNDDB reports three sensitive habitats in the general San Jose area: serpentine bunchgrass, northern coastal salt marsh, and north central coast drainage Sacramento sucker/roach river. None of these sensitive communities occur within or adjacent to the project area.

(7) Special-Status Species. For the purpose of this EIR, special-status species are defined as follows:

- Species that are listed, formally proposed, or designated as candidates for listing as threatened or endangered under the Federal Endangered Species Act.
- Species that are listed, or designated as candidates for listing, as rare, threatened, or endangered under the California Endangered Species Act.
- Plant species on List 1A, List 1B, List 2, List 3 and List 4 in the CNPS *Inventory of Rare and Endangered Vascular Plants of California*.[10]
- Wildlife species listed by CDFG as Species of Special Concern, or as Fully Protected species.
- Species that meet the definition of rare, threatened, or endangered under Section 15380 of the *CEQA Guidelines*.
- Considered to be a taxon of special concern by local agencies.

Plants. A list was compiled of 15 special-status plant species that potentially occurring in the vicinity of the project area (Table V.F-1). All of these plants are unlikely to occur in the project area because of the lack of suitable habitat. The site is primarily paved and landscaped, with a few patches of ruderal plants in the cracks of paved surfaces. The adjacent creek corridor also lacks suitable habitat for special-status plants. It is disturbed and supports patches of ruderal plants and non-native grasses.

Animals. The CNDDB contains records for six special-status animal species in the vicinity of downtown San Jose (Table V.F-2). Of these, Cooper's hawk is the only species expected to occur on the site. An immature Cooper's hawk was seen soaring over the intersection of Park Avenue and Montgomery/Autumn Streets during the December 6 site visit. No nest structures were seen in any of the trees along Los Gatos Creek, although they do provide suitable nest sites for this species, which is known to nest in urban landscapes throughout California.[11] In addition, Cooper's hawks were observed nesting in 2003 in an urban parking lot near the intersection of Bascom and Hamilton Avenues, approximately 2.5 miles southwest of the site.[12]

[10] CNPS 2005, op. cit.

[11] Peeters, H. and P. Peeters, 2005. *Raptors of California: California Natural History Guide No. 82.* University of California Press, Berkeley.

[12] CNDDB 2005, op. cit.

Table V.F-1: Special-Status Plant Species in the Project Vicinity

Species	Status[a]	Habitat/Blooming Period	Potential For Occurrence On Project Site
Big scale balsamroot *Balsamorhiza macrolepis*	-/-/1B	Valley and foothill grassland and cismontane woodland. Sometimes on serpentine. 35-1000 meters. March-June	None. Suitable habitat not present.
Congdon's tarplant *Centromadia parryi* ssp. *congdonii* *[Hemizonia parryi* ssp. *congdonii]*	-/-/1B	In valley and foothill grassland on alkaline soils, sometimes described as heavy white clay. 1-230 meters. June-(November)	None. Suitable habitat not present.
Robust spineflower *Chorizanthe robusta* var. *robusta*	FE/-/1B	Sandy terraces and bluffs or in loose sand in cismontane woodland, coastal dunes, and coastal scrub. 3-120 meters. April-September	None. Suitable habitat not present.
Mt. Hamilton thistle *Cirsium fontinale* var. *campylon*	-/-/1B	Cismontane woodland, chaparral, and valley and foothill grassland. In seasonal and perennial drainages on serpentine. 95-890 meters. (February)-October	None. Suitable habitat not present.
San Francisco collinsia *Collinsia multicolor*	-/-/1B	Closed-cone coniferous forest, coastal scrub. On decomposed shale (mudstone) mixed with humus. 30-250 meters. March-May	None. Suitable habitat not present.
Santa Clara Valley dudleya *Dudleya setchellii*	FE/-/1B	Valley and foothill grassland and cismontane woodland. Endemic to serpentines of Santa Clara County. On rocky serpentine outcrops and on rocks within grassland or woodland. 80-335 meters. April-June	None. Suitable habitat not present.
Fragrant fritillary *Fritillaria liliacea*	-/-/1B	Coastal scrub, valley and foothill grassland, and coastal prairie. Often on serpentine. Various soils reported though usually clay. 3-410 meters. February-April.	None. Suitable habitat not present.
Loma Prieta hoita *Hoita strobilinia*	-/-/1B	On mesic, serpentine sites within chaparral, cismontane woodland, and riparian woodland habitats. 30-600 meters. May-October	None. Suitable habitat not present.
Contra Costa goldfields *Lasthenia conjugens*	FE/-/1B	In vernal pools, swales, and low depressions, in open grassy areas within valley and foothill grassland and cismontane woodland. Extirpated from most of its range. 1-445 meters. March-June	None. Suitable habitat not present.
Arcuate bush mallow *Malacothamnus arcuatus*	-/-/1B	Chaparral in gravelly alluvium. 80-355 meters. April-September	None. Suitable habitat not present.
Hall's bush mallow *Malacothamnus hallii*	-/-/1B	Chaparral. Some populations on serpentine. 10-550 meters. May-September	None. Suitable habitat not present.
Hairless popcorn flower *Plabiobothrys glaber*	-/-/1A	Coastal salt marshes and alkaline meadows. 5-180 meters. March-May	None. Suitable habitat not present.

Table V.F-1 *continued*

Species	Status[a]	Habitat/Blooming Period	Potential For Occurrence On Project Site
Rayless ragwort *Senecio aphanactis*	-/-/2	Drying alkaline flats in cismontane woodland and coastal scrub. 20-575 meters. January-April	None. Suitable habitat not present.
Metcalf canyon jewel-flower *Streptanthus albidus* ssp. *albidus*	FE/-/1B	Valley and foothill grassland in relatively open areas in dry grassy meadows on serpentine soils and on serpentine balds. Endemic to Santa Clara County. 45-245 meters. April-July	None. Suitable habitat not present.
Caper-fruited tropidocarpum *Tropidocarpum capparideum*	-/-/1B	Valley and foothill grassland in alkaline hills. 0-455 meters. March-April	None. Suitable habitat not present.

[a] Status Codes (Federal/State/CNPS)

Federal
FE = Federally-listed as endangered
FT = Federally-listed as threatened

State
ST = State-listed as threatened
SR = State-listed as rare

CNPS (California Native Plant Society) List
1A = Presumed extinct in California
1B = Rare, threatened or endangered in California and elsewhere.
2 = Rare, threatened or endangered in California but common elsewhere.
3 = More information is needed for assignment to a list (review list).
4 = Limited distribution (watch list).

Source: LSA Associates, Inc., 2004.

Table V.F-2: Special-Status Animal Species in the Project Vicinity

Species	Status[a]	Habitat	Potential for Occurrence On Project Site
Steelhead (Central California Coast ESU)[b] *Oncorhynchus mykiss*	FT/–/–	Clear, cool streams with pools and riffles, with coarse gravel beds for spawning.	None. Suitable habitat not present, although known to occur in Los Gatos Creek.
Chinook salmon *Oncoryhchus tshawytscha*	FC/–/–	Clear, cool streams with pools and riffles, with coarse gravel beds for spawning.	None. Suitable habitat not present, although known to occur in Los Gatos Creek.
Bay checkerspot butterfly *Euphydryas editha bayensis*	FT/–/–	Native grasslands with serpentine rock outcrops. *Plantago erecta* is primary host plant.	None. Suitable habitat not present
California tiger salamander *Ambystome californiense*	FT/–/SC	Grasslands and foothills that contain small mammal burrows (for dry-season retreats) and seasonal ponds and pools (for breeding during the rainy season).	None. Suitable habitat not present
Pacific (western) pond turtle *Actinemys marmorata*	–/–/SC	Ponds, streams, drainages and associated uplands	None. Suitable habitat not present. Species likely occurs within Los Gatos Creek, however.
Cooper's hawk (nesting) *Accipiter cooperi*	–/–/SC	Woodlands and riparian areas. Usually nests in dense live oak or riparian stands.	High. Suitable nest trees along Los Gatos Creek. Species observed during site visit.
Burrowing owl *Athene cunicularia*	–/–/SC	Open, dry grasslands that contain abundant ground squirrel burrows.	None. Suitable habitat not present
San Joaquin kit fox *Vulpes macrotis mutica*	FE/ST/–	Annual grasslands with scattered shrubby vegetation. Loose-textured soils required for digging burrows.	None. Suitable habitat not present

[a] Status Codes (Federal/State/CDFG)
FE = Federally-listed as endangered.
FT = Federally-listed as threatened.
ST = State-listed as threatened.
SC = California Species of Special Concern.
[b] ESU = Evolutionarily Significant Unit.

Source: LSA Associates, Inc., 2004.

Although not documented in the CNDDB, steelhead (*Oncorhynchus mykiss*; federally threatened) and chinook salmon (*O. tshawytscha*; candidate for federal listing) are known to occur in Los Gatos Creek.[13] In 1997, 1998, and 1999, spawning adult chinook salmon and steelhead were observed in Los Gatos Creek near Hamilton and Meridian Avenues,[14] approximately 2.8 and 1.4 miles upstream of the site, respectively. Steelhead and chinook salmon require highly specific conditions for migration, spawning, and rearing young. Important factors associated with preferred stream channel conditions include temperature, velocity, depth, gravel substrate, and water quality. Shaded banks with overhanging riparian vegetation (termed "shaded riverine aquatic cover" by the USFWS) are also beneficial to salmonids, providing foraging habitat and cover from predators. High water temperatures, low surface flow of water, low levels of dissolved oxygen, and low sediment input can be detrimental to steelhead and chinook salmon populations. The section of Los Gatos Creek that flows adjacent to the eastern site boundary is characterized by shallow pools and riffles, with the majority of the channel substrate comprised of cobbles interspersed with small patches of gravel. Although the creek is well-shaded by the trees that grow along its banks, shaded riverine aquatic cover is lacking and the channel is largely devoid of woody debris and other features that contribute to habitat diversity. Trash has also accumulated in the creek in the vicinity of the site, resulting in lowered water quality. As such, the stream habitat adjacent to the site is not suitable for spawning or rearing of salmonids, although they undoubtedly move through the area while migrating to the known spawning areas further upstream.

Los Gatos Creek also provides suitable habitat for Pacific pond turtles (*Actinemys marmorata*), a California Species of Special Concern. Formerly known as western pond turtle (*Clemmys marmorata*), both the genus and common name of this species has recently been updated.[15] Pond turtle occur in ponds, marshes, rivers, streams, and irrigation ditches that typically have a rocky or muddy bottom, in a wide variety of habitats.[16]

None of the remaining special-status animal species are expected to occur on the site due to a lack of suitable habitat. Although burrowing owls (*Athene cunicularia*) have been recorded at San Jose International Airport and at other locations southeast of the City, they are not expected to occur on the site due to its location within a heavily urbanized area and complete absence of suitable burrows or open foraging habitat. Likewise, the absence of open grasslands, small mammal burrows, and other natural habitats precludes the occurrence of Bay checkerspot butterfly (*Euphydryas editha bayensis*), California tiger salamander (*Ambystoma californiense*), and San Joaquin kit fox (*Vulpes macrotis mutica*).

3. Regulatory Context

The regulatory context for biological resources on and around the project site is discussed below.

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[13] Leidy, R.A., G.S. Becker, and B.N. Harvey, 2003. *Historical Distribution and Current Status of Steelhead (Oncorhynchus mykiss), Coho Salmon (O. kisutch), and Chinook Salmon (O. tshawytscha) in Streams of the San Francisco Estuary, California.* Unpubl. report, October 2003.

[14] J. Abel, Biologist, Santa Clara Valley Water District. 2003. Personal Communication with Gorden Becker et. al, October. Ibid.

[15] Crother, B.I. et al., 2003. *Scientific and Standard English Names of Amphibians and Reptiles of North America North of Mexico: Update.* Herpetological Review 34(3):196–203.

[16] Stebbins, R.C., 2003. *A Field Guide to Western Amphibians and Reptiles.* 3rd ed. Houghton Mifflin Co., Boston, Massachusetts.

a. Federal Endangered Species Act. The federal Endangered Species Act (FESA) protects listed species from harm or "take" which is broadly defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct. Take can also include habitat modification or degradation that results in death or injury to a listed species. An activity can be defined as "take" even if it is unintentional or accidental. Listed plant species are provided less protection than listed wildlife species. Listed plant species are legally protected from take under FESA if they occur on federal lands or if the project requires a federal action, such as a Section 404 fill permit. The United States Fish and Wildlife Service (USFWS) has jurisdiction over federally-listed threatened and endangered wildlife and plant species under the FESA. The USFWS also maintains lists of proposed and candidate species. Species on these lists are not legally protected under the FESA, but which may become listed in the near future and are often included in their review of a project.

b. California Endangered Species Act. The California Endangered Species Act (CESA) prohibits the take of any plant or animal listed or proposed for listing as rare (plants only), threatened, or endangered. In accordance with the CESA, California Department of Fish and Game (CDFG) has jurisdiction over state-listed species. Additionally, the CDFG maintains a list of California Species of Special Concern, defined as species that appear to be vulnerable to extinction because of declining populations, limited ranges, and/or continuing threats.

c. California Environmental Quality Act (CEQA). Section 15380(b) of the *CEQA Guidelines* provides that a species not listed on the federal or state lists of protected species may be considered rare or endangered if the species can be shown to meet certain specified criteria. These criteria have been modeled after the definitions in FESA and CESA and the section of the California Fish and Game Code dealing with rare or endangered plants or animals. This section was included in the *CEQA Guidelines* primarily to deal with situations in which a public agency is reviewing a project that may have a significant effect on a species that has not yet been listed by either the USFWS or CDFG.

d. Clean Water Act. Under Section 404 of the Clean Water Act, the U.S. Army Corps of Engineers (Corps) is responsible for regulating the discharge of fill material into waters of the United States. Waters of the U.S. and their lateral limits are defined in 33 CFR Part 328.3(a) and include streams that are tributary to navigable waters and their adjacent wetlands.

In general, a Corps permit must be obtained before placing fill in wetlands or other waters of the U.S. The type of permit depends on the acreage involved and the purpose of the proposed fill. Minor amounts of fill can be covered by a Nationwide Permit. An Individual Permit is required for projects that result in more than a "minimal" impact on jurisdictional areas. Individual Permits require evidence that jurisdictional fill has been avoided to the extent possible and a review of the project by the public.

e. California Water Quality and Waterbody Regulatory Programs. Under Section 401 of the federal Clean Water Act and the Porter-Cologne Water Quality Control Act, the Regional Water Quality Control Board (RWQCB) regulates the discharge of fill and dredged material into wetlands and others waters. Applicants must obtain a Water Quality Certification or Waste Discharge Requirements from the RWQCB. This certification ensures that the project will uphold state water quality standards. The RWQCB may regulate areas that the Corps does not regulate or they may impose mitigation requirements even if the Corps does not require them.

The CDFG exerts jurisdiction over the bed and banks of watercourses and waterbodies according to provisions of Section 1601 to 1603 of the Fish and Game Code. The Fish and Game Code requires a Streambed Alteration Agreement for the fill or removal of material within the bed and banks of a watercourse or waterbody.

f. City of San Jose 2020 General Plan. The City's General Plan includes the following policy related to riparian corridors.

Riparian Corridors and Upland Wetlands

- *Policy 4:* New development should be designed to protect adjacent riparian corridors from encroachment of lighting, exotic landscaping, noise, and toxic substances into the riparian zone.

g. City of San Jose Tree Removal Controls. The City of San Jose Tree Removal Controls Ordinance[17] is intended to protect all trees having a trunk that measure 56 inches or more in circumference (18 inches in diameter) at the height of 24 inches above natural grade slope. A multiple-trunk tree is considered a single tree and the measurement of the tree is the sum of the circumference of all the trunks at 2 feet above natural grade slope. The ordinance protects both native and non-native tree species.

h. City of San Jose. Riparian Corridor Policy Study. The *Riparian Corridor Policy Study* was prepared for the City of San Jose in 1994, and revised in March 1999.[18] The findings of this study were incorporated into the City's General Plan policies and *Residential Design Guidelines, Commercial Design Guidelines and Industrial Design Guidelines* regarding protection of riparian corridors. In this study, the riparian corridor is defined as any defined stream channel including the area up to the bank full-flow line, as well as riparian (streamside) vegetation in contiguous adjacent uplands. The study includes the following guidelines for construction in riparian corridors:

- In all new urban development areas, residences and other occupiable buildings, public use areas, and street patterns should be oriented to provide views of the corridor for visibility, for habitat protection and public safety (Guideline 1A).
- Development adjacent to riparian habitats should be setback at least 100 feet from the outside edge of the riparian habitat (or top of the bank, whichever is greater) (Guideline 1C). Exceptions to the 100-foot setback include locations in or near Downtown San Jose.
- During construction of sites adjacent to riparian corridors, temporary fencing or solid barriers should be placed outside the riparian habitat area to protect it from damage (Guideline 7E). Other Best Management Practices developed for Storm Water Pollution Prevention Permits should also be implemented.

i. Other Statutes, Codes, and Policies. The federal Migratory Bird Treaty Act[19] prohibits killing, possessing, or trading in migratory birds except in accordance with regulations prescribed by the

[17] San Jose Municipal Code, Sections 13.32.010 to 13.32.100.

[18] The Habitat Restoration Group and Jones and Stokes Associates, Inc., 1999. City of San Jose Riparian Corridor Policy Study. Approved by City Council May 17, 1994, revised March 1999.

[19] 16 U.S.C., Sec. 703, Supp. I, 1989.

Secretary of the Interior. This act encompasses whole birds, parts of birds, and bird nests and eggs. Most native bird species on the project site are covered by this Act.

j. California Native Plant Society. The California Native Plant Society (CNPS), a non-governmental conservation organization, has developed lists of plant species of concern in California.[20] Vascular plants included on these lists are defined as follows:

List 1A	Plants considered extinct.
List 1B	Plants rare, threatened, or endangered in California and elsewhere.
List 2	Plants rare, threatened, or endangered in California but more common elsewhere.
List 3	Plants about which more information is needed – review list.
List 4	Plants of limited distribution – watch list.

Although the CNPS is not a regulatory agency and plants on these lists have no formal regulatory protection, plants appearing on List 1B or List 2 are, in general, considered to meet CEQA's Section 15380 criteria and adverse effects to these species are considered "significant."

4. Impacts and Mitigation Measures

This section analyzes impacts to biological resources that may result from implementation of the proposed project, and identifies mitigation measures, as necessary.

a. Criteria of Significance. The proposed project would have a significant impact on biological resources if it would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, regulations or by the CDFG or USFWS;
- Conflict with the provisions of approved local, regional, or State policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFG or USFWS; or
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

b. Less-than-Significant Biological Resources Impacts. The loss of approximately 128 non-ordinance sized ornamental trees and shrubs is considered less than significant. These trees and shrubs would be replaced at a ratio of approximately 1:1 per the City's typical replacement ratios on the project site and in the project area. The site provides very limited habitat for plants and wildlife, especially special-status species. Common wildlife species that are adapted to urban environments will continue to use the site after construction of the project.

[20] California Native Plant Society. (CNPS). 2004. Inventory of Rare and Endangered Plants. On-line version 6.3, January 16, 2004. http://www.northcoast.com/~cnps/cgi-bin/cnps/sensinv.cgi.

Increased trash from stadium activities (i.e., food) and the open turf of the ball field will likely result in increased numbers of California and ring-billed gulls, both of which are common in urban environments. Given the relatively small number of urban bird species that currently use the site, this increase is not expected to significantly impact the existing wildlife community.

Construction of the stadium will result in increased shading of the Los Gatos Creek corridor. Figures V.L-1 – VL-4c show the degree of shading at 9:00 a.m., 12:00 p.m., and 3:00 p.m., for dates in March, June, September and December. South of Park Avenue, the creek corridor would experience increased shading in the afternoon, all year. North of Park Avenue, the creek corridor would experience increased shading in the afternoon in the winter and spring. The existing riparian vegetation is not expected to be significantly impacted by the increased afternoon shade because most of the vegetation, especially the riparian trees, are shade tolerant. The abundance of some of the non-native plants on the edge of the riparian corridor, such as fennel, mallow, ripgut brome and foxtail barley could be decreased by increased shade. The abundance of some species in the understory such as Himalayan blackberry and English ivy, which are invasive plants, could be somewhat increased by increased soil moisture in a shadier environment.

The increased shade and increased light levels during night games in the riparian corridor are not expected to adversely impact wildlife use of the corridor, which will not be modified during or after project construction. Species that use the corridor are already adapted to the urban environment and are not likely to become deterred from doing so after the stadium is built, due to the existing cover provided by the trees and shrubs that grow along the creek. As long as adequate setbacks and other development guidelines from the City's *Riparian Corridor Policy Study*[21] are incorporated into the project design, construction of the stadium should not impede wildlife use of the Los Gatos Creek corridor.

Potential adverse impacts on the water quality and aquatic wildlife (e.g., salmonids) of Los Gatos Creek would be avoided through contractor implementation of Best Management Practices (BMPs) during project construction. Mitigation Measure HYD-2, includes a discussion of the City of San Jose's Post Construction Urban Runoff Management Policy which implements BMS, as well as Treatment Control Measures (TCMs) and requires the preparation of a Storm Water Pollution Prevention Program. Examples of erosion control measures that may be used include straw wattles, bales, and/or silt fencing to prevent sediment and construction-related runoff from entering the creek. All BMPs will be designed to the maximum extent practicable treatment standards under the applicable National Pollution Discharge Elimination System (NPDES) permit. (See Chapter V.H., Hydrology and Water Quality, for detailed evaluation of potential water quality impacts.)

The proposed project includes an average 50-foot setback from the top of bank of Los Gatos Creek for any roadways or structures. Riparian-type landscaping would be planted in the area. A portion of Reach 5 of the Los Gatos Creek trail would be located within the stadium project area. The trail project is independent of the stadium project, but would utilize the riparian setback areas resulting from the removal of the commercial buildings and parking lots east of S. Autumn Street and from the development of the Fire Training Facility site. The trail will consist of a Class 1, 12-foot-wide paved path, with 2-foot-wide compacted base rock shoulders on each side where space allows. The proposed trail project would improve the environment of the riparian corridor over its existing condition.

[21] The Habitat Restoration Group and Jones and Stokes Associates, Inc., 1999, op. cit.

The City of San Jose would apply for a permit from the Santa Clara Valley Water District for any work within 50 feet of Los Gatos Creek top of bank.

c. Significant Biological Resources Impacts. This section describes potential impacts to biological resources that are likely to occur within the project area or in the Los Gatos Creek corridor. Two such impacts are set forth below.

Impact BIO-1: Construction of the proposed project would result in the removal of 45 ordinance-size trees. (S)

All of the 45 ordinance-sized trees in the project area are listed for removal.

> Mitigation Measure BIO-1: Loss of ordinance size trees will be mitigated by implementation of landscaping plans approved by the City of San Jose, in conformance with the City of San Jose Landscape and Irrigation Guidelines and City of San Jose Planning Department specifications. For private projects, the City of San Jose requires tree replacement for those trees greater than 18 inches in diameter with 24-inch box trees at a ratio of 4:1 (trees planted to trees removed). Trees planted within the riparian corridor shall be native trees grown from Los Gatos Creek watershed stock. As a City proposed project, the City would commit to meeting the tree replacement ratio, but given the footprint of redevelopment on the site, replacement trees may be planted beyond the project site in the project area. (LTS)

Impact BIO-2: Construction activities adjacent to the Los Gatos Creek riparian corridor may disturb nesting Cooper's hawks and other raptors. (S)

The numerous tall cottonwoods along Los Gatos Creek provide suitable nest sites for Cooper's hawks and other raptors such as red-shouldered hawk. Although none of the trees will be removed during construction of the stadium, construction activities adjacent to the riparian corridor (i.e., demolition of existing buildings, construction of new facilities) could disturb nesting pairs, causing nest abandonment, loss of young, or reduced nesting success.

> Mitigation Measure BIO-2: Surveys to determine the presence of active raptor nests on or adjacent to (i.e., along Los Gatos Creek) to the construction area shall be conducted by a qualified biologist no more than 30 days prior to the initiation of construction-related activities, including removal of existing vegetation or facilities. If raptors are observed nesting on or near the site, exclusion zones will be established around all active nests. The size of the exclusion zone will be determined based on consultation with the CDFG, which typically requires a zone of 100 to 300 feet around the nest. No activity will be allowed inside the exclusion zone until a qualified biologist has determined that the young have successfully fledged from the nest or that the nest is no longer active. (LTS)

G. GEOLOGY, SOILS AND SEISMICITY

This section describes the project area geologic environment based on a site reconnaissance, published and unpublished geologic reports and maps, and site-specific technical reports. This section also assesses potential impacts from seismically-induced fault rupture, strong ground shaking, liquefaction, slope failure, lateral slope deformation, differential settlement and unstable or expansive soils. Mitigation measures for the identified significant impacts are provided, as appropriate.

1. Setting

This subsection describes the existing geologic and seismic conditions of the project and the vicinity and associated hazards.

a. Geologic Conditions. The geology, topography and soils of the project site and vicinity are described below.

(1) Geology. The project site is located at the western coastal margin of the Coast Range Geomorphic Province of Northern California, a relatively geologically young and seismically-active region on the western margin of the North American plate.[1] More specifically, the site is located at the northern end of the Santa Clara Valley, an alluvial valley and plain developed along the Guadalupe River. The project site is underlain by Quaternary-aged sand, gravel, silt, and mud.[2] A 2005 geotechnical feasibility study, prepared for the project site indicates that, in general, the midtown/downtown portion of San Jose is underlain by 20 to 25 feet of unconsolidated, moderately compressible, alluvial soils consisting of soft to stiff silts and clays and loose to dense sands.[3]

(2) Topography. The approximately 23.1-acre project site is located within a relatively flat urbanized area. The existing ground surface elevation varies from about 100 feet above mean sea level (amsl) to about 90 feet amsl.[4] No open creek or stream channels cross the site; however, Los Gatos Creek flows along the eastern project site boundary. The bottom of the creek channel is approximately 20 to 25 feet below the existing grade of the project site. The western bank has a slope of about 2:1 (horizontal to vertical).[5]

(3) Soils. Surface soils at the project site are mapped by the Natural Resource Conservation Service (formerly the Soil Conservation Service)[6] as soils of the Yolo Association. The Yolo association soils are characterized as well drained, medium and moderately fine textured soils developed in medium textured sedimentary alluvium. Yolo association soils have moderate to high shrink/swell potential, low to moderate corrosivity and fair strength.

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[1] California Geographic Survey (CGS), 2002, California Geomorphic Provinces, Note 36.

[2] Wentworth, C.M., 1997. Geologic Materials of the San Francisco Bay Region, United States Geological Survey (USGS) Open File Report 97-744.

[3] Lowney Associates, 2005. Geotechnical Feasibility Consultation San Jose Ballpark, Park Avenue and Autumn Streets, San Jose California, Report No. 2184-1G, prepared for: the Redevelopment Agency of The City of San Jose, December 7

[4] California Division of Mines and Geology (CDMG), 2002. Seismic Hazard Zones, San Jose West Quadrangle Map.

[5] Lowney Associates, 2005, op. cit.

[6] U.S. Department of Agriculture (USDA), 1968, Soils of Santa Clara County, Soil Conservation Service.

The geotechnical feasibility study (based on data reviewed from six previous investigations located within ½ mile of the project) indicates that subsurface conditions in the area consist of about 20 feet of interbedded layers of medium stiff to stiff clays and silts and loose to medium dense sands and gravels. Based on plasticity index testing at these former sites, it is anticipated that the project site will contain low to moderate plastic soils with a low to moderate expansion potential.[7] At the nearby site of the San Jose Diridon Light Rail Station, subsurface conditions were reported to consist of firm to stiff sandy lean clay with sand layers and lenses in the upper 35 feet overlying stiff sandy clay and dense to very dense sand layers through the depth drilled of about 100 feet.[8]

b. Seismic Conditions. Regional seismicity and site specific seismicity are described below.

(1) Regional Seismicity. The entire San Francisco Bay Area is located within the San Andreas Fault Zone (SAFZ), a complex of active faults forming the boundary between the North American and Pacific lithospheric plates. Movement of the plates relative to one another results in the accumulation of strain along the faults, which is released during earthquakes. Numerous moderate to strong historic earthquakes have been generated in northern California by the SAFZ. The level of active seismicity results in classification of the area of seismic risk Zone 4 (the highest risk category) in the California Building Code.

The SAFZ includes numerous active faults found by the California Geological Survey under the Alquist-Priolo Earthquake Fault Zoning Act (A-PEFZA) to be "active" (i.e., to have evidence of fault rupture in the past 11,000 years). The primary faults within the zone are the San Andreas, Hayward-Rodgers Creek, Calaveras, and San Gregorio faults. Regional active faults are shown on Figure V.G-1. There are no known active faults crossing the project site.[9]

The U.S. Geological Survey's Working Group on California Earthquake Probabilities estimated that there is a 62 percent probability that one or more Moment Magnitude (M_w) 6.7[10] or greater earthquakes will occur in the San Francisco Bay Area between 2002 and 2031.[11] The probability of a M_W 6.7 magnitude or greater earthquake occurring along individual faults was estimated to be 21 percent along the San Andreas Fault, 27 percent along the Hayward Fault, eleven percent along the Calaveras Fault, four percent along the Concord Fault, and three percent on the Greenville (Clayton/Marsh Creek) Fault. When predictions are expanded to 100 years it is estimated that about three M_W6.7 or greater events could occur during that time. Thus the probability of at least one M_W6.7 or greater magnitude earthquake rises to the near certainty of about 96 percent when calculated for a 100-year span.[12]

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[7] Lowney Associates, 2005, op. cit.

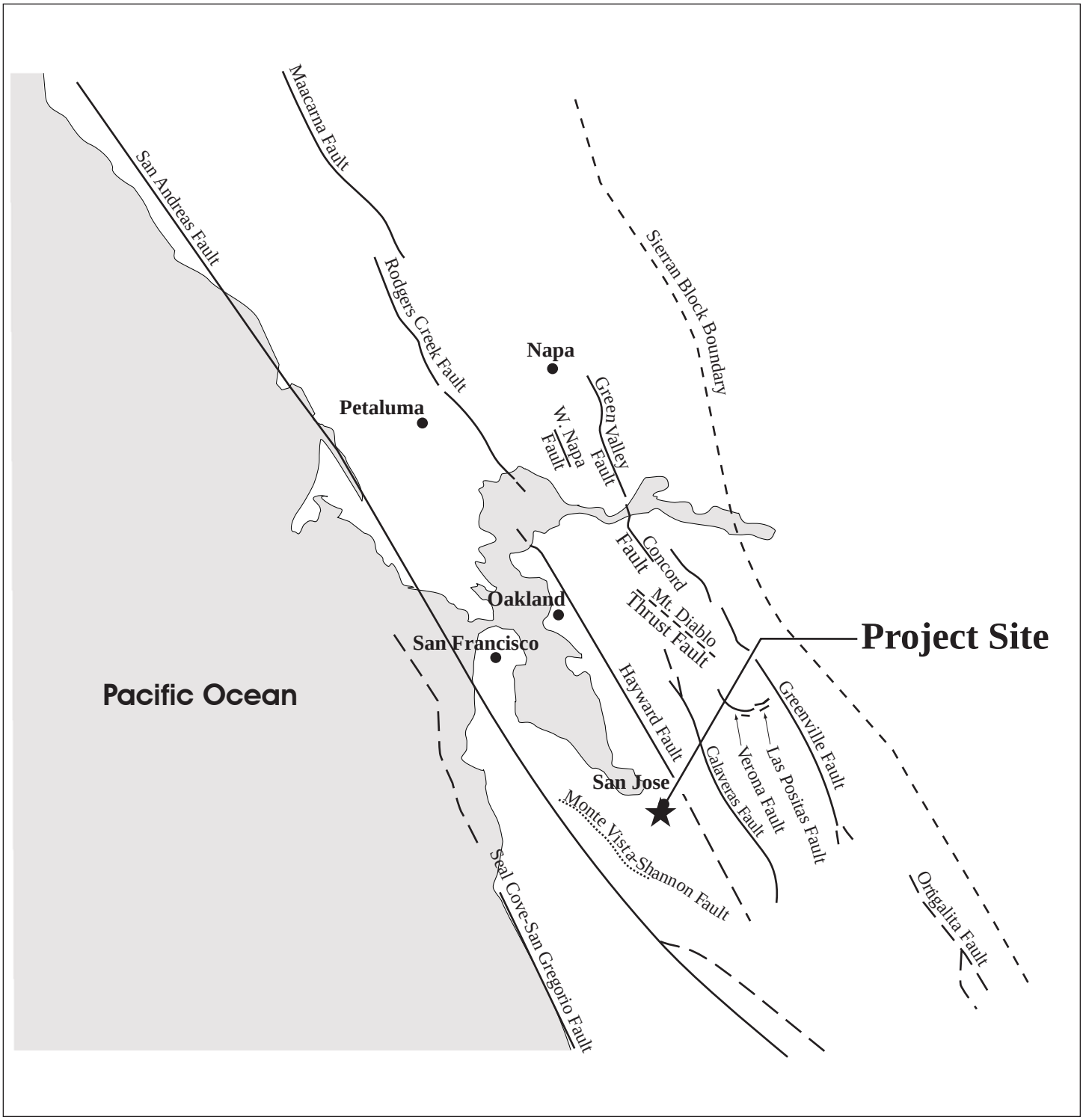
[8] Parikh Consultants, Inc., 2000. *Geotechnical Engineering Investigation Report, Diridon LRT Subway Structure*, Job No. 98168.10, March.

[9] City of San Jose, 1983. *Fault Hazard Map, San Jose West Quadrangle.*

[10] Moment magnitude (M_W) is now commonly used to characterize seismic events as opposed to Richter Magnitude. Moment magnitude is determined from the physical size (area) of the rupture of the fault plane, the amount of horizontal and/or vertical displacement along the fault plane, and the resistance to rupture of the rock type along the fault. Therefore, the magnitudes of expected earthquakes in the San Francisco Bay Area are reported as moment magnitude.

[11] USGS, 2003. *Earthquake Probabilities in the San Francisco Bay Region: 2002 to 2031 – A Summary of Findings*, Open File Report 03-214.

[12] Ibid.



LSA

FIGURE V.G-1

Legend

Active Fault - Fault has evidence of surface displacement within the past 11,000 years (dashed where inferred)

Potentially Active Fault - Fault has evidence of surface displacement in the past 1.6 million years, but not within the past 11,000 years

Seismic Source without Surface Rupture

N

0 20
MILES

Baseball Stadium in the Diridon/Arena Area

Regional Faults

SOURCE: LSA ASSOCIATES, INC., 2002.

I:\SJO530 ballpark\figures\Fig_VG1.ai (12/19/05)

(2) Site-Specific Seismicity. The project site is about 11 miles northeast of the San Andreas A-PEFZA fault zone[13] and about 6 miles southwest of the southern Hayward A-PEFZA fault zone.[14] Both faults are right lateral strike-slip faults with a northwest-southeast axis.[15] The site is not within an Alquist-Priolo Earthquake Fault Zone or a City of San Jose Potential Fault Hazard Zone[16]; however, it is located within a California Department of Conservation Seismic Hazard Zone as defined by the Seismic Hazards Mapping Act. Specifically, the project site falls within a liquefaction hazard zone.[17]

c. Seismic and Geologic Hazards. Seismic and geologic hazards, including surface rupture, ground shaking, peak acceleration, liquefaction and lateral spreading, expansive soils, slope stability, and settlement and differential settlement are discussed below.

(1) Surface Rupture. Surface rupture occurs when the ground surface is broken due to fault movement during an earthquake. The location of surface rupture generally can be assumed to be along an active or potentially active major fault trace. No active faults have been mapped at the project site. Therefore, potential for fault rupture at the site is negligible, and no portion of the site is located within an Alquist-Priolo Earthquake Fault Zone.

The closest active fault to the project site is the Hayward fault zone, located approximately 6 miles to the northeast. Other potentially damaging faults are located within 10 miles of the project site, including the Calaveras and Monte Vista-Shannon faults. The Calaveras fault is listed by A-PEFZA and is about 10 miles east of the site. The Monte Vista-Shannon fault is about 8 miles southwest of the project site and is considered a 'potentially active' fault that has not been active in the last 11,000 years.

(2) Ground Shaking. Ground shaking is a general term referring to all aspects of motion of the earth's surface resulting from an earthquake, and is normally the major cause of damage in seismic events. The extent of ground shaking is controlled by the magnitude and intensity of the earthquake, distance from the epicenter, and local geologic conditions. The Modified Mercalli Intensity Scale (MMI) is the most commonly used scale for measurement of the subjective effects of earthquake intensity (see Table V.G-1 for detailed descriptions of MMI levels). A related concept, acceleration, is measured as a fraction or percentage of the acceleration under gravity (g).

The repeat of the 1906 San Andreas quake is considered capable of generating about an M_w7.9 maximum earthquake.[18] An earthquake of this magnitude on the Hayward fault would generate very strong seismic shaking (MMI VIII) at the project site.

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[13] California Division of Mines and Geology (CDMG), 1974. *Special Studies Zone Map of the Cupertino Quadrangle.*

[14] California Division of Mines and Geology (CDMG), 1982. *Special Studies Zone Map of the San Jose East Quadrangle.*

[15] Right-lateral: if the trace of the fault were viewed while standing on one side during an event, it would appear that the ground on the other side of the fault moved to the right. Strike-slip: the sides are moving laterally relative to each other with little or no vertical movement.

[16] City of San Jose, 1983, op. cit.

[17] California Department of Conservation (CDC), 2002. *Seismic Hazard Zones Map, San Jose West Quadrangle.*

[18] ABAG, 2005. *Earthquake Shaking Scenario Map*, http://www.abag.ca.gov/bayarea/eqmaps/mapsba.html.

Table V.G-1: Modified Mercalli Scale

I	Not felt except by a very few under especially favorable circumstances.
II	Felt only by a few persons at rest, especially on upper floors of buildings. Delicately suspended objects may swing.
III	Felt quite noticeably indoors, especially on upper floors of buildings, but many people do not recognize it as an earthquake. Standing motor cars may rock slightly. Vibration like passing of truck. Duration estimated.
IV	During the day felt indoors by many, outdoors by few. At night some awakened. Dishes, windows, doors disturbed; walls make cracking sound. Sensation like heavy truck striking building. Standing motor cars rocked noticeably.
V	Felt by nearly everyone, many awakened. Some dishes, windows, etc., broken; a few instances of cracked plaster; unstable objects overturned. Disturbances of trees, poles, and other tall objects sometimes noticed. Pendulum clocks may stop.
VI	Felt by all, many frightened and run outdoors. Some heavy furniture moved; a few instances of fallen plaster or damaged chimneys. Damage slight.
VII	Everybody runs outdoors. Damage negligible in building of good design and construction; slight to moderate in well-built ordinary structures; considerable in poorly built or badly designed structures; some chimneys broken. Noticed by persons driving motor cars.
VIII	Damage slight in specially designed structures; considerable in ordinary substantial buildings, with partial collapse; great in poorly built structures. Panel walls thrown out of frame structures. Fall of chimneys, factory stacks, columns, monuments, walls. Heavy furniture overturned. Sand and mud ejected in small amounts. Changes in well water. Persons driving motor cars disturbed.
IX	Damage considerable in specially designed structures; well-designed frame structures thrown out of plumb; great in substantial buildings, with partial collapse. Buildings shifted off foundations. Ground cracked conspicuously. Underground pipes broken.
X	Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundations; ground badly cracked. Rails bent. Landslides considerable from river banks and steep slopes. Shifted sand and mud. Water splashed (slopped) over banks.
XI	Few, if any, (masonry) structures remain standing. Bridges destroyed. Board fissures in ground. Underground pipelines completely out of service. Earth slumps and land slips in soft ground. Rails bent greatly.
XII	Damage total. Practically all works of construction are damaged greatly or destroyed. Waves seen on ground surface. Lines of sight and level are distorted.

Source: California Geological Survey, 2002, How Earthquakes and Their Effects are Measured, Note 32. April.

(3) Peak Acceleration. Estimates of the peak ground acceleration have been made for the Bay Area based on probabilistic models that account for multiple seismic sources. Under these models, consideration of the probability of expected seismic events is incorporated into the determination of the level of ground shaking at a particular location. The expected peak horizontal acceleration (with a ten percent chance of being exceeded in the next 50 years) generated by any of the seismic sources potentially affecting the project area, including the project site, is estimated by the California Geological Survey as 0.482.[19] This level of ground acceleration at the project site is a potentially significant hazard.

(4) Liquefaction and Lateral Spreading. Liquefaction is the temporary transformation of loose, saturated granular sediments from a solid state to a liquefied state as a result of seismic ground shaking. In the process, the soil undergoes transient loss of strength, which commonly causes ground

[19] California Geological Survey (CGS), 2005. *Probabilistic Seismic Hazards Mapping Ground Motion Page*, accessed 12/6/2005, www.consrv.ca.gov/cgs/rghm/pshamap/pshamain.html.

displacement or ground failure to occur. Since saturated soils are a necessary condition for liquefaction, soil layers in areas where the groundwater table is near the surface have a higher liquefaction potential than those in which the water table is located at greater depths.

As mentioned above, the project is located within a State of California-defined Liquefaction Hazard Zone, and is rated as a moderate liquefaction hazard area by Association of Bay Area Governments (ABAG) studies.[20]

Lateral spreading is a form of horizontal displacement of soil toward an open channel or other "free" face, such as an excavation boundary. Lateral spreading can result from either the slump of low cohesion unconsolidated material or more commonly by liquefaction of either the soil layer or a subsurface layer underlying soil material on a slope.[21] Earthquake shaking leading to liquefaction of saturated soil can result in lateral spreading where the soil undergoes a temporary loss of strength.

The lateral spreading hazard will tend to mirror the liquefaction hazard for the project, and by definition needs an open channel or "free" face to expand into; one example of such a condition would be the temporary excavations resulting from the construction process. Regional mapping provided by ABAG indicates the risk of liquefaction for the general area of the project to be moderate. Therefore, the risk of lateral spreading is considered to be moderate unless site-specific investigations determine otherwise.[22]

(5) Expansive Soils. Expansion and contraction of volume can occur when expansive soils undergo alternating cycles of wetting (swelling) and drying (shrinking). During these cycles, the volume of the soil changes markedly. As a consequence of such volume changes, structural damage to building and infrastructure may occur if the potentially expansive soils were not considered in project design and during construction.

Alluvium, of the type that generally characterizes the site and vicinity, can develop into compressible or expansive soils. Regional mapping indicates the risk of expansive soils for the area of the project to be moderate to high. Therefore, the risk of expansive soils in the project site should be considered to be moderate to high unless site-specific investigations determine otherwise. [23]

(6) Slope Stability. Slope failure can occur as either rapid movement of large masses of soil ("landslide") or slow, continuous movement ("creep"). The primary factors influencing the stability of a slope are: 1) the nature of the underlying soil or bedrock; 2) the geometry of the slope (height and steepness); 3) rainfall; and 4) the presence of previous landslide deposits.

Regional mapping shows that the project and surrounding area is mapped as Category 1, stable areas of zero to 5 percent slope that are not underlain by landslide deposits.[24]

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[20] ABAG, 2003. *Liquefaction Hazard Map for San Jose, Scenario: Entire San Andreas, Magnitude 7.9 Earthquake,* accessed 12/13/05 www.abag.ca.gov/cgi-bin/pickmapliq.pl.

[21] Rauch, Alan F., 1997. EPOLLS: An Empirical Method for Predicting Surface Displacements due to Liquefaction-Induced Lateral Spreading in Earthquakes, Ph. D. Dissertation, Virginia Tech, Blacksburg, VA.

[22] ABAG, 2003, op. cit.

[23] USDA, 1968, op. cit.

[24] USGS, 1970. *Regional Slope Stability Map of the Southern San Francisco Bay Region.*

(7) Settlement and Differential Settlement. Differential settlement or subsidence could occur if buildings or other improvements were built on low-strength foundation materials (including imported fill) or if improvements straddle the boundary between different types of subsurface materials (e.g., a boundary between native material and fill). Although differential settlement generally occurs slowly enough that its effects are not dangerous to inhabitants, it can cause significant building damage over time. Portions of the project site that contain loose or uncontrolled (non-engineered) fill may be susceptible to differential settlement. The area of the project site has undergone several development cycles since the 1880's, and the possibility of casual or non-engineered fill being present on the site exists, as documented in the series of Phase I Site Assessments prepared for project area parcels.[25,26,27,28,29,30,31]

d. San Jose 2020 General Plan Goals and Policies.[32] Applicable Goals and Policies from the City's General Plan are presented below.

Hazards

- *Hazards Goal:* Strive to protect the community from injury and damage resulting from natural catastrophes and other hazard conditions.
  - *Hazards Policy 1:* Development should only be permitted in those areas where potential danger to the health, safety, and welfare of the residents of the community can be mitigated to an acceptable level.
  - *Hazards Policy 2:* Levels of "acceptable exposure to risk" established for land uses and structures based on descriptions of land use groups and risk exposure levels are outlined in Figure 15, "Acceptable Exposure to Risk Related to Various Land Uses," of the San Jose General Plan 2020 and should be considered in the development review process.
  - *Hazards Policy 3:* Provisions should be made to continue essential emergency public services during natural catastrophes.
- *Soils and Geologic Conditions Goal:* Protect the community from the hazards of soil erosion, soil contamination, weak and expansive soils and geologic instability.
  - *Soils and Geologic Conditions Policy 1:* The City should require soils and geologic review of development proposals to assess such hazards as potential seismic hazards, surface ruptures, liquefaction, land-sliding, mud-sliding, erosion, and sedimentation in order to determine if these hazards can be adequately mitigated.
  - *Soils and Geologic Conditions Policy 4:* In order to prevent undue erosion of creek banks, the City should seek to retain creek channels in their natural state, where appropriate.

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[25] Lowney Associates, 2005. *Phase I Site Assessment (Draft), 102 South Montgomery and 530 West San Fernando Streets, San Jose, California* for the Redevelopment Agency of the City of San Jose, Project No. 2184-1D, October.

[26] Lowney Associates, 2005. *Phase I Site Assessment (Draft), 150 South Autumn Street, San Jose, California* for the Redevelopment Agency of the City of San Jose, Project No. 2184-1F, October.

[27] Lowney Associates, 2005, *Phase I Site Assessment (Draft), 170 South Autumn Street, San Jose, California* for the Redevelopment Agency of the City of San Jose, Project No. 2184-1F, October.

[28] Lowney Associates, 2005. *Phase I Site Assessment (Draft), 645 Park Avenue, San Jose, California* for the Redevelopment Agency of the City of San Jose, Project No. 2184-1D, October.

[29] Lowney Associates, 2005. *Phase I Site Assessment (Draft), 150 South Montgomery Street, San Jose, California* for the Redevelopment Agency of the City of San Jose, Project No. 2184-1D, October.

[30] Lowney Associates, 2005. *Phase I Site Assessment (Draft), 105 South Montgomery Street, San Jose, California* for the Redevelopment Agency of the City of San Jose, Project No. 2184-1D, October.

[31] Lowney Associates, 2005. *Phase I Site Assessment (Draft), 510 West San Fernando Street and 115 South Autumn Street, San Jose, California* for the Redevelopment Agency of the City of San Jose, Project No. 2184-1D, October.

[32] City of San Jose, California, 2005. General Plan 2020, accessed 12/13/05 www.sanjoseca.gov/planning/.

- *Soils and Geologic Conditions Policy 6:* Development in areas subject to soils and geologic hazards should incorporate adequate mitigation measures.
- *Soils and Geologic Conditions Policy 8:* Development proposed within areas of potential geological hazards should not be endangered by, nor contribute to, the hazardous conditions on the site or on adjoining properties.

- *Earthquakes Goal:* Minimize the risk from exposure to seismic activity.
  - *Earthquakes Policy 1:* The City should require that all new buildings be designed and constructed to resist stresses produced by earthquakes.
  - *Earthquakes Policy 2:* The City should foster the rehabilitation or elimination of structures susceptible to collapse or failure in an earthquake.
  - *Earthquakes Policy 3:* The City should only approve new development in areas of identified seismic hazard if such hazard can be appropriately mitigated.
  - *Earthquakes Policy 4:* The location of public utilities and facilities, in areas where seismic activity could produce liquefaction should only be allowed if adequate mitigation measures can be incorporated into the project.
  - *Earthquakes Policy 5:* The City should continue to require geotechnical studies for development proposals; such studies should determine the actual extent of seismic hazards, optimum location for structures, the advisability of special structural requirements, and the feasibility and desirability of a proposed facility in a specified location.
  - *Earthquakes Policy 6:* Vital public utilities as well as communication and transportation facilities should be located and constructed in a way which maximizes their potential to remain functional during and after an earthquake.

2. Impacts and Mitigation Measures

a. Criteria of Significance. The project would have a significant geology, soils, or seismicity impact if it would:

- Expose people or structures to substantial risk of loss, injury, or death involving:
  - Rupture of a known active or potentially active earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area, or based on other substantial evidence of a known fault;
  - Strong seismic ground shaking;
  - Seismic-related ground failure, including liquefaction; or
  - Landslides.
- Result in substantial soil erosion or loss of topsoil.
- Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in an on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.
- Be located on expansive soils (as defined in Table 18-1-B of the 1994 Uniform Building Code) or corrosive soils, which could cause substantial damage to building foundations, pavements, utilities, and/or other improvements.

b. Less-than-Significant Geology, Soils and Seismicity Impacts. The proposed project is not located on an unstable geologic unit, the development of which would be subject to, or contribute to, on- or off-site fault rupture, landslide, lateral spreading, or subsidence. Potential impacts associated with erosion and loss of topsoil is discussed in Section V.H., Hydrology and Water Quality.

c. Significant Geology, Soils and Seismicity Impacts. The following four significant impacts associated with the project have been identified.

Impact GEO-1: Seismically-induced ground shaking at the project could result in damage to life and/or property. (S)

All structures in the Bay Area could potentially be affected by ground shaking in the event of an earthquake. The amount of ground shaking depends on the magnitude of the earthquake, the distance from the epicenter, and the type of earth materials in between. Very strong to violent ground shaking is expected at the project site during expected earthquakes on the San Andreas and other regional faults. This level of seismic shaking could cause extensive non-structural damage in buildings at the site. In addition, limited structural damage may occur.

> Mitigation Measure GEO-1: Prior to the issuance of any site-specific grading or building permits, a design-level geotechnical investigation shall be prepared by a licensed professional and submitted to the City of San Jose Public Works Department for review and confirmation that the proposed development fully complies with the California Building Code (Seismic Zone 4). The report shall determine the project site's geotechnical conditions and address potential seismic hazards such as liquefaction. The report shall identify building techniques appropriate to minimize seismic damage. In addition, the following requirement for the geotechnical and soils report shall be met:
>
> - Analysis presented in the geotechnical report shall conform with the California Division of Mines and Geology recommendations presented in the *Guidelines for Evaluating Seismic Hazards in California*.[33]
>
> All mitigation measures, design criteria, and specifications set forth in the geotechnical and soils report shall be followed. (LTS)

It is acknowledged that seismic hazards cannot be completely eliminated even with site-specific geotechnical investigation and advanced building practices (as provided in the mitigation measure above). However, exposure to seismic hazards is a generally accepted part of living in the San Francisco Bay Area and therefore the mitigation measure described above reduces the potential hazards associated with seismic activity to a less-than-significant level.

Impact GEO-2: Structures or property at the project could be adversely affected by expansive soils or by settlement of project site soils. (S)

Soils underlying portions of the project site have moderate to high shrink/swell potential.[34] This condition could significantly damage structures and utilities. In addition, non-uniformly compacted imported fill placed at the site could experience settlement under new structural loads. Structural damage, warping, and cracking of roads and other infrastructure, and rupture of utility lines may also occur if the potential expansive soils and the nature of the imported fill were not considered during design and construction of improvements.

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[33] California Division of Mines and Geology (CDMG), 1997. *Guidelines for Evaluating Seismic Hazards in California*, CDMG Special Publication 117, 74 p.

[34] U.S. Department of Agriculture, 1968. *Soils of Santa Clara County*.

Mitigation Measure GEO-2: In locations underlain by expansive soils and/or non-engineered fill, the designers of stadium foundation and other improvements (including the electrical substation, sidewalks, roads, and underground utilities) shall consider these conditions. The design-level geotechnical investigation to be prepared by a licensed professional and approved by the City of San Jose Public Works Department (required in Mitigation Measure GEO-1), shall include measures to minimize potential damage related to expansive soils and non-uniformly compacted fill. Mitigation options may range from removal of the problematic soils and replacement, as needed, with properly conditioned and compacted fill to design and construction of improvements to withstand the forces exerted during the expected shrink-swell cycles and settlement.

All mitigation measures, design criteria, and specifications set forth in the geotechnical and soils report shall be followed to reduce impacts associated with shrink-swell soils to a less-than-significant level. (LTS)

Impact GEO-3: Differential settlement at the project site could result in damage to project buildings and other improvements. (S)

Grading of the project site in preparation for construction of buildings and utilities would result in areas of cut and fill. Fills of different thickness and fills adjacent to cut areas where native soils are exposed at the surface could create the potential for differential settlement. If the settlement is not uniform, structural damage could occur. Buried utilities may also experience differential settlement along their alignments.

Uncompacted and loose fill and existing casual and historic fill will be subject to varying rates of compaction and settlement compared to the native undisturbed soil. Structures built over discontinuous materials of varying densities and compactness may be subject to stress or damage due to differential settlement.

Mitigation Measure GEO-3: Prior to issuance of a grading permit, a site-specific grading plan shall be prepared by a licensed professional and submitted to the City of San Jose Public Works Department (see Mitigation Measure GEO-1). The plan shall include specific recommendations for mitigating potential settlement associated with fill placement and areas of different fill thickness. (LTS)

Impact GEO-4: Liquefaction at the project site could result in damage to buildings and other improvements. (S)

Regional mapping by ABAG indicates moderate to high susceptibility to liquefaction across the project site. Adverse effects of liquefaction can take many forms including flow failures, lateral spreads, ground oscillation, loss of bearing strength, settlement, and increased lateral pressure on retaining walls.[35] When the soil supporting a building or other structure liquefies and loses strength, large deformations can occur within the soil that may allow the structure to settle and tip; smaller settle-

[35] Earthquake Engineering Research Institute (EERI), 1994. *Earthquake Basics: Liquefaction – What is it and what to do about it.* Accessed at http://www.eeri.org on October 20, 2005.

ments may also occur as soil pore-water pressures dissipate and the soil consolidates after the earthquake.[36]

> Mitigation Measure GEO-4: Project design shall be in accordance with the recommendations contained in a site-specific geotechnical report prepared by a licensed professional and reviewed and approved by City of San Jose Public Works Department. (see Mitigation Measure GEO-1). The San Jose Public Works Department shall approve all final design and engineering plans. Project design and construction shall be in conformance with current best standards for earthquake resistant construction in accordance with the California Building Code (Seismic Zone 4), applicable local codes, and the generally-accepted standard of geotechnical practice for seismic design in Northern California. The design-level geotechnical investigation shall include measures to minimize that potential damage related to liquefaction. (LTS)

[36] The California Public Resources Code states that cities and counties shall require a geotechnical report defining and delineating any seismic hazards prior to approval of a project located in a seismic hazard zone.

H. HYDROLOGY AND WATER QUALITY

This section describes the existing hydrological setting for the project site, including runoff, drainage, and water quality based on available information from published and unpublished reports, internet sources and a reconnaissance of the site conducted in November 2005. This section also identifies impacts that may result from project development, and suggests mitigation measures to reduce potential impacts.

1. Setting

A description of the existing conditions related to hydrology and water quality is provided below.

a. Climate. The climate of the San Jose area is characterized as dry-summer subtropical (often referred to as Mediterranean), with cool wet winters and relatively warmer dry summers. The mean annual rainfall in the vicinity of the project site, for the period between 1948 and 2005, is approximately 14.6 inches.[1] Analysis of long-term precipitation records indicates that wetter and drier cycles lasting several years are common in the region. Severe, damaging rainstorms occur at a frequency of about once every three years.[2]

b. Runoff and Drainage. There are no creeks or streams crossing the project site. Los Gatos Creek, a tributary to the Guadalupe River, flows along the eastern project site boundary. In the vicinity of the site, the bottom of the Los Gatos Creek channel is about 20 to 25 feet below the adjacent grade.[3] The site, which is located within an urbanized area, is relatively flat (at an elevation of approximately 100 to 110 feet above mean sea level (amsl))[4] and largely covered with impervious surfaces (pavement and compacted soil and gravel). Most of the rainfall at the site encounters the impervious surfaces and flows overland into the City-maintained storm drain system. The project site is served by two main storm sewer networks, both of which discharge directly to Los Gatos Creek east of the site.[5] The northern portion of the site is drained by pipes under S. Montgomery Street and W. San Fernando Street. At the Los Gatos Creek outfall, this drainage pipe is 18 inches in diameter. The southern portion of the site is drained by underground pipes in the vicinity of Park Avenue. At the Los Gatos Creek outfall, this drainage pipe is 48 inches in diameter.

c. Flooding. The portion of the project site proposed for development is not located within the 100-year flood hazard zone, as mapped by FEMA.[6] This designation indicates that the site would not be expected to be inundated by flood waters, even in an extreme storm event.

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[1] Western Regional Climate Center, 2005. Website: http://www.wrcc.dri.edu/elimsmsfo.html.

[2] Brown, William M. III, 1988, Historical Setting of the Storm: Perspectives on Population, Development, and Damaging Rainstorms in the San Francisco Bay Region, in Landslides, Floods, and Marine Effects of the Storm of January 3-5, 1982, in the San Francisco Bay Region, California, Stephen D. Ellen and Gerald F. Wieczorek, Eds., U.S. Geological Survey Professional Paper 1434.

[3] Lowney Associates, 2005. Geotechnical Feasibility Consultation, San Jose Ballpark, Park Avenue and Autumn Street, San Jose, California. December 7.

[4] United States Geological Survey, 1980. San Jose West Topographic Quadrangle, 7.5-minute Series.

[5] City of San Jose, Department of Public Works, 2002. Storm Drain System, maps 83A and 83C, revision date November 1.

[6] Federal Emergency Management Agency, 1982 (revised to reflect LOMR October 6, 2005). Flood Insurance Rate Map (FIRM), City of San Jose, California, Community Panel Number 060349 0025 D. August 2.

The project site could be impacted if one or more of the several dams in the vicinity were to fail catastrophically. Catastrophic structural dam failure can be caused by an earthquake or overflow. The dams include Lexington (renamed James H. Lenihan Dam at Lexington Reservoir in 1996) and Leroy Anderson. Each of these dams is under the jurisdiction of the California Department of Water Resources, Division of Safety of Dams (DWR). Existing dams under DWR's jurisdiction are periodically inspected to assure that they are adequately maintained and to direct the owner to correct any identified deficiencies. Regular inspections and required maintenance of the dams substantially reduces the potential for catastrophic failure. Dam failure inundation hazard maps for this area can be viewed at the Association of Bay Area Governments website.

The location of the project site (more than 10 miles from the southern portion of the San Francisco Bay) and the elevation of the site (greater than 100 feet amsl) preclude exposure of the site to coastal hazards, such as tsunamis, extreme high tides, or sea level rise.

d. Water Quality. The quality of surface water and groundwater in the vicinity of the project site is affected by past and current land uses at the site and within the watershed as well as the composition of geologic materials in the vicinity. Water quality in surface and groundwater bodies is regulated by the State Water Resources Control Board and Regional Water Quality Control Boards. The project site is under the jurisdiction of the San Francisco Bay Regional Water Quality Control Board (RWQCB), which is responsible for implementation of state and federal water quality protection regulations and guidelines in the Bay Area. The RWQCB implements the Water Quality Control Plan (Basin Plan), a master policy document for managing water quality issues in the region. The Basin Plan establishes beneficial water uses for waterways and water bodies within the region.

(1) Water Quality Regulatory Setting. Runoff water quality is regulated by the National Pollutant Discharge Elimination System (NPDES) Nonpoint Source Program (established through the Clean Water Act); the NPDES program objective is to control and reduce pollutants to water bodies from nonpoint discharges. Locally, the NPDES program is administered by the RWQCB. The RWQCB has conveyed responsibility for implementation of storm water regulations in the vicinity of the project site to the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP). The SCVURPPP maintains compliance with the NPDES Permit and promotes storm water pollution prevention within that context. Compliance with the NPDES Permit is mandated by state and federal statutes and regulations.

Participating agencies (including the City of San Jose) must comply with the provisions of the County permit by ensuring that new development and redevelopment mitigate water quality impacts to storm water runoff both during the construction and operation of projects. Recent changes to the permit held by the SCVURPPP are detailed in RWQCB Order 01-024 (NPDES Permit No. CAS029718).

New development and significant redevelopment projects that are subject to Provision C.3 of the RWQCB order are grouped into two categories based on project size. While all projects regardless of size should consider incorporating appropriate source control and site design measures that minimize storm water pollutant discharges to the maximum extent practicable, new and redevelopment projects that do not fall into Group 1 or Group 2 are not subject to the requirements of Provision C.3. The general criteria for establishing whether a project is a Group 1 or Group 2 project is presented below [for a detailed definition, refer to the County NPDES permit (No. CAS029718)]:

Group 1:	New development and redevelopment projects that would create or replace more than 1 acre of impervious surface (e.g., roof area, streets, sidewalks, parking lots).
Group 2:	New development and redevelopment projects that would create or replace more than 10,000 square feet of impervious surface. Projects consisting of one single-family home are excluded from Group 2.

The proposed project would be considered a Group 1 project, and would be required to meet all the terms of the permit, including (but not limited to):

- **Numeric Sizing Criteria for Pollutant Removal Treatment Systems.** The project must include source controls, design measures, and treatment controls to minimize storm water pollutant discharges. Treatment controls must be sized to treat a specific amount – about 85 percent – of average annual runoff (in the Bay Area this is equivalent to a storm with precipitation measuring 1 inch).
- **Operation and Maintenance of Treatment Measures.** Treatment controls often do not work unless adequately maintained. The permit requires an operations and maintenance (O&M) program, which includes: 1) identifying the properties with treatment controls; 2) developing agreements with private entities to maintain the controls, and 3) periodic inspection, maintenance (as needed), and reporting.
- **Limitation on Increase of Peak Storm Water Runoff Discharge Rates.** Urbanization creates impervious surfaces that reduce the landscape's natural ability to absorb water and release it slowly to creeks. These impervious surfaces increase peak flows in creeks and can cause erosion. Projects must evaluate the potential for this to occur and provide mitigation as necessary.

In addition, projects disturbing more than one acre of land during construction are required to file a Notice of Intent (NOI) with the RWQCB to be covered under the State NPDES General Construction Permit for discharges of storm water associated with construction activity. A developer must propose control measures that are consistent with the State General Permit. A Storm Water Pollution Prevention Plan (SWPPP) must be developed and implemented for each site covered by the general permit. A SWPPP should include Best Management Practices (BMPs) designed to reduce potential impacts to surface water quality during the construction of the project.

According to records maintained by the Santa Clara Valley Water District (District), up to two abandoned wells and up to nine "other" wells are located at the project site. Installation, maintenance, and destruction of wells are regulated by the Department of Water Resources California Well Standards (Bulletin 74-90). The main purpose of these regulations is the protection of groundwater quality. Under existing regulations, any wells not in use (or where the owner has not demonstrated an intention to use the well) must be properly destroyed. A permit from the District is required for well destruction. If the wells are to be maintained, the owner must demonstrate this intention by ensuring that the well cover is secured, sealed, identified as a well, and the area around the well be kept clear of wastes that could impact groundwater quality.

(2) Groundwater. Based on countywide monitoring studies conducted in 2002 and 2003, groundwater in the vicinity of the project site occurs at elevations of approximately 85 to 100 feet NGVD (based on regional contour mapping) within the Santa Clara Valley Confined Groundwater

Subbasin.[7] The site's surface elevation ranges from about 100 to 110 feet NGVD, and therefore groundwater would be expected to occur near the ground surface. However, this regional monitoring reflects the elevation of the potentiometric surface of a confined groundwater system.[8] Therefore, even though water may rise to near the ground surface in wells that penetrate the confined aquifer, excavations that do not penetrate the confining layer may not encounter free groundwater. Unconfined groundwater may also occur above the confined unit. For example, during drilling for collection of soil samples associated with a Phase II Environmental Assessment at 105 S. Montgomery Street, a boring was completed to a depth of ten feet below the ground surface (bgs) and encountered no groundwater.[9] However, in 1999, groundwater was encountered at depths ranging from about 15 to 20 feet bgs during drilling of geotechnical borings for the Diridon lightrail transit subway structure (just north of the project site).[10] Fluctuations in the depth to groundwater would be expected to occur seasonally with variations in aquifer recharge from winter storms. Previous geotechnical investigations in the vicinity of the site indicate that groundwater occurs in the range of 13.5 to 30 feet bgs.[11]

Shallow groundwater at the project site may have been contaminated by releases of petroleum-related compounds, solvents, and metals from historical land uses. Potential soil and groundwater contaminant issues are discussed in Section V.I, Hazards and Hazardous Materials.

e. San Jose 2020 General Plan Policies. Applicable policies from the City's General Plan are presented below.

- *Post-Construction Urban Runoff Management Policy:* This Policy establishes that all new development projects incorporating 10,000 square feet or more of new building rooftop or paved area are required to include specific measures for improving the water quality of urban runoff to the maximum extent feasible. In addition, the Policy establishes general guidelines and best management practices for particular land uses, and requires that all post-construction treatment control measures be maintained to operate effectively.

Natural Resources

- *Bay and Baylands Policy 5:* The City should continue to participate in the Santa Clara Valley Urban Runoff Pollution Prevention Program and take other necessary actions to formulate and meet regional water quality standards which are implemented through the National Pollution Discharge Elimination System Permits and other measures.
- *Water Resources Policy 6*: When new development is proposed in areas where stormwater runoff will be directed into creeks upstream from groundwater recharge facilities, the potential for surface water and groundwater contamination should be assessed and appropriate preventative measures should be recommended.
- *Water Resources Policy 7:* The City shall require the proper construction and monitoring of facilities storing hazardous materials in order to prevent contamination of the surface water, groundwater and underlying aquifers. In furtherance of this policy, design standards for such facilities should consider high groundwater tables and/or the potential for freshwater or saltwater flooding.

[7] Santa Clara Valley Water District, 2005. *Groundwater Conditions, 2002/2003*. January.

[8] Potentionmetric surface is the surface to which water would rise in an aquifer by hydrostatic pressure. Confined groundwater aquifers are confined between two low permeability geologic units. The uppermost water surface is not free to move up and down (as in an unconfined aquifer).

[9] Soenen, Kurt, 2005. Project Environmental Engineer, Lowney Associates, personal communication with Bruce Abelli-Amen of Baseline. December 5.

[10] Parikh Consultants, Inc., 2000. Geotechnical Engineering Investigation Report, Diridon LRT Subway Structure, Vasona, Light Rail Project, Santa Clara County, California. March.

[11] Lowney Associates, 2005, op.cit.

- *Water Resources Policy 8*: The City should establish nonpoint source pollution control measures and programs to adequately control the discharge of pollutants into the City's storm sewers.
- *Water Resources Policy 9:* The City should take a proactive role in the implementation of the Santa Clara Valley Nonpoint Source Pollution Control Program, as well as implementation of the City's local nonpoint source control and storm water management program.
- *Water Resources Policy 10*: The City should encourage a more efficient use of water by promoting water conservation techniques and the use of water-saving devices.
- *Water Resources Policy 11:* The City should promote the use of reclaimed water when feasible, particularly for industrial uses, for irrigation, and in groundwater recharge areas.
- *Water Resources Policy 12:* For all new discretionary development permits for projects incorporating large paved areas or other hard surfaces (e.g., building roofs), or major expansion of a building or use, the City should require specific construction and post-construction measures to control the quantity and improve the water quality of urban runoff.

Hazards

- *Flooding Policy 1:* New development should be designed to provide protection from potential impacts of flooding during the 100-year-flood.

2. Impacts and Mitigation Measures

This section analyzes impacts related to hydrology and water quality that could result from implementation of the proposed project. The subsection begins with criteria of significance, which establish the thresholds for determining whether a project impact is significant. The latter part of this section presents the potential hydrology and water quality impacts associated with the proposed project. Mitigation measures are provided as appropriate.

a. Criteria of Significance. The project would have a significant effect on hydrology or water quality if it would:

- Violate any water quality standards or waste discharge requirements.
- Create or contribute runoff that would be an additional source of water quality degradation.
- Result in substantial erosion or sedimentation on- or off-site that would affect the quality of receiving water.
- Create or contribute runoff that would exceed the capacity of existing or planned stormwater drainage systems and/or increase upstream or downstream flooding and require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
- Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map.
- Expose people or structures to a substantial risk of loss, injury or death involving flooding.
- Expose people or structures to a substantial risk of inundation by seiche, tsunami, extreme high tides, and/or sea level rise.
- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a significant net deficit in aquifer volume or a lowering of the local groundwater table level.

b. Less-than-Significant Impacts. The following is a discussion of less-than-significant hydrology and water quality impacts associated with the proposed project.

(1) Coastal Hazards, Including Seiches. The distance from the Bay and elevation of the project site would protect the site from coastal flooding hazards, including tsunami, extreme high tides, and sea level rise. There are no surface water bodies in the vicinity of the project site that could generate damaging seiches.

(2) Flood-related Hazards. According to the most recent FEMA mapping, the site is not located within the 100-year flood hazard zone, and therefore, no placement of structures in a flood hazard zone would occur at the site.

The site is located within a mapped dam failure inundation zone. However, existing dam inspection and maintenance programs ensure that dam failures remain a very low probability event. This potential impact is less than significant.

(3) Depletion of Groundwater Resources. As discussed in Section V.M, Utilities, proposed project could cause a reduction in water pressure that would be noticed by other water uses currently being served at the lower end of the pressure range. As such, at the San Jose Water Company's recommendation, the City may install one new well in an easement within the area with access to the existing water lines. Impacts to groundwater resources by the proposed well would be less than significant. The site is highly urbanized under existing conditions and largely covered with impervious surfaces. As explained below in Impact HYD-1, it is expected that the project would decrease the quantity of impervious surfaces and therefore incrementally increase groundwater recharge. Therefore depletion of groundwater resources associated with the proposed project is not expected.

(4) Alteration of Course of Stream or River. Drainage patterns at the site would be locally modified and the amount of impervious cover is expected to decline (the potential for hydromodification impacts are described below). However, the project would not alter the course of an established stream or river.

(5) Hydromodification. Alteration of drainage patterns could result in hydromodification impacts to downstream creeks. Hydromodification is defined as the alteration of the hydrologic characteristics of coastal and noncoastal waters, which in turn could cause degradation of water resources. In the case of a stream channel, this is the process whereby a stream bank is eroded by flowing water. This typically results in the suspension of sediments in the water course.

Provision C.3.f of the applicable NPDES Permit specifies the enhanced requirements for limiting "the increase of peak stormwater runoff rates." However, the NPDES Permit amendment Order No. R2-2005-0035, NPDES Permit No.CAS029718) states that:

> *…projects within "Redevelopment Project Areas" (as defined by Health and Safety Code Section 33000, et seq.) that redevelop an existing Brownfield site or create housing units affordable to persons of low or moderate income as defined by Health and Safety Code Section 50093, are excepted from the requirements of Provision C.3.f. and the HMP, and after impracticability of including onsite treatment measures is established, from the requirement*

> *for alternate, equivalent offsite treatment. Significant change in impervious surface or significant change in stormwater runoff volume or timing is unlikely in these redevelopment circumstances, because these developments would be within a largely already paved catchment, and on a site that is largely already paved or otherwise impervious*[12].

This permit provision exempts the proposed project from hydrograph modification mitigation requirements, recognizing that this type of develop would not generally substantially affect downstream hydrodynamic conditions. In addition, the City of San Jose's City Council Policy 8-14, *Post – Construction Hydromodification Management*, exempts those "projects that do not create an increase in impervious surface cover over pre-project conditions." Therefore, potential impacts associated with hydromodification potentially resulting from the proposed project are less than significant.

c. Significant Hydrology and Water Quality Impacts. The project could result in the following significant impacts related to hydrology and water quality.

<u>Impact HYD-1</u>: Alteration of the local drainage patterns could potentially result in exceedance of the capacity of downstream stormwater conveyance structures, resulting in localized flooding. (S)

Under the existing conditions, the 23.1-acre project site is urbanized and almost entirely covered with impervious surfaces (with the exceptions of landscape planters and street trees scattered throughout the site and a 0.2 acre vegetated island between S. Montgomery and S. Autumn streets). Although the specific design of all the components of the project (i.e., the stadium, parking garage, and electrical substation) have not been completed, the project would result in a net decrease in impervious surfaces relative to the existing conditions. New pervious surfaces associated with the proposed project include:

- The playing field of the stadium would include 3.1 acres of pervious surfaces.[13]
- The new setback along Los Gatos Creek would include approximately 0.8 acres of new pervious surface.
- The project would include street trees throughout the development.

Assuming that the number of street trees under the existing and proposed conditions is approximately the same, the project would be expected to result in a 3.9-acre decrease in impervious cover (existing impervious cover is approximately 22.9 acres (23.1 acres - 0.2 acres = 22.9 acres) and the proposed impervious cover is expected to be approximately 19.2 acres (23.1 acres – 3.1 acres – 0.8 acres = 19.2 acres)).

[12] California Regional Water Quality Control Board, San Francisco Bay Region, 2005. Amendment Revising Order No. 01-119, Order No. R2-2005-0035, NPDES Permit No.CAS029718), page 4.

[13] This qualitative analysis considers the playing field at the stadium to be a pervious surface. The playing surface would be covered with turf grass. The turf would be underlain by a sandy soil with high infiltration capacity and a subsurface network of drainage pipes. However, the turf and soil profile would still retain a substantial amount of water during storms and would not be expected to contribute sediment or other urban pollutants (such as petroleum hydrocarbons and metals) to receiving waters. It should be noted that during some storms (e.g. prior to or during a baseball game), it is likely that the infield portion of the playing surface would be covered with a tarpaulin and would effectively act as an impervious surface.

A decrease in impervious cover would be expected to result in a net decrease in total runoff from the site. However, the drainage patterns (which have not yet been specified) may change so that drainage amounts directed toward particular subareas may increase or decrease. A substantial increase in drainage directed to a particular subarea and conveyance system may result in exceedance of the capacity of the system. This could result in localized flooding during extreme storm events.

> Mitigation Measure HYD-1: As a condition of approval of the final grading and drainage plans for the project, it shall be demonstrated through detailed hydraulic analysis that implementation of the proposed drainage plans would include drainage components that are designed in compliance with City of San Jose standards. The grading and drainage plans shall be reviewed for compliance with these requirements by the City of San Jose Department of Public Works. Any improvements deemed necessary by the City shall be made a part of the conditions of approval.
>
> Implementation of this mitigation measure would reduce potential impacts associated with increased peak runoff volumes to a less-than-significant level. (LTS)

Impact HYD-2: Construction activities and post-construction site uses could result in degradation of water quality in the receiving waters by reducing the quality of stormwater runoff. (S)

(1) Construction-Period Impacts. Construction and grading within the project site would require temporary disturbance of surface soils. During the construction period, grading and excavation activities would result in exposure of soil to runoff, potentially causing erosion and entrainment of sediment (and potentially contaminants associated with releases that may have occurred at industrial sites) in the runoff. Soil stockpiles and excavated areas on the project site would be exposed to runoff and, if not managed properly, the runoff could cause erosion and increased sedimentation and pollutants in stormwater.

The potential for chemical releases is present at most construction sites given the types of materials used, including fuels, oils, paints, and solvents. Once released, these substances could be transported to Los Gatos Creek and the Bay in stormwater runoff, wash water, and dust control water, potentially reducing water quality. In addition, the project site may have experienced historic chemical releases that have affected soil quality. Erosion of contaminated soils could result in the transport of pollutants (along with the sediments) to the Bay.

(2) Operation-Period Impacts. New construction and intensified land uses at the project site would result in increased vehicle use and potential discharge of associated pollutants. Increased numbers of vehicles and parking facilities at the project site will likely result in increased leaks of fuel, lubricants, tire wear, and fallout from exhaust, which will contribute petroleum hydrocarbons, heavy metals, and sediment to the pollutant load in runoff being transported to receiving waters.

Runoff from the stadium playing field and landscaped areas at the site may contain residual pesticides and nutrients. Typical outdoor playing fields are constructed to maximize the reliability of the turf and include advanced drainage systems. These drainage systems typically include a sandy soil with high infiltration capacity and a subsurface network of drainage pipes that collect the infiltrated precipitation and convey it away quickly. If the playing surface is well above the uppermost groundwater level, the drainage systems can be designed to function largely by gravity. The intensity of use (for baseball and other entertainment functions) would stress the turf and therefore frequent fertilization is

likely. The sandy soils with the high infiltration capacity may not provide thorough treatment of the applied fertilizers and pesticides. Maintenance of the playing field could result in degradation of quality of the drainage. Long-term degradation of water quality runoff from the site could impact local water quality in Los Gatos Creek.

Operation of a relocated electrical substation could also result in impacts to runoff water quality. The substation would handle and use transformer oil and include maintenance operations. Surface water runoff from the site after construction is expected to contain minor concentrations of a variety of pollutants typical of electrical substations (e.g., automobile fluids, oils, suspended solids, metals, and organics).

The proposed electrical transformer and switchgear banks would contain inert mineral oil. The transformer and switchgear would be installed and maintained in accordance with a required Spill Prevention Control and Countermeasure Plan. Existing regulatory requirements would ensure that the transformers are supported by a secondary containment system. Pursuant to Environmental Protection Agency (EPA) requirements, the equipment and spill containment area will be inspected by PG&E staff on a monthly basis. Storm water runoff from other portions of the yard which are not included within the drainage ditch that would receive runoff from the transformer pad would be separately discharged to a storm drainage pipe system. This storm drainage pipe system would discharge to an existing storm water collection system. In the unlikely event of mineral oil leakage, the secondary containment would trap the oil and prevent discharge into the stormwater collection system.

The project site discharges into Los Gatos Creek, a tributary to the Guadalupe River. Both Los Gatos Creek and the Guadalupe River are listed as impaired (on the State's 303(d) list) for diazinon (a pesticide) by the Regional Water Quality Control Board (RWQCB). In addition, the RWQCB has designated the Guadalupe River as water quality impaired for mercury. If there is a chance that the project could increase the loading of these pollutants discharged to these waterways, then a significant impact would be expected to occur (the RWQCB has determined that the assimilative capacity of these waterways for these pollutants has already been exceeded).

The contaminants that have been identified as causing the water quality impairment of the Los Gatos Creek and the Guadalupe River are unlikely to be used at the site. Diazinon has been for banned (except, in some cases for agricultural use) and is therefore not available for legal use at the project site. Mercury would not be used at the site and discharges of this contaminant would not be expected to be affected by the project.

The proposed project does not specifically identify any BMPs to treat stormwater runoff prior to discharge to the Los Gatos Creek. A wide range of treatment BMPs would be available for treatment of runoff from the site. It is likely that the final design will include a variety of BMPs, ranging from treatment tree wells to bioswales and detention basins. Many of the types of BMPs typically used in urban settings do not require large areas of dedicated land. These urban-type BPMs are usually incorporated into the urban landscape (e.g. distributed landscape features, tree wells, vortex-type separators). If detention basins are used, some of the site would need to be set aside for this purpose (or a dual-use park is possible where the basin(s), when dry, are used as recreational facilities). Based

on preliminary calculations, if the site were served by a single detention basin approximately four feet deep the basin area would need to be about 0.24 acres to adequately treat the runoff.[14]

Untreated discharge from the site would likely contain elevated levels of pollutants and therefore would result in a significant impact to water quality requiring mitigation. The following two-part mitigation measure shall be implemented.

> Mitigation Measure HYD-2a: **Construction-Period Impact Mitigation.** The project proponent shall comply with the City of San Jose's Post-Construction Urban Runoff Management Policy (Policy Number 6-29), which requires:
>
> > *... all new and redevelopment projects to implement Post-Construction Best Management Practices (BMPs) and Treatment Control Measures (TCMs) to the maximum extent practicable. This Policy also establishes specified design standards for Post-Construction TCMs for Major Projects and minimum Post-Construction BMPs for all Land Uses of Concern, including Expansion Projects. This Policy further establishes the criteria for determining the situations in which it is impracticable to comply with the Major Project design standards, including the criteria for evaluating the equivalency of Alternative Compliance Measure(s)*[15]
>
> In addition, the project proponent shall prepare a SWPPP designed to reduce potential impacts to surface water quality through the construction period of the project. The SWPPP must be maintained on-site and made available to City inspectors and/or RWQCB staff upon request. The SWPPP shall include specific and detailed BMPs designed to mitigate construction-related pollutants. At minimum, BMPs shall include practices to minimize the contact of construction materials, equipment, and maintenance supplies (e.g., fuels, lubricants, paints, solvents, adhesives) with stormwater. The SWPPP shall specify properly designed centralized storage areas that keep these materials out of the rain.
>
> An important component of the stormwater quality protection effort is the knowledge of the site supervisors and workers. To educate on-site personnel and maintain awareness of the importance of stormwater quality protection, site supervisors shall conduct regular tailgate meetings to discuss pollution prevention. The frequency of the meetings and required personnel attendance list shall be specified in the SWPPP.
>
> The SWPPP shall specify a monitoring program to be implemented by the construction site supervisor, which must include both dry and wet weather inspections. In addition, in accordance with State Water Resources Control Board Resolution No. 2001-046,[16] monitoring

[14] Based on the sizing criteria included in the California Storm Water Best Management Practice Handbook (1993), and a 23.1-acre project site and the assumption of 83 percent directly connected impervious area (approximately three acres would be dedicated to the ballfield).

[15] City of San Jose, 2005. City Council Policy, Post-Construction Urban Runoff Management, Policy Number 6-29, May 17, page 2.

[16] State Water Resources Control Board, 2001. Modification of Water Quality Order 99-08-DWQ State Water Resources Control Board (SWRCB) National Pollutant Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction Activity.

would be required during the construction period for pollutants that may be present in the run-off that are "not visually detectable in runoff."[17]

BMPs designed to reduce erosion of exposed soil may include, but are not limited to: soil stabilization controls, watering for dust control, perimeter silt fences, placement of hay bales, and sediment basins. The potential for erosion is generally increased if grading is performed during the rainy season as disturbed soil can be exposed to rainfall and storm runoff. If grading must be conducted during the rainy season, the primary BMPs selected shall focus on erosion control (i.e., keeping sediment on the site). End-of-pipe sediment control measures (e.g., basins and traps) shall be used only as secondary measures. Entry and egress from the construction site shall be carefully controlled to minimize off-site tracking of sediment. Vehicle and equipment wash-down facilities shall be designed to be accessible and functional during both dry and wet conditions.

Mitigation Measure HYD-2b: **Operation-Period Impact Mitigation.** The design-level storm water control plan shall demonstrate through detailed hydraulic analysis that implementation of the proposed drainage plan would result in treatment of the appropriate percentage of the runoff from the site (in compliance with the County NPDES permit). The amount of runoff that is typically required to be treated is about 85 percent of the total average annual runoff from the site. The qualified professionals (a professional engineer with experience in the design of stormwater BMPs that is acceptable to the City) preparing the design-level storm water control plan shall consider additional measures designed to mitigate water quality degradation of runoff from all portions of the completed development. In general, passive, low-maintenance BMPs (e.g., grassy swales, porous pavements) are preferred. The City shall ensure that the project design includes features and operational BMPs to reduce potential impacts to surface water quality associated with operation of the project to the maximum extent practicable. These features shall be included in the storm water control plan and final development drawings.

The final design team for the development project shall review and incorporate as many concepts as practicable from Start at the Source, Design Guidance Manual for Stormwater Quality Protection[18] and the California Stormwater Quality Association's Stormwater Best Management Practice Handbook, Development and Redevelopment The final design team should also consider installing "end-of-pipe" treatment systems, including, but not limited to, baffle boxes, catch basins, and hydrodynamic vortex-type separators. Any use of end-of-pipe treatment systems must be accompanied by a viable maintenance program. Specifically:

- Drainage from the stadium playing surface and seating areas should be treated prior to discharge to Los Gatos Creek.
- The enclosed parking areas shall not be drained to the stormwater conveyance system. The garages should be dry-swept or, if washdown water is used the effluent should be dis-

[17] Construction materials and compounds that are not stored in water-tight containers under a water-tight roof or inside a building are examples of materials for which the discharger may have to implement sampling and analysis procedures.

[18] Bay Area Stormwater Management Agencies Association, 1999. *Start at the Source, Design Guidance Manual for Stormwater Quality Protection*.

charged to the sanitary sewer system under permit from the San Jose/Santa Clara Water Pollution Control Plant.

The City of San Jose Department of Public Works shall review and approve the SWPPP and drainage plan prior to approval of the grading plan. City staff may require more stringent stormwater treatment measures, at their discretion. Implementation of this mitigation would reduce the level of significance of this impact to a less-than-significant level. (LTS)

Impact HYD-3: Dewatering may contain contaminants and if not properly managed could cause impacts to construction workers and the environment. (S)

Groundwater at the project site could be encountered at about 15 feet below the ground surface (and, on a seasonal basis, may be present at shallower depths) and may therefore be encountered during excavation for building foundations, utilities, and other improvements.

There are two general classes of pollutants that may result from dewatering operations: sediment and chemical compounds (including toxics and petroleum hydrocarbons). High sediment content in dewatering discharges is common because of the nature of the operation in which soil and water mixes in the turbulent flow of high volume pump intakes. Chemical pollutants are most commonly found during dewatering in areas with a history of groundwater contamination (e.g. leaks to the sub-surface from industrial sites). Much of the project site is located in an area of industrial activity (refer to the Section V.I, Hazards and Hazardous Materials, for discussion of identified areas of potential subsurface contamination). Direct discharge of dewatering to the storm drainage system could result in water quality impacts to the Bay.

Mitigation Measure HYD-3: The SWPPP shall include provisions for the proper management of construction-period dewatering activities. At minimum, all dewatering shall be contained prior to discharge to allow the sediment to settle out, and filtered, if necessary to ensure that only clear water is discharged to the storm or sanitary sewer system, as appropriate. In areas of suspected groundwater contamination (i.e., underlain by fill or near sites where chemical releases are known or suspected to have occurred), groundwater shall be analyzed by a State-certified laboratory for the suspected pollutants prior to discharge. Based on the results of the analytical testing, the project proponent shall acquire the appropriate permit(s) prior to discharge of the dewatering effluent. Discharge of the dewatering effluent would require a permit from the RWQCB (for discharge to the storm sewer system) and/or the San Jose/Santa Clara Water Pollution Control Plant (for discharge to the sanitary sewer system).

Proper implementation of the mitigation measure described above would reduce this impact to a less-than-significant level. (LTS)

I. HAZARDS AND HAZARDOUS MATERIALS

This section describes the potential for hazardous materials[1] and other hazards to affect human health and the environment at the project site. Historical land uses at and near the project site have included uses that have the potential to have released contaminants affecting soils and groundwater. There may be a potential for construction workers and future site workers and patrons to come into contact with hazardous materials at the project site during and following project development.

1. Setting

a. Regulatory Framework. A myriad of laws and regulations at the federal, State, and local levels affect the management of hazardous materials. In California, the U.S. Environmental Protection Agency (U.S. EPA) has granted most enforcement authority over federal hazardous materials regulations to the California Environmental Protection Agency (Cal EPA). In turn, two local agencies, the San Jose Fire Department (SJFD) and Santa Clara County Department of Environmental Health (SCCDEH), have been granted authority by the State to enforce most regulations pertaining to hazardous materials in the City of San Jose.

Oversight over investigation and remediation of sites affected by hazardous materials releases can be performed by State agencies, such as the Department of Toxic Substances Control (DTSC), regional agencies, such as the San Francisco Bay Regional Water Quality Control Board (RWQCB), or local agencies, such as SCCDEH or the Santa Clara Valley Water District (SCVWD).[2]

b. Hazardous Materials Setting. The hazardous materials setting is based on previous environmental investigations conducted at the project site and a site reconnaissance.

(1) Status of Environmental Investigations. Phase I Environmental Site Assessments are in the process of being prepared for parcels at the project site. The following draft Phase I reports were reviewed for the project site:

- Lowney Associates, 2005a. *Draft Phase I Environmental Site Assessment, 102 South Montgomery Street and 530 West San Fernando Street, San Jose, California*. October 17.
- Lowney Associates, 2005b. *Draft Phase I Environmental Site Assessment, 105 South Montgomery Street, San Jose, California*. October 17.
- Lowney Associates, 2005c. *Draft Phase I Environmental Site Assessment, 150 South Montgomery Street*. October 17.
- Lowney Associates, 2005d. *Draft Phase I Environmental Site Assessment, 510 West San Fernando Street and 115 South Autumn Street, San Jose, California*. October 17.

[1] The California Health and Safety Code defines a hazardous material as "...any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety, or to the environment. Hazardous materials include, but are not limited to, hazardous substances, hazardous waste, radioactive materials, and any material which a handler or the administering agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment." (California Health and Safety Code, Section 25501).

[2] Prior to July 2004, SCVWD had lead regulatory agency status for many leaking underground tank sites and other groundwater contamination sites in the project vicinity. SCCDEH has since taken over oversight over most of these contaminated sites.

- Lowney Associates, 2005e. *Draft Phase I Environmental Site Assessment, 645 Park Avenue, San Jose, California.* October 17.
- Lowney Associates, 2005f. *Draft Phase I Environmental Site Assessment, 150 South Autumn Street, San Jose, California*. November 4.
- Lowney Associates, 2005g. *Draft Phase I Environmental Site Assessment, 170 South Autumn Street, San Jose, California.* November 4.

The Phase I reports are intended to identify potential areas of contamination, and the likelihood that contamination will affect development of the project. After the Phase I reports are finalized, Phase II investigations will be conducted, based on the recommendations of the Phase I reports. These Phase II investigations will include the collection of soil and groundwater samples from the project site and the use of quantitative screening criteria to determine whether areas of contamination are present at the project site that could affect project development. Additional investigation and/or remedial action may be required under the oversight of a regulatory agency (such as DTSC, RWQCB, or SCCDEH) should contamination be identified during the Phase II investigations.

(2) Current and Historical Land Uses Associated With Hazardous Materials. Information on current land uses at the project site is based on a site reconnaissance and is detailed in Table V.I-1. Historical land uses were identified from Phase I reports for the project site. Current and historical land uses associated with hazardous materials are described below.

Backup Electrical Generators. Backup diesel-powered electrical generators were identified at 510 W. San Fernando Street[3] and 645 Park Avenue.[4] Generators currently in operation are required to have secondary containment for diesel aboveground storage tanks (ASTs), but generators historically present at the project site may not have had similar leak-prevention features.

Compressed Gas Manufacturing. ARC Gas Products, located at 140 S. Montgomery Street, is an industrial gas manufacturer. Their product line includes hazardous materials such as acetylene, ammonia, chlorine, hydrogen chloride, sulfur dioxide, and sulfur hexafluoride gases.

Dry Cleaning. Based on City permit records, a dry cleaning establishment may have operated at 150 S. Autumn Street during the 1950s.[5] Dry cleaners are associated with the use of tetrachloroethylene, a volatile organic compound (VOC) commonly used as a dry cleaning solvent.

Electrical Motor Service. An electrical motor service operated at 510 W. San Fernando Street during the 1960s until the 1990s.[6] This facility likely used petroleum-based lubricants, solvents, and

[3] Lowney Associates, 2005d. Draft Phase I Environmental Site Assessment, 510 West San Fernando Street and 115 South Autumn Street, San Jose, California. October 17.

[4] Lowney Associates, 2005e. *Draft Phase I Environmental Site Assessment, 645 Park Avenue, San Jose, California.* October 17.

[5] Lowney Associates, 2005f. *Draft Phase I Environmental Site Assessment, 150 South Autumn Street, San Jose, California*. November 4.

[6] Lowney Associates, 2005d, op cit.

Table V.I-1: Current Land Uses at the Project Site

Current Land Uses	Address	APNs	Site Acreage	Building Area (Sq. Ft.)
PG&E Substation	630 W. San Fernando St.	261-35-002	1.5	–
Former Stephen's Meat Products	105 S. Montgomery St.	261-35-007, -003, -010, and -006	1.0	27,200
SBC Communications	145 S. Montgomery St.	261-35-027	4.5	150,000
Former KNTV television studio	645 Park Avenue	261-35-014	1.6	15,000
Patty's Inn and single-family residence	102 S. Montgomery St. and 530 W. San Fernando St.	259-48-012	0.15	2,900
Amtrak offices	510 W. San Fernando St. 114 S. Montgomery St. and 115 S. Autumn St.	259-48-011, and -013	1.0	22,964
Arc Gas Products	140 S. Montgomery St.	259-48-052	0.6	12,300
Pacific Blue Traders garden store	150 S. Montgomery St.	259-48-053	1.0	9,710
Creative Security Concepts Inc. Alliance for Community Care	150 and 150A S. Autumn St.	259-48-071, -074	1.0	28,314
CarQuest	170 S. Autumn St.	259-48-060	0.35	12,197
Multi-tenant office building	595 Park Avenue	259-48-073, and -057	0.55	4,500
City of San Jose Fire Department Field Operations and Vehicle Maintenance Facility	245 and 255 S. Montgomery St.	261-37-025	5.0	41,960

Note: This table is also included as Table V.A-2, and corresponds to Figure V.A-3, APN Location Map.

Source: City of San Jose, LSA Associates, Inc. 2005

other hazardous materials. Surface staining was identified near a former hazardous materials storage area during a previous inspection of this parcel.[7] Two gasoline underground storage tanks (USTs), one closed in place in 1986 and one removed in 1989, were used to fuel vehicles at the site.[8]

Electrical Substation. Electrical substations typically use, store, and dispose of three classes of hazardous materials:[9]

- ***Dielectric fluid.*** Electrical transformers and other substation equipment contain dielectric fluid (a non-electrical conductive liquid made from a highly refined hydrocarbon-based oil), which is used for insulation and cooling. When oil-filled equipment is taken out of service, this fluid must be disposed of as hazardous waste. Prior to the 1970s, dielectric fluids frequently contained polychlorinated biphenyls (PCBs), a suspected carcinogen.
- ***Lead-acid batteries.*** Lead-acid batteries are used to provide backup power for monitoring, alarm, protective relaying, instrumentation and control, and emergency lighting during power outages.

[7] Ibid.

[8] Ibid.

[9] PG&E, 2005. PG&E Delta Distribution Planning Area Capacity Increase Substation Project, Proponent's Environmental Assessment. August.

- ***Industrial gases.*** Electrical substations use two industrial gases, sulfur hexafluoride and nitrogen gas. Sulfur hexafluoride gas (SF_6) is used as an insulator and arc suppresser in circuit breakers. Under normal conditions, it is completely contained in the equipment. Although SF_6 is relatively inert and non-toxic, containment is considered important, as it is a greenhouse gas. Cylinders of compressed nitrogen gas are used to maintain a slight positive pressure on oil-filled electrical equipment. This pressure serves to keep out moisture, which can damage the equipment. Nitrogen gas is inert and non-toxic.

Fill Materials. A preliminary geotechnical report for the project site indicates that native soils in the project vicinity have been covered with up to 7 feet of undocumented fill material. [10] As the source of the material is unknown, it is possible that hazardous materials from releases at the origin of the fill may have affected this material. This material may therefore potentially contain contaminants such as metals and/or organic compounds.

Gasoline Service Stations. Two gasoline service stations were formerly present at the north-east and southeast corners of the Park Avenue/S. Montgomery Street intersection.[11] These stations were removed during the early 1970s, when S. Autumn Street was constructed. Gasoline service stations typically use, store, and dispose of large quantities of petroleum products and other hazardous materials associated with vehicle maintenance.

Iron Works/Machine Shop. An iron works and machine shop was present at the building at 150 S. Montgomery Street during the 1950s and 1960s.[12] Metals, petroleum products, and solvents are associated with this land use. A later tenant of the iron works/machine shop building was listed as a generator of waste oil, mixed oil, and liquids with halogenated organic compounds. [13]

Medical Laboratory. A medical facility, which operated at various times as a physician's laboratory, a blood bank, and transplant support operations, was present at 150 S. Autumn Street from the 1970s until 2000. [14] Records indicate that in the 1990s, small quantities of various hazardous materials were used at the site, including sodium hydroxide, acetone, isopropyl and methyl alcohol, ethyl ether, hydrocarbon mineral oil, acetic acid, hydrochloric acid, ethylene oxide, and Freon. [15] Permit information indicates an acid-waste neutralization tank was installed at the site in 1983. [16]

Vehicle Maintenance. Vehicle maintenance is currently occurring and has historically taken place at several facilities at the project site. Vehicle maintenance is conducted at the San Jose Fire Department facility at 245-255 S. Montgomery Street. Vehicle maintenance and fueling was also apparent at the former meat processing facility at 105 S. Montgomery Street, which included a gaso-

[10] Lowney Associates, 2005h. *Geotechnical Feasibility Consultation, San Jose Ballpark, Park Avenue, and Autumn Street, San Jose, California.* December 7.

[11] Lowney Associates, 2005e, op cit.

[12] Lowney Associates, 2005c. *Draft Phase I Environmental Site Assessment, 150 South Montgomery Street*. October 17.

[13] Ibid.

[14] Lowney Associates, 2005f, op cit.

[15] Ibid.

[16] Ibid.

line UST and an oil-water separator.[17] Business plans from the 105 S. Montgomery Street site indicated that 55-gallon drums of used and new motor oil were stored at the site.[18] During the 1960s until the early 1970s, an auto repair shop was present at 170 S. Autumn Street.[19]

(3) Reported Releases of Hazardous Materials. Butcher Electric, at 510 W. San Fernando Streeet/115 S. Autumn Street, was listed on the State Cortese database of hazardous materials release sites due to a release from a leaking gasoline UST.[20] The UST was removed in 1989, and samples from the tank excavation contained hydrocarbons related to gasoline. Affected soil was overexcavated, and two monitoring wells were installed at the site. No groundwater impact from the release was identified. Case closure was issued for the site by SCVWD on 30 March 1992.[21] No other reported releases were identified at project site parcels during Phase I activities. The draft Phase I reports concluded that no reported hazardous materials spills with a potential to significantly affect project site parcels were identified in the project vicinity.[22]

(4) Hazardous Materials Associated With Building Demolition. As many of the current buildings at the project site were all constructed prior to the 1980s, there may be a potential for lead, asbestos, and other hazardous materials to be present in building materials at the site. Prior to 1978, lead compounds were commonly used in interior and exterior paints. Prior to the 1980s, building materials often contained asbestos fibers, which were used to provide strength and fire resistance. Based on information in the draft Phase I reports, no lead or asbestos surveys are known to have been completed at the project site.

In addition, other common items, such as electrical transformers, fluorescent lighting tubes and fixtures, electrical switches, heating/cooling equipment, and thermostats, can contain hazardous materials, which may pose a health risk if not handled and disposed of properly.

Federal and State regulations govern the demolition of structures where lead or material containing lead is present. During demolition, lead-based paint that is securely adhering to wood or metal may be disposed of as demolition debris, which is a non-hazardous waste. Loose and peeling paint must be disposed of as a California and/or federal hazardous waste if the concentration of lead exceeds applicable waste thresholds. State and federal construction worker health and safety regulations require air monitoring and other protective measures during demolition activities where lead-based paint is present.

Federal, State, and local requirements also govern the removal of asbestos or suspected asbestos-containing materials (ACMs), including the demolition of structures where asbestos is present. All friable (crushable by hand) ACMs, or non-friable ACMs subject to damage, must be abated prior to

[17] Lowney Associates, 2005b. *Draft Phase I Environmental Site Assessment, 105 South Montgomery Street, San Jose, California.* October 17.

[18] Ibid.

[19] Lowney Associates, 2005g. *Draft Phase I Environmental Site Assessment, 170 South Autumn Street, San Jose, California.* November 4.

[20] Lowney Associates, 2005d, op cit.

[21] Ibid.

[22] Ibid.

demolition in accordance with applicable requirements. Friable ACM must be disposed of as an asbestos waste at an approved facility. Non-friable ACM may be disposed of as non-hazardous waste at landfills that will accept such wastes. Workers conducting asbestos abatement must be trained in accordance with State and federal OSHA regulations.

Fluorescent lighting tubes and ballasts, computer displays, and several other common items containing hazardous materials are regulated as "universal wastes" by the State of California. Universal waste regulations allow common, low-hazard wastes to be managed under less stringent requirements than other hazardous wastes. Management of other hazardous wastes is governed under DTSC hazardous waste rules.

c. San Jose 2020 General Plan Policies. The following policies from San Jose 2020 General Plan would apply to the proposed project:

Hazards

- *Hazardous Materials Policy 1:* The City should require proper storage and disposal of hazardous materials to prevent leakage, potential explosions, fires, or the escape of harmful gases, and to prevent individually innocuous materials from combining to form hazardous substances, especially at the time of disposal.
- *Hazardous Materials Policy 2:* The City should support State and federal legislation which strengthen safety requirements for the transportation of hazardous materials.
- *Hazardous Materials Policy 3:* The City should incorporate soil and groundwater contamination analysis within the environmental review process for development proposals. When contamination is present on a site, the City should report this information to the appropriate agencies that regulate the cleanup of toxic contamination.
- *Hazardous Materials Policy 4:* Development located within areas containing naturally occurring asbestos should be required to mitigate any potential impacts associated with grading or other subsurface excavation.
- *Fire Hazards Policy 2:* All new development should be constructed, at a minimum, to the fire safety standards contained in the San Jose Building Code.
- *Fire Hazards Policy 6:* New development should provide adequate access for emergency vehicles, particularly fire fighting equipment, as well as provide secure evacuation routes for the inhabitants of the area.
- *Fire Hazards Policy 7:* The City should regulate the storage of flammable and explosive materials and strongly encourage the proper transportation of such materials.

2. Impacts and Mitigation Measures

a. Criteria of Significance. The proposed project would have a significant impact relating to hazards and hazardous materials if it would:

- Create a significant hazard to the public or environment through the routine transport, use, or disposal of hazardous materials.
- Create a significant hazard to the public or environment through reasonably foreseeable upset or accident conditions involving the release of hazardous materials into the environment.
- Create a significant hazard to the public or environment through exposure to hazardous materials present in soils, surface water, ground water, and/or building materials as a result of historical land uses in the project vicinity.
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within ¼-mile of an existing or proposed school.

- Be located on or adjacent to a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would result in a safety hazard for people residing or working in the area.
- Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan.
- Result in an increased risk of exposure to wildland or urban fire hazards.

b. Less-than-Significant Hazards and Hazardous Materials Impacts. Less-than-significant impacts related to hazards and hazardous materials are discussed below.

(1) Emergency Response and Evacuation. Guidance for emergency response at the project site is contained in the City's Emergency Operations Plan, which is maintained by the City's Office of Emergency Services. The City will create an emergency operation plan for the proposed stadium and update as necessary. Plan review and approval by the San Jose Police Department, San Jose Fire Department, City Department of Planning, Building and Code Enforcement and the Department of Public Works will be required prior to final approval of the project. Adherence to existing laws, regulations, and policies would prevent potential interference with emergency response or evacuation plans.

(2) Fire Hazards. The project site is located in an urbanized area, and is not adjacent to a designated wildfire hazard area. The project development would be subject to plan review and inspection by the City Fire Department and Department of Planning, Building and Code Enforcement to ensure that the project meets all State and local Building and Fire Code requirements. The City Building Division enforces various codes, including the 2001 California Building Code based on the 1997 edition of the Uniform Building Code and the 2004 California Electric Code based on 2002 National Electrical Code. No impacts from wildland or urban fire hazards would be expected from development of the project.

c. Significant Hazards and Hazardous Materials Impacts. The project would result in four potentially significant impacts related to hazardous materials.

<u>Impact HAZ-1</u>: Development of the project could expose construction workers and/or the public to hazardous materials from contaminants in soil and groundwater during and following construction activities. (S)

Environmental investigations have identified several current and historical land uses associated with hazardous materials on project site parcels. These land uses may potentially have resulted in releases of hazardous materials that have affected site soils and groundwater. The classes of hazardous materials potentially present in site soils and groundwater include petroleum hydrocarbons, metals, solvents, PCBs, and polynuclear aromatic hydrocarbons (PAHs).

Sensitive receptors are present in the project vicinity, including residences to the east of the project site, and the Foundry School, an alternative high school, located at 258 Sunol Street, within ¼-mile to the west. Residences and schools are considered sensitive receptors, as they contain populations, such as children, the elderly, and the infirm, that are more susceptible to health effects of hazardous materials than the general population. Other groups that are likely to come into direct contact with

contaminants at the project site, such as construction and maintenance workers, are presumed to be working-age adults.

Future construction workers and maintenance workers will have direct contact with surface and subsurface soils and groundwater. These workers may be exposed to contaminants via inhalation of dust and vapor, direct dermal contact with soils and groundwater, and/or accidental ingestion. Improper storage, handling, and disposal of contaminated materials could increase potential risks to construction workers and nearby workers, students, and residents. Following project development, portions of the project site proposed for public access would be covered with building foundations, concrete, and landscaping which would likely serve to limit exposure to site soils to future site patrons. Maintenance and utility workers may be exposed to contaminants in site soils and groundwater sporadically throughout the life of the project.

> Mitigation Measure HAZ-1a: As a condition of approval for any permit for demolition, grading, or construction at any parcel at the project site, a Phase I Environmental Site Assessment shall be conducted by a qualified professional (e.g., a California-registered environmental assessor) to identify current or historical land uses that have or may have included the storage or generation of hazardous materials and the potential for releases of hazardous materials to have occurred that might impact the site. The assessments shall be performed in conformance with the current standard of care established by ASTM and EPA for Phase I Environmental Assessments and shall be submitted to the City Environmental Services Department (ESD) Environmental Compliance Officer for review and approval. The Phase I ESA assessments shall identify the potential presence of any environmental impacts to the subject site related to any historic and/or present uses of hazardous materials at the subject site and/or at any sites in the vicinity of the subject site, and present recommendations for further investigation of the parcel, if warranted.
>
> Recommendations for investigation shall be implemented in Phase II investigations at the project site. The Phase II(s) shall include sampling of site soils and groundwater in areas of suspected contamination, based on the findings of the Phase I assessments. Additional groundwater samples shall be collected to establish baseline groundwater quality at the site and determine if previously unreported off-site contamination has migrated and affected the project site. The Phase II investigations shall also characterize the chemical quality of undocumented fill materials at the project site. Soil and groundwater sampling results shall be compared to RWQCB Environmental Screening Levels (ESLs) for commercial/industrial land uses for shallow soils for sites underlain by a potential drinking water source. The Phase II investigations shall be submitted to the ESD Environmental Compliance Officer for review and approval.
>
> If hazardous materials are identified in site soils or groundwater in excess of RWQCB ESLs for commercial/industrial land uses, a Human Health Risk Assessment (HHRA) shall be performed by a qualified environmental professional. The HHRA shall describe measures that must be implemented to ensure that any potential added health risks to construction workers, maintenance and utility workers, site users, and the general public as a result of hazardous materials are reduced to a cumulative risk of less than 1×10^{-6} (one in one million) for carcinogens and a cumulative hazard index of 1.0 for non-carcinogens, or as required by a regulatory oversight agency. The HHRA would be subject to review and/or approval by the City ESD Environmental Compliance Officer and/or regulatory oversight agencies.

The potential risks to human health in excess of these goals would be reduced either by remediation of the contaminated soils or groundwater (e.g., excavation and off-site disposal and/or extraction/treatment of groundwater) and/or implementation of institutional controls and engineering controls (IC/EC). IC/EC may include the use of hardscape (buildings and pavements), importation of clean soil in landscaped areas to eliminate exposure pathways, and deed restrictions. If IC/EC are implemented, an Operations and Maintenance Program must be prepared and implemented to ensure that the measures adopted are maintained throughout the life of the project. If IC/EC are implemented, the Operations and Maintenance Program would be subject to review and approval by the City ESD Environmental Compliance Officer and/or regulatory oversight agencies.

Mitigation Measure HAZ-1b: Prior to approval for any demolition, grading, or construction permits at the project site, a Construction Risk Management Plan (CRMP) shall be prepared with provisions to protect construction workers, the nearby public, and future workers and nearby residents from health risks from residual contaminants in site soils and groundwater during project construction and subsequent maintenance activities. The CRMP shall summarize previous environmental investigations and health risk assessments conducted for the project site (Mitigation Measure HAZ-1a). The CRMP shall include provisions for protection of human health both for the construction phase of the development as well as for the operational phase.

In accordance with State and federal laws and regulations, the CRMP shall describe required worker health and safety provisions for all workers potentially exposed to contaminated soil and groundwater. The CRMP shall include all necessary controls to mitigate short-term risks from releases of constituents of concern to the environment in the form of dust, vapors, and/or water runoff during construction activities. Real-time air monitoring for contaminants of concern shall be required during all activities with the potential to disturb contaminated materials at the site. Action levels for contaminants of concern shall be established, with detailed descriptions of corrective actions to be taken in the event that the action levels are reached during monitoring.

The CRMP shall also provide procedures to be undertaken in the event that previously unreported contamination or subsurface hazards are discovered during construction; incorporate construction safety measures for excavation and other construction activities; establish detailed procedures for the safe storage, stockpiling, use, and disposal of contaminated soils and groundwater and other hazardous materials at the project site; provide emergency response procedures; and designate personnel responsible for implementation of the CRMP during the construction and operational phases of the project.

The CRMP shall also include an Operations and Maintenance Plan component, to ensure that health and safety measures required for future construction, utility trenching, and maintenance at the project site shall be enforced in perpetuity. The CRMP shall be submitted to the City ESD Environmental Compliance Officer for review and approval. If regulatory oversight is required for site remediation, the CRMP would also be subject to review and approval by regulatory oversight agencies.

Implementation of this two-part measure would reduce this impact to a less-than-significant level. (LTS)

Impact HAZ-2: Improper use or transport of hazardous materials during construction activities could result in releases affecting construction workers and the general public. (S)

Construction activities proposed by the project would require the use and transport of hazardous materials. These materials may include contaminated soil and/or groundwater, building demolition debris containing lead and asbestos, and fuels, oils, and other chemicals used during construction. Removal/relocation and transportation of hazardous materials could result in accidental releases or spills, potentially posing health risks to workers, the public, and the environment.

Mitigation Measure HAZ-2: The CRMP for the project site shall include emergency procedures and the management and disposal of contaminated soils and groundwater (see Mitigation Measure HAZ-1b). Use, storage, disposal, and transport of hazardous materials during construction activities shall be performed in accordance with existing local, State, and federal hazardous materials regulations.

Implementation of this measure would reduce this impact to a less-than-significant level. (LTS)

Impact HAZ-3: Demolition of any structures containing lead-based paint, asbestos-containing building materials, or other hazardous materials could release airborne particles of hazardous materials, which may affect construction workers and the public. (S)

The majority of the buildings currently present at the project site were constructed prior to 1980 and may contain lead-based paint, asbestos containing building materials, and/or other common hazardous materials. Exposure to these materials during demolition may potentially result in serious health risks to construction workers and the nearby public. Federal, State, and local requirements govern the abatement of lead-based paint and removal of asbestos or suspected asbestos-containing materials, including special construction worker health and safety standards for sites where lead and/or asbestos may be present. Other regulations require the proper handling and disposal of hazardous wastes. These requirements are promulgated by federal and State agencies and the Bay Area Air Quality Management District (BAAQMD).

Mitigation Measure HAZ-3: As a condition of approval for any demolition permit for a structure at the project site, a lead-based paint and asbestos-containing material survey shall be performed at the structure by a qualified environmental professional. Based on the findings of the survey, identified asbestos hazards shall be abated by a certified asbestos abatement contractor in accordance with the regulations and notification requirements of the BAAQMD. Federal and State construction worker health and safety regulations shall be required during renovation or demolition activities, and any required worker health and safety procedures shall be incorporated into the project CRMP (per Mitigation Measure HAZ-1b). If loose or peeling lead-based paint are identified, they shall be removed by a qualified lead abatement contractor and disposed of in accordance with existing hazardous waste regulations. Other hazardous wastes generated during demolition activities, such as fluorescent light tubes, mercury switches, and computer displays, shall be managed and disposed of in accordance with existing hazardous waste regulations.

Implementation of this measure would reduce this impact to a less-than-significant level. (LTS)

Impact HAZ-4: Future land uses at the project site may potentially create a significant hazard to the public or the environment as a result of routine transport, use, production, upset, or disposal of hazardous materials. (S)

The electrical substation at the site would use, store, and dispose of hazardous materials, including dielectric fluid, lead-acid batteries, and industrial gases. The stadium, parking garage, and other proposed uses of the project would use and store turf maintenance and other janitorial and maintenance products, which may contain hazardous materials. Improper use, storage, or disposal of these materials could result in a release of hazardous materials that could potentially affect site workers, site patrons, the general public, and nearby ecological receptors.

The electrical substation, stadium complex, and any other businesses at the project site that use, store, or dispose of hazardous materials would be required to comply with federal, State, and local requirements for managing hazardous materials. These plans include the primary hazardous materials programs administered by SJFD and SCCDEH (CUPA Plans, Programs, and Permits) as well as other requirements of State and federal laws and regulations. Depending on the precise types and quantities of hazardous materials use, stored at and disposed of from the project site, these requirements may include the preparation of, implementation of, and training in the following plans, programs, and permits:

(1) CUPA Plans, Programs, and Permits.

Hazardous Waste Generator Requirements. Facilities that generate more than 100 kilograms per month of hazardous waste, or more than 1 kilogram per month of acutely hazardous waste, must be registered in accordance with the Resource Conservation and Recovery Act (RCRA) (Title 42, US Code, Sections 6901 et seq.).

Aboveground and Underground Storage Tank Permits. Facilities with aboveground or underground storage tanks must be permitted. Other plans, such as a Spill Prevention Control and Countermeasures (SPCC) Program, will be required at the electrical substation site due to the size, location, and contents of the equipment at the facility. The SPCC Program will provide a detailed engineering analysis of the potential for release from oil-filled equipment and lead-acid batteries present at the substation, and will describe the measures, such as secondary containment and emergency response, that will be implemented to reduce the release potential.

Hazardous Materials Business Plan (Business Plan). Facilities that use, store, or handle hazardous materials in quantities greater than 500 pounds, 55 gallons, or 200 cubic feet are required to prepare a Business Plan. The Business Plan would contain facility maps, up-to-date inventories of all hazardous materials for each shop/area, emergency response procedures, equipment, and a description of employee training.

Hazardous Material Release Response Plan (Contingency Plan). All facilities that generate hazardous waste must prepare a Contingency Plan. The Contingency Plan identifies the duties of the facility Emergency Coordinator, identification and location of emergency equipment, and also

includes reporting procedures for the facility Emergency Coordinator to follow after a hazardous materials incident.

California Accidental Release Program (CalARP). Businesses that use significant quantities of acutely hazardous materials must prepare a detailed engineering analysis of the potential accident factors present at a business and the mitigation measures that can be implemented to reduce this accident potential.

(2) Non-CUPA Plans, Programs, and Permits.

High-Voltage Electrical Safety Orders. Title 8, Sections 2700 through 2983 of the California Code of Regulations contain worker heath and safety regulations that would apply to workers at the electrical substation.

Injury and Illness Prevention Plan. The California General Industry Safety Order requires that all employers in California shall prepare and implement an Injury and Illness Prevention Plan which should contain a code of safe practice for each job category, methods for informing workers of hazards, and procedures for correcting identified hazards.

Emergency Action Plan. The California General Industry Safety Order requires that all employers in California prepare and implement an Emergency Action Plan. The Emergency Action Plan designates employee responsibilities, evacuation procedures and routes, alarm systems, and training procedures.

Fire Prevention Plan. The California General Industry Safety Order requires that all employers in California prepare and implement a Fire Prevention Plan. The Fire Prevention Plan specifies areas of potential hazard, persons responsible for maintenance of fire prevention equipment or systems, fire prevention housekeeping procedures, and fire hazard training procedures.

Hazard Communication Plan. Facilities involved in the use, storage, and handling of hazardous materials are required to prepare a Hazard Communication program. The purpose of the Hazard Communication program is to provide methods on safe handling practices for hazardous materials, ensure proper labeling of hazardous materials containers, and ensure employee access to Material Safety Data Sheets (MSDSs).

Mitigation Measure HAZ-4: Compliance with existing hazardous materials plans, programs, and permits would serve to mitigate potential hazardous materials impacts related to proposed future land uses. (LTS)

J. CULTURAL AND PALEONTOLOGICAL RESOURCES

This section presents an overview of the City's history, describes the cultural and paleontological resources within and immediately adjacent to the project area, and provides mitigation measures for effects to cultural and paleontological resources which may result from the implementation of the proposed project. This summary is based on a background report on Cultural and Paleontological Resources that is presented as Appendix G to this EIR.

Background research for this section included a records search at the Northwest Information Center (NWIC) of the California Historical Resources Information System, Sonoma State University, Rohnert Park, California. The NWIC is an affiliate of the California Office of Historic Preservation and is the official state repository of cultural resources reports and records for Santa Clara County. Other State of California and City of San Jose cultural resources listings reviewed include: (1) California Inventory of Historic Resources;[1] (2) Five Views: An Ethnic Historic Site Survey for California;[2] (3) California Historical Landmarks;[3] (4) California Points of Historical Interest;[4] (5) Directory of Properties in the Historic Property Data File for Santa Clara County;[5] and (6) City of San Jose's Historic Resources Inventory.[6] Additional historical research for this study was conducted at the History Park Research Library in San Jose, the San Jose Library and the California Room, Special Collections and Sourisseau Academy within the library, Santa Clara County Recorders Office, the City of San Jose's online Planning, Building and Code Enforcement website, and the City of San Jose Development Services Department at City Hall.

The California Native American Heritage Commission (NAHC) was consulted regarding information about cultural resources in the project area, but did not identify Native American resources within the study area. The San Jose Historical Landmarks Commission and the Preservation Action Council of San Jose were also consulted regarding information about cultural resources in the project area. The San Jose Historical Landmarks Commission will review the historic properties within the project area as part of the EIR, and the Preservation Action Council of San Jose recommended evaluating any "threatened building or structure 50 years old or older."

1. Setting

The section below summarizes the site's paleontological resources, and San Jose's history from about 12,000 years ago when Native Americans first entered the area, to modern times. Discussion of the cultural resources within the project area follows. Lastly, laws, codes, and regulations relevant to cultural resources in the City of San Jose are presented.

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[1] California Department of Parks and Recreation, 1976. *California Inventory of Historic Resources.*

[2] California Department of Parks and Recreation, Office of Historic Preservation, 1988. *Five Views: An Ethnic Historic Site Survey for California.*

[3] California Department of Parks and Recreation, Office of Historic Preservation, 1990. *California Historical Landmarks*.

[4] California Department of Parks and Recreation, Office of Historic Preservation, 1992. *California Points of Historical Interest.*

[5] California Department of Parks and Recreation, Office of Historic Preservation, 2005. *Directory of Properties in the Historic Property Data File.*

[6] City of San Jose, Planning Divisions, 2005. "Historic Resources Inventory." Website: www.ci.san-jose.ca.us/planning/sjplan/Historic/pdf/Historic_resources.pdf.

a. Paleontological Resources. Paleontological resources, fossils, are the remains of plants and animals and the rocks that contain them. This section describes background paleontological research, and then describes the project area's paleontological setting and sensitivity.

Background research to identify paleontological resources (fossils) within and adjacent to the project area consisted of a review of paleontological and geological literature and maps, and a fossil locality search (conducted on November 8, 2005, at the University of California Museum of Paleontology (UCMP), Berkeley). This locality search is described in the report attached as Appendix G. The fossil locality search identified three fossil localities within approximately 5 miles of the project area.

The project area lies on a layer of soils approximately 5 feet deep, which does not contain significant paleontological resources.[7] Underlying this soil is young Holocene-aged alluvium that has a depth of 0 to 10 feet within the project area and is considered too young to contain fossil resources. Older Late Pleistocene alluvium underlies the Holocene-aged alluvium and can be as deep as 150 feet. Late Pleistocene alluvium is known to contain fossil resources throughout the Bay Area[8] and is highly sensitive for paleontological resources. This alluvium contains continental vertebrate fauna that can include, but is not limited to saber-toothed cat, camel, bison, horse, sloth, and mammoth of the Rancholabrean land mammal age.[9] There are two vertebrate fossil localities from Late Pleistocene alluvial deposits approximately 5 miles north and northwest from the project area.

The nearest fossil locality is less than one mile west of the project area and lies within Miocene sandstones of the Briones Formation.[10] Both vertebrate and invertebrate fossils have been found within this formation that underlies the Late Pleistocene alluvium described above.[11] It seems unlikely that project ground-disturbing construction could affect this geologic unit considering the depth of the alluvium within the project area.[12] However, since the fossil locality from this bedrock is less than

[7] Soil Conservation Service. 1968:193. *Soil Survey of Santa Clara County, California.* United States Department of Agriculture, Soil Conservation Service, Morgan Hill, California.

[8] Helley, E.J., K.R. LaJoie, W.E. Spangle, and M.L. Blair. 1979. *Flatland Deposits of the San Francisco Bay Region – their geology and engineering properties, and their importance to comprehensive planning.* Geological Survey Professional Paper 943. U.S. Geological Survey and Department of Housing and Urban Development, Washington, D.C.

Wentworth, C.M., M.C. Blake, Jr., R.J. McLaughlin, and R.W. Graymer. 1999. *Preliminary Geologic Map Description of the San Jose 30 x 60 Minute Quadrangle, California.* U.S. Geological Survey Open-File Report 98-795.

[9] Stirton, R.A., 1951. Prehistoric Land Animals of the San Francisco Bay Region. In *Geology Guidebook of the San Francisco Bay Counties: History, Landscape, Geology, Fossils, Minerals, Industry, and Routes to Travel*, prepared by Olaf P. Jenkins, pp. 177-186. Bulletin 154. State of California Division of Mines, San Francisco.

Savage, Donald, 1951. *Late Cenozoic Vertebrates of the San Francisco Bay Region.* UC Publications Bulletin of the Dept. of Geological Sciences 28(10):215:314.

Helley, E.J., K.R. LaJoie, W.E. Spangle, and M.L. Blair. 1979. *Flatland Deposits of the San Francisco Bay Region – their geology and engineering properties, and their importance to comprehensive planning.* Geological Survey Professional Paper 943. U.S. Geological Survey and Department of Housing and Urban Development, Washington, D.C.

Bell, C.J., E.L. Lundelius, Jr., A.D. Barnosky, R.W. Graham, E.H. Lindsay, D.R. Ruez, Jr., H.S. Semken, Jr., S.D. Webb, and R.J. Zakrzewski. 2004. The Blancan, Irvingtonian, and Rancholabrean Mammal Ages. In *Late Cretaceous and Cenozoic Mammals of North America*, edited by M.O. Woodburne, pp. 232-314. Columbia University Press, New York.

[10] Wentworth, C.M., M.C. Blake, Jr., R.J. McLaughlin, and R.W. Graymer, 1999, op. cit.

[11] Wagner, J. 1978. *Late Cenozoic history of the Coast Range east of San Francisco Bay.* Ph.D. dissertation, Department of Geological Science, University of California, Berkeley, 161 pp.

[12] Helley, E.J., K.R. LaJoie, W.E. Spangle, and M.L. Blair., 1979, op. cit.

one mile from the project area,[13] the alluvium underlying the project area may not be as deep as suggested by the literature, and may therefore contain significant fossils.

b. Prehistory and Ethnography. California was probably settled by native Californians between 12,000 and 6,000 years ago.[14] Penutian-speaking peoples migrated into central California around 4,500 year ago and were settled around San Francisco Bay by 1,500 years ago. The descendants of the native groups who lived between the Carquinez Strait and the Monterey area prefer to be called Ohlone, although they are often referred to by the name of their linguistic group, Costanoan. San Jose is within the ethnographic territory of the Tamyen tribelet of Ohlone, who occupied a large area in the South Bay. The Tamyen spoke Tamyen, or Santa Clara Costanoan, one of eight Ohlone languages.[15]

The basic Ohlone social unit was the family household, which was made up of about 15 individuals.[16,17] Households grouped together to form villages. In the San Jose area, many of these villages were located along the Guadalupe River, Coyote Creek, and Los Gatos Creek. Ohlone culture was transformed when European settlers moved into northern California. These settlers set up the mission system, which used the native peoples for labor, and almost destroyed the native culture by exposing the Ohlone to diseases to which they had no immunity. After the secularization of the missions in 1834, native people in the Bay Area moved to ranchos, where they worked as manual laborers.[18]

c. San Jose History. San Jose is California's oldest civil settlement, founded in November 1777 under orders from Governor Felipe de Neve.[19] The settlement was first established on the banks of the Guadalupe River, at what is now the corner of Hobson and Vendome streets.[20] In 1849, San Jose served briefly as California's first capital. In the years following the Civil War, San Jose continued to grow. Trinity Episcopal Church, the City's oldest surviving religious building, was built in 1863 at the corner of Second and St. John Streets. In 1892, the City's first federal building, the old post office at 110 Market Street (which contains a portion of the current day San Jose Museum of Art) was completed. San Jose's first residential neighborhoods grew up around its downtown commercial core.[21,22]

San Jose was actively involved in the agriculture industry, which was of major importance to the Santa Clara Valley economy. When Louis Pellier successfully introduced the French prune to wild plums trees in his San Jose nursery, a new and vibrantly lucrative crop was created. During the 1930s and 1940s, approximately 25,000 men, women, and children found seasonal employment in San

[13] Wagner, J., 1978, op. cit.

[14] Moratto, Michael J., 1984. *California Archaeology*. Academic Press, Orlando.

[15] Levy, Richard, 1978. "Costanoan." In *California*, edited by Robert F. Heizer, pp. 485-495. Handbook of North American Indians, Volume 8; William C. Sturtevant, general editor. Smithsonian Institution, Washington D.C.

[16] Harrington, J.P., 1933. Report of Fieldwork. *Annual Report of the Bureau of American Ethnology for the Years 1931-1932.*

[17] Broadbent, Sylvia M., 1972. *The Rumson of Monterey: An Ethnography from Historical Sources.* Contributions of the University of California Archaeological Research Facility, Berkeley.

[18] Levy, 1978, op. cit.

[19] Gudde, Erwin G., 1998. *California Place Names: The Origin and Etymology of Current Geographical Names.*

[20] Hoover, et al., 1990. *Historic Spots in California.*

[21] Gudde, 1998, op. cit.

[22] Hoover, 1990, op. cit.

Jose's two dozen fruit canneries. Fruit production and processing continued to be the mainstay of San Jose's economy until the 1960s.[23]

San Jose has always been known for being on the cutting edge of developments in electronics. In 1909, the City was the site of a successful electronic endeavor: the world's first radio broadcast station was established at the corner of First and E. San Fernando Streets by Dr. Charles Herrold. In the years following World War II, the Santa Clara Valley experienced tremendous growth, with electronics, aviation, and semiconductor companies opening offices and factories in "Silicon Valley," creating thousands of jobs for returning military personnel, defense workers, and their families. San Jose was transformed from a market town with an agricultural economic base to a business and residential community known for its high-technology companies. The City has more high-tech firms than any other city in the world. Today San Jose has an ethnically diverse population of more than 900,000 and is a modern thriving city.[24]

d. Project Area History. During the Mission period from 1797 until 1834, the project area served as pastures for pigs. In 1842, the lands were granted to Roberto, a Christianized Indian of Mission Santa Clara. Rancho Los Coches was named for the pigs that formerly resided on the property. In 1857, the lands were sold to the Suñol family and Henry M. Naglee. The Suñols built an adobe, approximately ½ mile southwest of the project area, that is a local landmark.[25]

Henry M. Naglee subdivided his property, including the project area, into lots in 1860.[26] North Street (today's West San Fernando); South Street (today's Park Avenue); and East Street (today's South Montgomery Street) are depicted on Healey's 1860 map. The proposed project area contains two lots and portions of two additional lots. Lot 29 was bounded by North Street, South Street, East Street, and Los Gatos Creek to the east. Lots 27 and 28 were just west of Lot 29; today's Southern Pacific Railroad tracks would run through the center of Lot 27. Lot 62 was the southernmost lot and Southern Pacific Railroad tracks would also cross through the western portion of the lot. Through time, these lots were subdivided resulting in numerous small lots.

Naglee, a distinguished Civil War officer, did not build his home within the project area but chose what is today Naglee Park, from Eleventh Street to Coyote Creek. The project area was agricultural land with a few homes and little need for further subdivision. By 1876, the area was identified as being within San Jose's Fourth Ward and contained four buildings.[27] The 1884 Sanborn depicts several single-family dwellings, multi-family dwellings, a boarding house and outbuildings within the project area. Due to the rural location, few lots were further subdivided by 1891.[28]

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[23] Beilharz, Edwin A. and Donald O. DeMers, Jr., 1980. *San Jose, California's First City*. Continental Heritage Press, Tulsa, Oklahoma.

[24] City of San Jose, 2005. *About San Jose*. City of San Jose, California. http://www.sanjoseca.gov/about.html.

[25] Hoover, et al., 1990, op. cit.

[26] Healey Charles T., 1860. *Rancho de Los Coches Subdivision*. On file, California Room, San Jose Library, San Jose, California.

[27] Thompson and West, 1876. *Historical Atlas of Santa Clara County, California*. Thompson and West, San Francisco, California. Reprinted 1973 by Smith and McKay, San Jose.

[28] Sanborn Map Company, 1884. New York.

The project area and vicinity, known by various names including West End, West Side, and Crandallville, was just beyond the city limits. Crandall Street, approximately 700 feet north of the project area is named after Oliver L. Crandall. Crandall & Sons opened a grocery store, the first commercial enterprise within the vicinity, in the early1870s. The completion of the South Pacific Coast Railroad in 1877 led to additional development. The Southern Pacific Coast narrow gauge line ran from Alameda County through San Jose and on to Santa Cruz. The Westside Depot, also opened in 1877, was northwest of and adjacent to the project area. The same year, West San Fernando and South Montgomery streets were laid out. In 1891, Jacob Rich's First Street line constructed an extension for his electric trolley cars, along West San Fernando and north on Cahill to the Westside Depot.

In 1911, the project area, along with the Gardiner District, was the first area to be annexed to the City of San Jose since 1850.[29] According to Sanborn Insurance Maps and City Directories, the project area was residential while adjacent areas contained a mix of residential, commercial, and industrial enterprises. Project area residents included cannery workers, Southern Pacific engineers and workers, laborers, and warehouse workers.

The first industry within the project area was the 1889 Electric Improvement Company, and slowly, beginning in the 1930s, commercial and industrial buildings replaced residences. The increase in commercial and industrial development within the project area and vicinity was the result of new construction related to the Southern Pacific Depot (today's Diridon Station). Construction of Cahill Station, as it was originally named, and associated railroad tracks, tunnels and underpasses, began in 1928 and was completed in 1935. This Depression Era project was one of the largest railroad projects in the United States and added more than three million dollars to the local economy. The depot construction provided jobs at a time when many people were destitute.[30] By 1950, the project area was a mix of residential and industrial. The 1962 Sanborn Insurance Map depicts most of the current buildings in place. Several project area buildings were remodeled or demolished and replaced in the 1970s.

Street names and locations have changed through the years. In 1860, West San Fernando was called North Street, South Montgomery Street was East Street, and Park Avenue was South Street.[31] Otterson Street first appears on the 1891 Sanborn map. By 1915, Alamena Street (later changed to Pearl Street) appears south of Otterson Street; Gillespie Avenue extends south from West San Fernando in the same location as today's South Autumn Street. Gillespie Avenue did not connect with Park Avenue, as South Autumn does today, but ended at the southern boundary of today's 140 South Montgomery Street. Pearl Street is no longer extant and the South Autumn Street extension was completed by 1970.

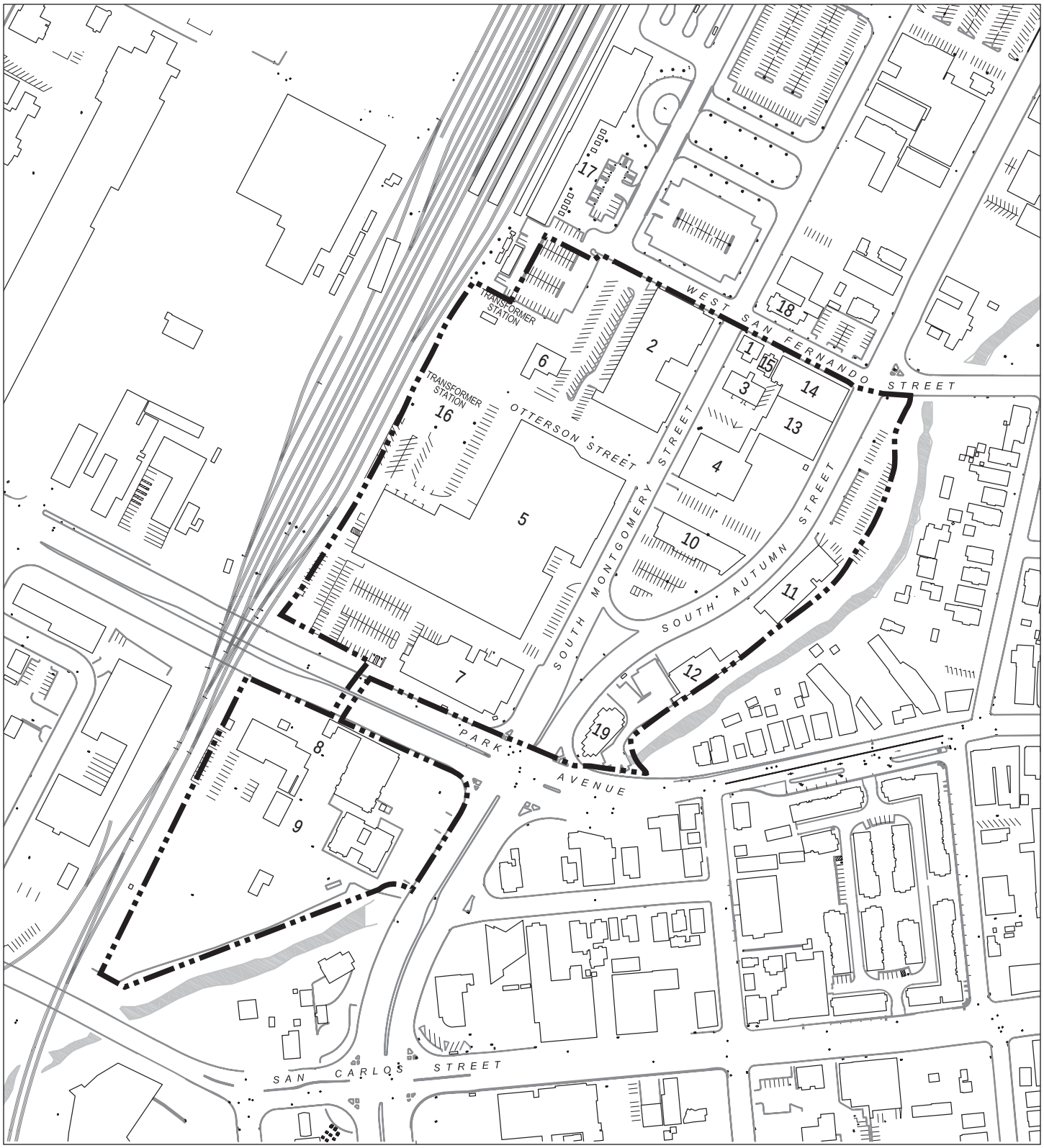
The section below discusses the project area by address.

630 W. San Fernando Street. (Figure V.J-1, #16) In 1889, the Electric Improvement Company occupied the same location as the current PG&E Substation. At that time the address was 17 Otterson Street. Two contending power companies operated in San Jose from the 1880s until they were merged

[29] Arbuckle, Clyde, 1986. *Clyde Arbuckle's History of San Jose*. Memorabilia of San Jose, San Jose.

[30] Gilbert, Lauren Miranda, and Bob Johnson, 2004. *San Jose's Historic Downtown.* Arcadia Publications, Charleston, South Carolina.

[31] Healey, 1860, op. cit.



LSA

FIGURE V.J-1

1 102 S. MONTGOMERY ST.
2 105 S. MONTGOMERY ST.
3 114 S. MONTGOMERY ST.
4 140 S. MONTGOMERY ST.
5 145 S. MONTGOMERY ST.
6 327 OTTERSON ST.
7 645 PARK AVE.
8 245 S. MONTGOMERY ST.
9 255 S. MONTGOMERY ST.
10 150 S. MONTGOMERY ST.
11 150 S. AUTUMN ST.
12 170 S. AUTUMN ST.
13 115 S. AUTUMN ST.
14 510 W. SAN FERNANDO ST.
15 530 W. SAN FERNANDO ST.
16 630 W. SAN FERNANDO ST.
19 595 PARK AVE.

ADJACENT BUILDINGS
17 65 CAHILL ST.
18 92-98 S. MONTGOMERY ST.

PROJECT BOUNDARY

N

0 150 300
FEET

Baseball Stadium in the Diridon/Arena Area

Project Area Buildings

BASE MAP SOURCE: CITY OF SAN JOSE

I:\SJO530 ballpark\figures\Fig_VJ1.ai (02/18/06)

in 1902 by the United Gas and Electric Company. In 1914, United Gas and Electric Company merged with PG&E.[32]

The substation is one of two such distribution substations in San Jose that transforms electrical voltage to a lower voltage for business and residential use. Originally the substation also provided power for urban and interurban car lines, and continues to be in use today. Although PG&E has occupied the same property for almost 100 years, structural components of the facility have been continuously upgraded. No buildings are associated with the substation; the property contains multiple modern transformers situated between West San Fernando Street and extending south past Otterson Street.

102 S. Montgomery Street. (Figure V.J-1, #1) The second commercial operation within the project area was also constructed in the late 1800s.[33] The Italianate Commercial building was a store sheathed with channel rustic siding and a hipped roof with closed eaves appearing much as it does today. Benjamin Ouimet (spelled Quimet in some documents) owned the parcel of property that includes 530 West San Fernando Street (see below). Oiumet had a grocery store that he operated until the 1930s.[34] In the late 1930s, the building was a tavern called Patty's, although the owner was Adolph Krickeberg, the grandfather of the current owner. Krickeberg, a local rancher, reopened the pub after Prohibition. During Prohibition, the building served as a voting precinct. Krickeberg's clientele included cannery workers, train crew, and warehouse workers that lived and worked nearby.[35]

Other names and uses associated with the building are the O'Neill & Krickeberg liquor store in the late l930s and early 1940s, and a restaurant operated by J.B. Corda in the 1950s. Since the 1960s the building has been a tavern or bar, with names including Depot Inn Tavern, Cordas Restaurant and Tavern, and Patty's Inn.

530 W. San Fernando Street. (Figure V.J-1, #15) The only remaining residence within the project area is on the same parcel as Patty's Inn (see above, 102 South Montgomery Street). Property owner and building contractor Ben Ouimet applied for City of San Jose Building Permit number 158 on January 28, 1924. The building permit states the building was a four room 1-story residence, 10- by 12-feet, with a concrete foundation, plastered interior, tar and gravel roof, and outside walls to be 2- by 4-foot rustic partitions. The estimated cost to build the residence was $1,900. The building permit line for listing the name of an architect was blank.

The residence is a typical bungalow available by mail order or in architectural pattern books, built during a period when the City was expanding westward from its historic core. The residence has been occupied by renters for many years.[36]

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[32] Arbuckle, Clyde, 1986. *Clyde Arbuckle's History of San Jose*. Memorabilia of San Jose, San Jose.

[33] Foster, Stason I., and Ron L. Helm, 2005a. *Phase I Environmental Site Assessment 102 South Montgomery Street and 530 West San Fernando Street, San Jose, California.* Lowney Associates, Mountain View, California.

[34] Polk and Husted, 1925-34. *San Jose City Directories 1925-1934.* On file at the California Room of the San Jose Library, San Jose.

[35] Hazle, Maline, 1993. Historic S.J. Pub Burns. *San Jose Mercury*, 20 December 1993:1B, 8B. San Jose, California.

[36] Foster, Stason I., and Ron L. Helm, 2005. *Phase I Environmental Site Assessment 102 South Montgomery Street and 530 West San Fernando Street, San Jose, California.* Lowney Associates, Inc., Mountain View, California.

140 S. Montgomery Street. (Figure V.J-1, #4) The Gillespie Lumber Yard was between S. Montgomery Street and S. Autumn Street in the same location as today's 140 S. Montgomery Street.[37] Harold Hellwig, who owned the adjacent ironworks company at 150 South Montgomery Street, purchased the property in 1936. Hellwig constructed a new building in 1948 that was replaced in 1977. ARC Gas Products Inc. currently occupies the building.

150 S. Montgomery Street. (Figure V.J-1, #10) The Gillespie Lumber Yard (see above) extended from 140 South Montgomery Street into this property until the 1930s. Reinhard Hellwig established an ironworks in San Jose in 1871. Harold, possibly a son or nephew, worked at Reinhard's shop until the late 1920s when he established his own shop at 577 West Santa Clara Street. After 1935 Harold moved his Hellwig Ironworks to 150 South Montgomery Street and constructed a two-story Minimal Traditional style "clinker" brick building circa 1935 (Foster and Helm 2005b).[38] Hellwig applied for City of San Jose Building Permit number 2614 on November 27, 1934. The permit states the building was a one-story, type III industrial building, to be used as an iron shop. The estimated cost to build the iron shop was $13,000. The building permit line provided for listing the name of an architect was blank. In 1951, Hellwig added an extension to the western side of the building. The building permit lists the addition as a machine shop and Hellwig listed himself as the contractor/agent.

Hellwig's ironworks and machine shop moved from the building in the early 1960s and in 1969 it was renovated by Navlet's Florist for a wholesale flower market. The eastern portion of the building extended across today's South Autumn Street and into the southern portion of 150 South Autumn Street. That eastern portion of the building was removed in 1969 when South Autumn Street was realigned and became a throughway between Park Avenue and West San Fernando Street.

By 1991, portions of the building were converted to office use but most of the building continued to serve as a warehouse. Currently, Anno Domini Gallery occupies the western portion of the building and Pacific Traders occupies the eastern portion of the building.

145 S. Montgomery Street. (Figure V.J-1, #5) In 1933, Allen T. Gilliland, Sr., and his wife paid $3,000 for the assets of a bankrupt San Jose bakery which came to be called the Sunlite Baking Company. On August 31, 1936, the Sunlite Baking Company applied for City of San Jose Building Permit number 4176, for a 1-story, type V business building, to be occupied as a bakery. The estimated cost to build the bakery was $22,000. History San Jose archives contain some plans of architectural details by Ralph Wyckoff for the Sunlite Baking Company. Wyckoff is also the listed architect on the 1943 bakery addition permit. Other buildings designed by Wyckoff include the 1933 San Jose Post Office, which is listed in the National Register; the Spanish Colonial-style Science Building at San Jose State University; and downtown commercial buildings including the San Jose National Bank Building at Market and Santa Clara Streets, and the Moderne Drugstore Building at 2nd and Santa Clara Streets.

The bakery building is a one-story Moderne board-formed concrete industrial building with a flat roof with a parapet and a scalloped cornice. Covered by a cantilevered canopy, the entrance is in a projecting stepped-front piece that features vertical fluting. The double-hung industrial metal sash windows are in recessed panels separated by fluted pilasters. The central projecting block has triple

[37] Sanborn Map Company, 1915. *San Jose, Cal.* Sanborn Map Company, New York.

[38] Foster, Stason I., and Ron L. Helm, 2005. *Phase I Environmental Site Assessment 150 South Montgomery Street, San Jose, California.* Lowney Associates, Inc., Mountain View, California.

banks of windows with enriched blind arches that flank the frontispiece. A bay on the south end of the east front façade is filled with glass brick.

By the mid-1950s, the company was one of the largest Santa Clara County bakeries.[39] The company expanded the bakery and constructed a bread depot across the street at 327 Otterson Street (see below) as depicted on the 1962 Sanborn Insurance Map.

Upon the death of his father, Allen Gilliland, Jr. took over the operation of the company, which included San Jose's first television station, KNTV-Channel 11. Gilliland sold the bakery in 1966 and maintained ownership of the television station.[40] Pacific Telephone and Telegraph Company purchased the single-story Moderne industrial building in the 1970s and converted the buildings' interiors for the telephone industry. The interior has been extensively remodeled to accommodate telephone companies. SBC Communications currently occupies the building.

327 Otterson Street. (Figure V.J-1, #6) This property is adjacent to the PG&E substation. No city records for the address or parcel number are available. The 1915 and 1950 Sanborns depict an office in the approximate location of the current building. This building was probably associated with the PG&E substation since the surrounding area was vacant or residential. The 1962 Sanborn depicts the current building, as a 'bread depot' that would have been associated with the Sunlite Baking Company, across the street (see above). The building appears to have been extensively remodeled or rebuilt in the 1970s. Pacific Bell Fleet Management currently occupies the building.

105 S. Montgomery Street. (Figure V.J-1, #2) This property was residential until the late 1940s. City directories indicate the first commercial building within what is currently the Stephen's Meats complex was occupied by Milligan News Agency, a wholesale magazine distributor. The Milligan News agency building, then 123 South Montgomery Street and currently the southernmost building within the Stephen's Meat Products complex, was in use in 1947 when the northern portion of the complex was still residential. The original Stephen's Meat Products building was constructed in the northernmost portion of the property in the late 1940s by Stephen Pizzo.[41] References to Stephen's Meat Products first appeared in city directories in 1949. The neon sign reading "Pure Pork Sausage Stephen's Meat Products" on South Montgomery Street was also erected in the late 1940s.

The Milligan News Agency constructed a second magazine warehouse in the mid-1950s. Stephen's Meat Products purchased the two magazine buildings in the 1960s and, in 1964, the buildings were converted for meat processing. A. John Novelli, an Oakland engineer, designed the plans for the expansion and facility conversion. The buildings contain four original brick smokehouses. In 2002, the business converted from meat processing to meat distribution. Currently, the buildings are vacant.

510 W. San Fernando Street, 114 S. Montgomery Street, and 115 S. Autumn Street. (Figure V.J-1, #14, #13, #3) The large parcel that contains these properties was residential in the late 1800s. Two commercial buildings had been constructed on the eastern portion of the property by 1939. The northern building, in the same location as 510 West San Fernando Street and 115 South Autumn Street,

[39] Arbuckle, Clyde, 1986, op. cit.

[40] Ibid.

[41] Foster, Stason I., and Ron L. Helm, 2005. *Phase I Environmental Site Assessment 105 South Montgomery Street and 530 West San Fernando Street, San Jose, California.* Lowney Associates, Inc., Mountain View, California.

was occupied by the Pacific Telephone and Telegraph Company. An artificial stone manufacturing operation occupied the southern building that is currently an open storage area. The building was demolished between 1974 and 1982.[42] The 1950 Sanborn continued to depict a dwelling at 114 South Montgomery Street.

The Butcher Electric Company building at 510 West San Fernando Street was built in 1943 by Roy Butcher. Butcher founded his electric company in 1914 and received California's fourth electrical contractor license. The company was one of the largest electric companies in Santa Clara Valley.[43] Butcher Electric conducted business on West San Fernando Street from 1946 until 1992. Two other buildings are associated with Butcher Electric Company: both buildings are one-story industrial warehouses. The building at 115 South Autumn Street was constructed in 1948 to be used as an electric shop, and the building at 114 South Montgomery Street was constructed in 1952 as an electrical supply warehouse. Due to several additions to the 510 West San Fernando Street and 115 South Autumn Street buildings, they appear to be a single structure from the exterior. City of San Jose building permits for the properties include a 1957 office addition, a 1959 motor shop addition, and a $30,000 exterior remodel in 1971.

Butcher Electric ceased operations within the project area in 1992 and currently leases the buildings to Amtrak. Amtrak has remodeled the interiors of the buildings since their occupancy began.

645 Park Avenue. (Figure V.J-1, #7) The western portion of the property was residential until 1955. The eastern portion of the property remained residential until 1965.

The KNTV building was constructed in 1955[44] by Allen T. Gilliland, the founder of Sunlite Baking Company. The bakery was north and adjacent to the TV studio. Gilliland planned on using the new concrete block building as a garage for his bakery if the TV station failed, since the television industry was not fully established and there were concerns that TV was a passing fad. KNTV's first broadcast was on September 12, 1955[45] and, as a result of Gilliland's foresight to establish the first TV station in the South Bay, San Jose had a TV station that continues successfully to this day.

The station became an affiliate of ABC in 1960, the same year Gilliland died. His son continued the station, and remodeled and added to the building in 1965. In 1968, Gilliland began the San Jose Cable TV system and continued operating KNTV. The station was sold in 1978 and another building addition was made in 1980.[46] KNTV3 no longer occupies the building.

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[42] Foster, Stason I., and Ron L. Helm, 2005. *Phase I Environmental Site Assessment 510 West San Fernando Street and 115 South Autumn Street, San Jose, California.* Lowney Associates, Inc., Mountain View, California.

[43] Arbuckle, 1986, op. cit.

[44] Foster, Stason I., and Ron L. Helm, 2005. *Phase I Environmental Assessment 645 Park Avenue, San Jose, California*. Lowney Associates, Inc., Mountain View, California.

[45] San Jose Mercury News, 1955. Station KNTV Starts Telecasting Today. *San Jose Mercury News*, 12 September 1955:1. San Jose, California.

[46] Hill, Ward. Department of Parks and Recreation DPR523 form for P-43-001285, the KNTV Building. On file, Northwest Information Center, California Historical Resources Information System, Sonoma State University, Rohnert Park, California.

595 Park Avenue. (Figure V.J-1, #19) This multi-tenant commercial office building was built in 1983.

150 S. Autumn Street. (Figure V.J-1, #11) The 1891 Sanborn Insurance Map depicts a dwelling and outbuildings within this property. In 1915, the property was occupied by United States Laundry (Foster and Helm 2005f). The laundry's address was 496 West San Fernando Street. In the 1930s, Consolidated Laundry owned the property and added a second building. In 1972, the address was changed and a new one-story building was constructed. Yoshihiro Uchida, a San Jose entrepreneur,[47] owned the building from 1972 until 1984. The property was rented and occupied as a physician's laboratory and medical office beginning in the 1970s. Currently the building is used for office space.

The eastern portion of Harold Hellwig's circa 1935 building at 150 South Montgomery Street extended into the southern portion of this property. That eastern portion of the building was removed by 1970 when South Autumn Street was realigned and became a throughway between Park Avenue and West San Fernando Street.

170 S. Autumn Street. (Figure V.J-1, #12) South Autumn Street was not constructed adjacent to this property until the 1970s. South Montgomery Street properties extended into this property and, until the 1950s, contained sheds and outbuildings.[48] In the 1950s, a taxi and towing business building was constructed. The building was demolished in 1968, when the current building was constructed. The building was an auto parts and machine shop until the early 1990s and is currently Carquest Auto Parts.

245 S. Montgomery Street and 255 S. Montgomery Street. (Figure V.J-1, #8, #9) Hiram Cahill built a home within this property and in 1860 sold the land to the City. The house became the Infirmary until City residents complained about the proximity of the "pest house". The Infirmary was closed in 1871. Sanborn maps indicate these properties were vacant in 1884, and residential in 1891 and 1915. The 1950 Sanborn map depicts the Pacific Truck Service Inc. building at 245 South Montgomery Street, and its truck service yard at 255 South Montgomery Street. The San Jose Fire Department buildings currently at the addresses were built in 1976. The San Jose Fire Department Field Operations building is at 255 South Montgomery Street and 245 South Montgomery Street is the General Services Vehicle Maintenance building.

e. Development Adjacent to the Project Area. Areas adjacent to the project area had development patterns similar to that of the project area. The area north of West San Fernando is currently a mix of residential and commercial buildings. The areas south and west of the project area are primarily commercial. The area east of Los Gatos Creek, however, continues to be a residential area.

The Delmas Park neighborhood, which includes the Lakehouse and the Auzerais/Bird residential areas, is east and southeast of the project area on the east side of Los Gatos Creek.

[47] Foster, Stason I., and Ron L. Helm, 2005. *Phase I Environmental Site Assessment 150 South Autumn Street, San Jose, California.* Lowney Associates, Inc., Mountain View, California.

[48] Foster, Stason I., and Ron L. Helm, 2005. *Phase I Environmental Site Assessment 170 South Autumn Street, San Jose, California.* Lowney Associates, Inc., Mountain View, California.

The Southern Pacific Railroad tracks have been at their location (the western boundary of the project area) since 1878, when the line was extended south to Los Gatos from San Jose. The Westside Depot, northwest and adjacent to the project area, was built at the same time and provided access to project area. In 1935, the Cahill Station replaced the original small depot. The Southern Pacific Railroad depot or Diridon Station, the former Cahill Station, has been listed in the National Register of Historic Places since 1993.

East of Los Gatos Creek is a residential area containing Queen Anne style residences constructed between 1892 and 1898. The City has approved plans for a commercial/residential development immediately northeast of the project area that includes recommendations for the treatment of two architectural resources within that project area. One resource, the 1919 San Jose Water Works building, was determined eligible for the National Register and meets the requirements for the City of San Jose's City Landmark classification. Mitigation recommendations require maintaining and rehabilitating the building in place or moving the building to another location within the current parcel. The second resource, a circa 1890s Queen Anne Style residence (45 Delmas Avenue), is not eligible for listing in the California Register but does meet the requirements for classification as a City of San Jose Structure of Merit classification. Recommendations, subject to City determination, included salvaging and relocating features of the residence, and photo documentation of the building. [49]

Southwest of the project area are several California Packing Company (Calpak) and Del Monte fruit processing plants. These canneries were constructed between the 1890s and 1940s. The City has approved plans for a residential development that includes demolition of Del Monte/Calpak Plant #3 at 801 Auzerais Avenue. Plant #3 operated from 1917 until 1999. The plant was designated a Structure of Merit in 1992 and currently appears to be a Candidate City Landmark.[50] The property also appears eligible for listing in the National Register as a contributor to a potential multi-property historic district containing seven San Jose Del Monte canneries.[51]

The most recent addition to the area was the HP Pavilion at San Jose at 525 West Santa Clara Street, one city street north of the project area. The pavilion was completed in 1993 and hosts San Jose Sharks games as well as visiting entertainers.

f. Known Cultural Resources. Known cultural and archaeological resources in the project area are discussed below.

(1) Previously-Identified Resources. There are five previously-identified resources within the project area, and two previously-identified resources adjacent to the project area.

The *City of San Jose Historic Resources Inventory* lists the following buildings in the project area:

145 S. Montgomery Street, Structure of Merit;
150 S. Montgomery Street, Structure of Merit;

[49] Hill, Ward, 2002. *Historic Evaluation Report, San Jose Water Works, Delmas Avenue Project, City of San Jose, Santa Clara County, California*. Basin Research Associates, San Leandro, California.

[50] Page and Turnbull, Inc., 2004. *Del Monte Plant #3 Historic Resource Evaluation and Re-Use Study*. San Francisco, California.

[51] Archives and Architecture, 1998 *Historical and Architectural Evaluation for Del Monte Plant #51 at 50 Bush Street in the City of San Jose, County of Santa Clara*. San Jose, California.

645 Park Avenue, Structure of Merit;
102 S. Montgomery Street, Identified Structure; and
530 W. San Fernando Street, Identified Structure.

The *City of San Jose Historic Resources Inventory* lists the following buildings adjacent to the project area.

65 Cahill Street, a City Landmark, and listed in the National Register; and
92-98 S. Montgomery Street, Identified Structure.

(2) Archaeological Sensitivity. The project area is sensitive for the presence of possibly-significant prehistoric and historical archaeological deposits.

Prehistoric Archaeological Sensitivity. Although no prehistoric archaeological sites have been recorded in or adjacent to the project area, human occupancy and use of the general area spans 5,000 to 7,000 years before present, and possibly longer. Adjacent Los Gatos Creek, which seasonally floods, indicates that the project area has a moderate to high sensitivity for the presence of prehistoric archaeological deposits, possibly beneath flood-deposited soils. Numerous prehistoric archaeological sites are documented in similar environmental contexts in Santa Clara Valley. Also, the general vicinity of the project area offered early inhabitants a diversity of rich ecological communities from which to gather necessary plant and animal resources.

Historical Archaeological Sensitivity. The project area's sensitivity is indicated by numerous buildings depicted on Sanborn maps. While many of these buildings are no longer present in the project area, associated subsurface archaeological deposits may be present. Such deposits may include privies, trash pits, or structural remains associated with the businesses and homes, and may contain important information about several periods in San Jose's historical development.

The *acequia*, San Jose's original irrigation system, ran through the original downtown San Jose area. It is unlikely remains of the *acequia* extend into the project area since City limits were east of the project area.

g. Regulatory Context. The sections below briefly discuss laws, codes, and regulations applicable to cultural resources within the City of San Jose.

(1) California Environmental Quality Act. CEQA defines a "historical resource" as a resource which is listed in or determined eligible for listing on the California Register (California Register), listed in a local register of historical resources (as defined at PRC 5020.1(k)), identified as significant in a historical resource survey meeting the requirements of section 5024.1(g) of the Public Resources Code, or determined to be a historical resource by a project's lead agency (§15064.5(a)). A historical resource consists of "Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California…. Generally, a resource shall be considered by the lead agency to be 'historically significant' if the resource meets the criteria for listing on the California Register of Historical Resources" (§15064.5(a)(3)). The California Environmental Quality Act (CEQA) states that a substantial adverse change in the significance of a historical resource is a significant effect on the environment (§15064.5(b)).

CEQA applies to effects on archaeological sites (§15064.5(c)). A Lead Agency applies a two-step screening process to determine if an archaeological site meets the definition of a historical resource, a unique archaeological resource, or neither. Prior to considering potential impacts, the Lead Agency must determine whether a cultural resource meets the definition of a historical resource in §15064.5(a). If the cultural resource meets the definition of a historical resource, then it is treated like any other type of historical resource in accordance with §15126.4. If the cultural resource does not meet the definition of a historical resource, then the Lead Agency applies the second screen to determine if the resource meets the definition of a unique archaeological resource as defined in §21083.2(g). Should the archaeological site meet the definition of a unique archaeological resource, then it must be treated in accordance with §21083.2. If the archaeological site does not meet the definition of a historical resource or a unique archaeological resource, then effects to the site are not considered significant effects on the environment (§15064.5(c)(4)).

(2) Local Programs. The City of San Jose is a "Certified Local Government" which qualifies its historic preservation program for technical and financial assistance from the California Office of Historic Preservation. The City's Historic Preservation Ordinance (Municipal Code Chapter 13.48), adopted in 1975, authorizes San Jose to maintain an inventory of historic resources, establish a historic landmarks commission, preserve historic properties using a landmark designation process, require historic preservation permits for additions or alterations to designated City Landmarks or buildings within City Historic Districts, and provide financial incentives through the Historic Property Contracts program.[52,53]

(3) San Jose 2020 General Plan Policies. San Jose's General Plan reaffirms the City's commitment to preserve its cultural heritage. The following policies from the Historic, Archaeological and Cultural Resources sub-section of the Aesthetic, Cultural and Recreational Resources Element of the General Plan:

Aesthetic, Cultural and Recreational Resources

- *Historic, Archaeological and Cultural Resources Policy 5*: New development in proximity to designated historic landmark structures and sites should be designed to be compatible with the character of the designated historic resources. In particular, development proposals located within the Areas of Historic Sensitivity designation should be reviewed for such designed sensitivity.
- *Historic, Archaeological and Cultural Resources Policy 8:* For proposed development sites which have been identified as archaeologically sensitive, the City should require investigation during the planning process in order to determine whether valuable archaeological remains may be affected by the project and should also require that appropriate mitigation measures be incorporated into the project design.
- *Historic, Archaeological and Cultural Resources Policy 9:* Recognizing that Native American burials may be encountered at unexpected locations, the City should impose a requirement on all development permits and tentative subdivision maps that upon discovery of such burials during construction, development activity will cease until professional archaeological examination and reburial in an appropriate manner is accomplished.

[52] San Jose Department of City Planning and Building, 1995. *What is Historic Preservation?*

[53] San Jose Department of Planning, Building and Code Enforcement, 2000a. *Incentives for Ownership of a Designated City Landmark*.

2. Impacts and Mitigation Measures

Implementation of the proposed project has the potential to impact cultural resources. Significance criteria, the potential impacts of several components of the proposed project, and recommended mitigation measures are described below.

a. Criteria of Significance. Significance thresholds based on the *CEQA Guidelines* for cultural resources are presented below, followed by a description of the evaluation criteria and process used for possibly significant historic properties.

(1) Cultural Resources Criteria of Significance. The proposed project would have a significant effect on cultural resources if it would:

- Result in the physical demolition, destruction, relocation, or alteration of a historical resource that is eligible for listing on the California Register, listed in a local register of historical resources (as defined at PRC 5020.1(k)), identified as significant in a historical resource survey meeting the requirements of §5024.1(g) of the Public Resources Code, or determined to be a historical resource by the City of San Jose (§15064.5(a));
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; or
- Disturb any human remains, including those interred outside of formal cemeteries.

(2) Historic Properties Significance Criteria. Properties in the City of San Jose are evaluated for historic significance using the criteria established under the National Register of Historic Places (National Register), the California Register of Historical Resources (California Register), and the City of San Jose historic evaluation criteria.

i. National Register of Historic Places Criteria. The National Register considers the quality of significance in American history, architecture, archeology, engineering, and culture that is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

Criterion A: that are associated with events that have made a significant contribution to the broad patterns of our history; or

Criterion B: that are associated with the lives of persons significant in our past; or

Criterion C: that embody the distinctive characteristics of a type, period, or method of construction, or that represents the work of a master, or that possesses high artistic values, or that represents a significant and distinguishable entity whose components may lack individual distinction; or

Criterion D: that have yielded, or may be likely to yield, information important in prehistory or history.

ii. California Register of Historical Resources Criteria. Properties in the City of San Jose that are evaluated for historical significance are also considered under the criteria of the California Register. The significance criteria are generally parallel to those used by the National Register, but are oriented to document the unique history of California. The California Register consists of

resources that are listed automatically, under the provisions of Public Resources Code §5024.1 (which are listed in or eligible for the National Register or State Historical Landmarks numbered 770 or greater), and those that may be listed by application and acceptance by the California Historical Resources Commission.

In order for a resource to be eligible for listing in the California Register of Historical Resources, a building, site or object must meet the following standards:

A property must be significant at the local, state or national level, under one or more of the following criteria:

Criterion 1:	It is associated with events or patterns of events that have made a significant contribution to the broad patterns of California's history and cultural heritage; or
Criterion 2:	It is associated with the lives of persons important in our past; or
Criterion 3:	It 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
Criterion 4:	It has yielded, or may be likely to yield, information important in prehistory or history.

"All resources nominated for listing must have integrity, which is the authenticity of a historical resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance. Resources, therefore, must retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance. Integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling and association. It must also be judged with reference to the particular criteria under which a resource is proposed for nomination."[54]

iii. City of San Jose Historic Preservation Ordinance and Evaluation Procedures. Under the City of San Jose Historic Preservation Ordinance (Chapter 13.48 of the Municipal Code), preservation of historic landmarks and districts is promoted in order to stabilize neighborhoods and areas of the city; to enhance, preserve and increase property values; carry out the goals and policies of the city's general plan; increase cultural, economic, and aesthetic benefits to the city and its residents; preserve, continue, and encourage the development of the city to reflect it's historical, architectural, cultural, and aesthetic value or traditions; protect and enhance the city's cultural and aesthetic heritage; and to promote and encourage continued private ownership and utilization of such structures. Buildings and sites that qualify based on historical, architectural, cultural, aesthetic and engineering interest or value are evaluated according to the following criteria:

1. Identification or association with persons, eras or events that have contributed to local, regional, State or national history, heritage or culture in a distinctive, significant or important way;

[54] California Office of Historic Preservation, 1999:1. *California Register of Historical Resources: The Listing Process.* California Office of Historic Preservation, Sacramento.

2. Identification as, or association with, a distinctive, significant or important work or vestige:
   a. of an architectural style, design or method of construction;
   b. of a master architect, builder, artist or craftsman;
   c. of high artistic merit;
   d. the totality of which comprises a distinctive, significant or important work or vestige whose component parts may lack the same attributes;
   e. that has yielded or is substantially likely to yield information of value about history, architecture, engineering, culture or aesthetics, or that provides for existing and future generations an example of the physical surrounds in which past generations lived or worked; or
   f. that the construction materials or engineering methods used in the proposed landmark are unusual or significant or uniquely effective.

The factor of age alone does not necessarily confer a special historical, architectural, cultural, aesthetic, or engineering significance, value or interest upon a structure or site, but it may have such effect if a more distinctive, significant or important example thereof no longer exists.

A historic district may be established if the City Council finds that the following criteria are satisfied: (1) that said proposed historic district is a geographically definable area of urban or rural character, possessing a significant concentration or continuity of site, buildings, structures or objects unified by past events or aesthetically by plan or physical development, and (2) the district has special historical, architectural, cultural, aesthetic or engineering interest or value of an historical nature.

b. Less-than-Significant Cultural Resource Impacts. Less-than-significant impacts of the proposed project are discussed below.

Fourteen buildings and one structure (listed below) within the project area do not meet the significance criterion or lack the integrity or age requirement to be listed in the National or California registers, and do not appear to be eligible as City of San Jose City Landmarks or Candidate City Landmarks.

A brief synopsis listing why each of the fifteen buildings and one structure are not historical resources as defined by CEQA, and therefore need no impact mitigation or preservation, is presented below. One adjacent building (#18) is included in the list. Building numbers refer to the numbers on Figure V.J-1.

1. 102 S. Montgomery Street
   Does not meet any of the eligibility criterion
   Lacks integrity

2. 105 S. Montgomery Street
   Does not meet any of the eligibility criterion
   Lacks integrity

3. 114 S. Montgomery Street
Secondary building
Does not convey the significance of the Butcher Electric Company

4. 140 S. Montgomery Street
Does not meet the age requirement; built in 1977

5. 145 S. Montgomery Street
Lacks integrity

6. 327 Otterson Street
Secondary building
Lacks integrity

8. 245 S. Montgomery Street
Does not meet the age requirement; built in 1976

9. 255 S. Montgomery Street
Does not meet the age requirement; built in 1976

10. 150 S. Montgomery Street
Lacks integrity

11. 150 S. Autumn Street
Does not meet the age requirement; built in 1972

12. 170 S. Autumn Street
Does not meet the age requirement; built in 1970

13. 115 S. Autumn Street
Lacks integrity

14. 510 W. San Fernando Street
Lacks integrity

15. 530 W. San Fernando Street
Does not meet any of the eligibility criterion

16. 630 W. San Fernando Street
Lacks integrity

18. 92-98 South Montgomery Street
Does not meet any of the eligibility criterion

19. 595 Park Avenue
Does not meet the age requirement; built in 1983

In addition, there are not enough cohesive elements within the project site to constitute a historic district. As noted above, and described in greater detail in Appendix G, many of the buildings constructed in the 1930s and 1940s have been demolished and replaced by 1970s buildings or have been expanded or remodeled. Older structures on the site do not meet any of the eligibility criterion or they lack integrity.

This EIR will be referred to the Historic Landmarks Commission for review and comment.

c. Significant Cultural Resources Impacts and Mitigation Measures. Five significant impacts are evaluated below.

(1) Cultural Resources. Impacts CULT-1 through CULT-4 relate to cultural resources. Impact CULT-5 relates to paleontological resources.

<u>Impact CULT-1</u>: The KNTV Broadcast Facility, 645 Park Avenue, appears eligible for listing in the California Register and as Candidate for City Landmark (CCL) and would sustain direct impacts due to the proposed project. (S)

Since the building is the birthplace of TV in San Jose, is still identified as the KNTV building, and continues to house TV station KNTV3, the building appears eligible for the California Register. Preservation in place is always the preferred mitigation measure for such a historic resource; however, the building must be removed for construction of the proposed stadium. Four mitigation measures are included below. Mitigation Measure CULT-1a shall be undertaken in conjunction with Mitigation Measure CULT-1b, 1c or 1d. Implementation of Mitigation Measures CULT-1b, Relocation, or CULT-1c, Incorporation, would reduce this significant impact to a less-than-significant level. Implementation of CULT-1d, Salvage, would *not* reduce this significant impact to a less-than-significant level.

> <u>Mitigation Measure CULT-1a</u>: **Documentation.** The building shall be documented to Historic American Buildings Survey (HABS) Level 3 standards, according to the Outline Format described in the *Historic American Buildings Survey Guidelines for Preparing Written Historical Descriptive Data*.[55] Photographic documentation shall follow the *Photographic Specifications – Historic American Building Survey,* including 15-20 archival quality large-format photographs of the exterior and interior of the building and its architectural elements. Construction techniques and architectural details shall be documented, especially noting the measurements of structural members, hardware, and other features that tie the architectural elements to a specific date. A copy of the documentation, with original photo negatives and prints, shall be placed in a historical archive or history collection accessible to the general public. Five copies of the documentation with archival photographs shall be produced for distribution to local and regional repositories. One copy shall be provided to the Northwest Information Center of the California Historical Resources Information System, Sonoma State University, Rohnert Park, California. A brochure shall also be prepared that includes a brief historical overview and photographs of the buildings and is made available for distribution to local libraries, museums, and schools.

[55] Pacific Coast Basin Regional Office, U.S. National Park Service 1993.

If only documentation were undertaken for mitigation, impacts to this resource would be significant unavoidable. (SU)

and

Mitigation Measure CULT-1b: **Relocation.** If feasible, the building shall be stabilized and relocated to another nearby site appropriate to its historic character. After relocation, preservation, rehabilitation, and restoration, as appropriate, shall follow the Secretary of the Interior's Standards[56] to ensure that the building retains its integrity and historical significance. (LTS)

or

Mitigation Measure CULT-1c: **Incorporation.** If preservation or relocation is not possible, the building, or portions thereof, shall be incorporated into the ballpark to the extent feasible, following the Secretary of the Interior's Standards[57] to ensure that the building retains its integrity and historical significance.[58] (LTS)

or

Mitigation Measure CULT-1d: **Salvage.** If relocation, preservation, or incorporation are not possible, the building shall be offered to an appropriate agency or museum, such as History San Jose, for salvage of its architectural elements. (SU)

Impact CULT-2: The Sunlite Baking Company building, 145 South Montgomery, appears eligible for listing in the National and California registers and as a Candidate City Landmark and would sustain direct impacts due to the proposed project. (S)

Preservation in place is always the preferred mitigation measure for such a historic resource; however, the building must be removed for construction of the proposed stadium. Incorporation in the project is not feasible because the building would be located in the middle of the ballpark playing field. Architectural documentation, relocation, and salvage are mitigation options for this resource. Architectural documentation can be used to lessen the severity of impacts to architectural historical resources by recording architecturally significant features that justify the resource's California Register eligibility. Relocation can be undertaken to maintain a resource's California Register eligibility, and thereby reduce the severity of impacts, provided that the following conditions are met: (1) the resource is relocated to prevent its destruction; and (2) the resource, in its new location, retains its historic features and compatibility in orientation, setting, and general environment.[59] Salvage can reduce potential impacts by removing distinctive architectural elements for reuse in other projects.

[56] U.S. Department of the Interior, Office of the Secretary 1990

[57] Ibid.

[58] PETCO Park in San Diego successfully incorporated the 95 year-old Western Metal Supply Company building into their ballpark.

[59] California Office of Historic Preservation, 1999, p. 3. *California Register and National Register: A Comparison.* Technical Assistance Series 6. California Department of Parks and Recreation, Sacramento.

Three mitigation measures are included below: Mitigation Measure CULT-2a (Documentation), CULT-2b (Relocation) and CULT-2c (Salvage). Mitigation Measure CULT-2a shall be undertaken in conjunction with Mitigation Measure CULT-2b or 2c. Implementation of Mitigation Measures CULT-2a and CULT-2b would reduce this significant impact to a less-than-significant level. Implementation of CULT-2c would *not* reduce this significant impact to a less-than-significant level.

> Mitigation Measure CULT-2a: **Documentation.** The building shall be documented to Historic American Buildings Survey (HABS) Level 3 standards, according to the Outline Format described in the *Historic American Buildings Survey Guidelines for Preparing Written Historical Descriptive Data*.[60] Photographic documentation shall follow the *Photographic Specifications – Historic American Building Survey,* including 15-20 archival quality large-format photographs of the exterior and interior of the building and its architectural elements. Construction techniques and architectural details shall be documented, especially noting the measurements of structural members, hardware, and other features that tie the architectural elements to a specific date. A copy of the documentation, with original photo negatives and prints, shall be placed in a historical archive or history collection accessible to the general public. Five copies of the documentation with archival photographs shall be produced for distribution to local and regional repositories. One copy shall be provided to the Northwest Information Center of the California Historical Resources Information System, Sonoma State University, Rohnert Park, California. A brochure shall also be prepared that includes a brief historical overview and photographs of the buildings and is made available for distribution to local libraries, museums, and schools.
>
> If only documentation were undertaken for mitigation, impacts to this resource would be significant unavoidable. (SU)
>
> *and*
>
> Mitigation Measure CULT-2b: **Relocation.** If feasible, the building shall be stabilized and relocated to another nearby site appropriate to its historic character. After relocation, preservation, rehabilitation, and restoration, as appropriate, shall follow the Secretary of the Interior's Standards[61] to ensure that the building retains its integrity and historical significance. (LTS)
>
> *or*
>
> Mitigation Measure CULT-2c: **Salvage.** If relocation is not possible, the building shall be offered to an appropriate agency or museum, such as History San Jose, for salvage of its architectural elements. (SU)

Impact CULT-3: The project area may contain buried archaeological resources. (S)

(2) Historical Archaeological Sensitivity. The project area's sensitivity is indicated by numerous buildings depicted on Sanborn maps from the late 1800s and early 1900s. While many of these buildings are no longer present in the project area, associated subsurface archaeological deposits may remain. Such deposits may include privies, trash pits, or structural remains associated with the

[60] Pacific Coast Basin Regional Office, U.S. National Park Service 1993.

[61] U.S. Department of the Interior, Office of the Secretary 1990

businesses and homes, and may contain important information about several periods in San Jose's historical development.

(3) Prehistoric Archaeological Sensitivity. The historically-documented seasonal flooding of Los Gatos Creek suggests that the project area has a moderate to high sensitivity for the presence of prehistoric archaeological deposits beneath flood-deposited soils. Numerous prehistoric archaeological sites are documented in similar environmental contexts in Santa Clara Valley.

> Mitigation Measure CULT-3: Due to high sensitivity for both prehistoric and historical archaeological resources, a qualified archaeologist shall monitor all ground-disturbing activities within the project area for historical and prehistoric archaeological resources. Monitoring should continue until, in the archaeologist's judgment, cultural resources are not likely to be encountered. A cultural resources monitoring plan shall be prepared prior to the issuance of a grading or building permit. The monitoring plan shall describe how project construction will be monitored to reduce impacts to cultural resources which may be identified within the project site. The monitoring plan shall also include a review of Sanborn fire insurance maps, historical photographs, and other appropriate historical materials to identify potentially archaeologically sensitive areas for monitoring. Limited subsurface testing may be appropriate prior to construction to identify archaeological deposits.
>
> If deposits of prehistoric or historical archaeological materials are encountered during project activities, all work within 25 feet of the discovery shall be redirected until the archaeological monitor can review the finds and make recommendations.[62] Monitoring shall continue until, in the archaeologist's judgment, archaeological resources are no longer likely to be encountered. It is recommended that such deposits be avoided by project activities. If such deposits cannot be avoided, they shall be evaluated for their California Register eligibility. Archaeological monitors must be empowered to halt construction activities within 25 feet of the discovery to review the possible archaeological material and to protect the resource while it is being evaluated. If the deposits are not eligible, avoidance is not necessary. If the deposits are eligible, they will need to be avoided or adverse effects must be mitigated. Upon completion of the assessment, the archaeologist shall prepare a report documenting the methods and results, and provide recommendations for the treatment of the archaeological materials discovered. The report shall be submitted to City of San Jose Planning, Building, and Code Enforcement director, and the NWIC.
>
> Prehistoric and historic archaeological sites may extend into State Right-of-Way (R/W). Should ground disturbing activities within State R/W take place as part of this project and there is an inadvertent archaeological or burial discovery, the Caltrans Cultural Resource Study Office, District 4, shall be immediately contacted.[63] A Caltrans staff archeologist evaluates the finds within one business day of being contacted.

[62] Prehistoric materials can include flaked-stone tools (e.g. projectile points, knives, choppers) or obsidian, chert, basalt, or quartzite toolmaking debris; bone tools; culturally darkened soil (i.e., midden soil often containing heat-affected rock, ash and charcoal, shellfish remains, faunal bones, and cultural materials); and stone milling equipment (e.g., mortars, pestles, handstones). Prehistoric archaeological sites often contain human remains. Historical materials can include wood, stone, concrete, or adobe footings, walls and other structural remains; debris-filled wells or privies; and deposits of wood, glass, ceramics, metal, and other refuse.

[63] The Caltrans Cultural Resource Study Office can be contacted at (510) 286-5618 or (510) 286-5615.

Prehistoric materials can include flaked-stone tools (e.g. projectile points, knives, choppers) or obsidian, chert, basalt, or quartzite toolmaking debris; bone tools; culturally darkened soil (i.e., midden soil often containing heat-affected rock, ash and charcoal, shellfish remains, faunal bones, and cultural materials); and stone milling equipment (e.g., mortars, pestles, handstones). Prehistoric archaeological sites often contain human remains. Historical materials can include wood, stone, concrete, or adobe footings, walls and other structural remains; debris-filled wells or privies; and deposits of wood, glass, ceramics, metal, and other refuse.

Project personnel shall not collect or move any archaeological materials or human remains and associated materials. Fill soils used for construction purposes should not contain archaeological materials. (LTS)

Impact CULT-4: Ground disturbance associated with the demolition, grading, site preparation and construction of the proposed project may disturb human remains, including those interred outside of formal cemeteries. (S)

Given that the project area is sensitive for the presence of prehistoric archaeological sites, there is the possibility for discovery of human remains during ground disturbing activities. The following mitigation measure shall be implemented.

Mitigation Measure CULT-4: If human remains are encountered, work within 25 feet of the discovery shall be redirected and the County Coroner notified immediately. At the same time, an archaeologist shall be contacted to assess the situation. If the human remains are of Native American origin, the Coroner must notify the Native American Heritage Commission within 24 hours of this identification. The Native American Heritage Commission will identify a Most Likely Descendant (MLD) to inspect the site and provide recommendations for the proper treatment of the remains and associated grave goods.

Upon completion of the assessment, the archaeologist shall prepare a report documenting the methods and results, and provide recommendations for the treatment of the human remains and any associated cultural materials, as appropriate and in coordination with the recommendations of the MLD. The report shall be submitted to City of San Jose Planning, Building, and Code Enforcement director, and the NWIC. (LTS)

Impact CULT-5: Ground disturbing activities within the project area could adversely impact paleontological resources. (S)

Project soils are approximately five feet deep within the project area. If paleontological resources are encountered within this depth from the ground surface, they shall be handled according to the accidental discovery section described in CULT-2. The Late Pleistocene alluvium that underlies the project area soils is highly sensitive for fossil resources, as are the sandstones of the Briones Formation beneath this alluvium. The following two-part mitigation measure shall be implemented.

Mitigation Measure CULT-5a: A qualified paleontologist shall be present during initial project ground-disturbance at or below 5 feet from original ground surface. The paleontologist shall determine if further monitoring of project ground-disturbing activities below the soil layer is necessary, or if periodic site inspections are appropriate. If site inspections are recommended,

each subsequent inspection shall determine if more thorough paleontological monitoring is necessary. Prior to project ground-disturbing activities, pre-field preparation by a qualified paleontologist shall take into account specific details of project construction plans for the project area as well as information from available paleontological, geological, and geotechnical studies. Limited subsurface investigations may be appropriate for defining areas of paleontological sensitivity prior to ground disturbance.

If paleontological resources are encountered during project activities, all work within 25 feet of the discovery shall be redirected until the paleontological monitor can evaluate the resources and make recommendations. If paleontological deposits are identified, it is recommended that such deposits be avoided by project activities. Paleontological monitors must be empowered to halt construction activities within 25 feet of the discovery to review the possible paleontological material and to protect the resource while it is being evaluated. If avoidance is not feasible, adverse effects to such resources shall be mitigated. Mitigation can include data recovery and analysis, preparation of a report and the accession of fossil material recovered to an accredited paleontological repository, such as the UCMP.

Monitoring shall continue until, in the paleontologist's judgment, paleontological resources are no longer likely to be encountered. Upon project completion, a report shall be prepared documenting the methods and results of monitoring. Copies of this report shall be submitted to the City of San Jose Planning, Building, and Code Enforcement director and to the repository to which any fossils were transmitted.

Mitigation Measure CULT-5b: If paleontological resources are encountered during project activities, and a paleontologist monitor is not present, all work within 25 feet of the discovery shall be redirected until a qualified paleontologist has evaluated the discoveries, prepared a fossil locality form documenting the discovery and made recommendations regarding the treatment of the resources. If the paleontological resources are found to be significant, adverse effects to such resources shall be avoided by project activities. If project activities cannot avoid the resources, adverse effects shall be mitigated. At a minimum, mitigation shall include data recovery and analysis, preparation of a report, and the transmittal of any fossil material recovered to a paleontological repository, such as the UCMP. Upon completion of project activities, a report documenting the methods and findings of the mitigation shall be prepared and copies submitted to City of San Jose Planning, Building, and Code Enforcement director as well as to the paleontological repository to which fossils were transmitted.

Project personnel should not collect or move any paleontological materials and associated materials. Fill soils used for construction purposes should not contain paleontological materials. (LTS)

d. Policy Conflicts. The proposed project would be inconsistent with several San Jose General Plan Historic, Archeological and Cultural Resources policies regarding the historic buildings. As discussed in Impact CULT-1, implementation of the proposed project would likely result in the demolition or relocation of one historic building on the project site. As discussed in Impact CULT-2, the proposed project would also alter the character of the historic San Jose Diridon Station, a designated City Landmark. To the extent feasible, the stadium would be designed to be visually compatible with adjacent historic structures; however, due to the lack of design details for the

proposed project, a positive policy determination in regard to that compatibility cannot be made at this time.

K. VISUAL AND AESTHETIC RESOURCES

This section addresses the subject of aesthetics and visual quality. It includes a description of existing visual conditions and an evaluation of the potential aesthetic effects of the proposed stadium project. The visual analysis is based on field observations of the project site and surroundings in addition to review of the following materials: conceptual project site plan; aerial and ground-level photographs of the project area; topographic data; and public planning documents.

1. Setting

This setting section for visual resources addresses regional and local context, views of the project site and its vicinity, as well as view corridors in the vicinity, and relevant policies.

a. Regional and Local Landscape Context. The proposed project site is situated approximately 20 miles southeast of the San Francisco Bay in the City of San Jose, which is characterized by large-scale urban development. The Santa Clara Valley, in which the City sits, is surrounded by grassy hills interspersed with trees; the hills gradually become steeper and densely wooded as they rise in elevation. The northern extension of the Santa Cruz Mountains encloses the Valley to the southwest and contains peaks up to 3,000 feet in elevation. The Diablo Mountain Range forms the eastern Valley boundary and reaches a summit elevation of almost 4,000 feet. The natural landscape of the surrounding mountains forms a distant scenic backdrop for the City's urban development. The majority of the neighborhoods and downtown core encircling the project site contain multiple-story urban development that forms a visual boundary between the neighboring cities and distant mountains.

b. Project Site Visual Context. The project site is located in an urbanized area of San Jose and is visually characterized by a variety of commercial, light industrial, transportation, utility, and office development. The site's topography is generally flat. The site is largely covered in impervious surfaces, with limited existing natural vegetation beyond landscaped areas; however, there are a number of mature street trees throughout the project site. There are 17 buildings on the project site, generally ranging from approximately 2,900 to 150,000 square feet in size, and reaching from one to three stories in height. The fire training tower on the Fire Training site is seven stories in height. Surface parking lots and roadways make up the remainder of the project site.

Figure V.K-1 illustrates the locations from which photos of the site were taken. (See Figure V.A-1 and Photos 1 through 7 in the Land Use section of this chapter for additional views of the site and vicinity.)

c. Project Site Visibility. The project site is generally flat with limited vegetation and is visible from public viewing areas directly surrounding the site, such as the sidewalks and roadways along W. San Fernando Street, Park Avenue (a major collector street), W. San Carlos Street and Bird Avenue (both major arterials). The project site is also visible from the railroad tracks which run parallel to the project site. Train passengers have direct views of the backs of the buildings adjacent to the train tracks as well as intermittent views across the site as trains travel through the area. The project site may be slightly visible from other public viewing areas in the general vicinity. However, the built up urban setting surrounding the proposed project site limits off-site views of the site. Unobstructed views of the entire site are generally only possible from elevated viewpoints. Photo 1 is of the project site, across the railroad tracks, looking northeast from the San Carlos Street overpass. The white roof of the HP Pavilion is visible on the left. The seven-story training tower on the Fire Training site is

visible in the center of the photo. The San Jose Downtown skyline is visible in the background to the northeast.

Photo 1: View of the project site from the W. San Carlos Street overpass, looking northeast

d. Public View Corridors and Viewpoints. The project site is bordered by five public view corridors: W. San Fernando Street, Park Avenue, Bird Avenue, W. San Carlos Street, and the railroad tracks and light rail lines. Designated scenic urban throughways within 1 mile of the project site include I-280 and SR 87. The Los Gatos Creek corridor along the eastern boundary of the project site also provides an important visual and natural resource within the Midtown and Downtown areas and is designated as a scenic trail corridor in the Scenic Routes and Trails Diagram of the City's General Plan.

Visually prominent structures in the area include the HP Pavilion, San Jose Diridon Station, and the fire training tower. The Arena Green public park is located across from the HP Pavilion.

Each of the five public view corridors in the area is discussed below.

(1) W. San Fernando Street. W. San Fernando Street begins east of San Jose State University and continues through Downtown San Jose, passes under SR 87, and continues through the Midtown area, immediately north of the project site. W. San Fernando Street terminates at the rail road tracks (at the western edge of the project site). Views of the project site south from W. San Fernando Street are of buildings on the project site, including Stephen's Meat Products, Patty's Inn and the associated single-family home, and the Amtrak offices. Street trees line W. San Fernando Street, adjacent to the Amtrak offices, as shown in Photo 2.

Photo 2: View west at the intersection of W. San Fernando Street and S. Autumn Street

(2) Park Avenue. Park Avenue is a major collector street that extends west of San Jose State University (at Plaza de Cesar Chavez), continues under SR 87, runs in an east-west direction through the Midtown area, and continues northwest to I-880, and then terminates at Santa Clara University. Park Avenue passes through the project site (utilizing an underpass beneath the rail-road tracks on the project site's western edge), with one- to three-story office buildings to the north and the Fire Training site to the south. Photo 3 is of the Fire Training site southwest from the inter-

LSA

FIGURE V.K-1

N

0 150 300
FEET

PROJECT BOUNDARY

VIEWPOINT LOCATIONS

NOTE: VIEWPOINT 9 NOT ON MAP

Baseball Stadium in the Diridon/Arena Area

Aerial View of Project Site and Visual Resources Photo Location Map

SOURCE: GLOBEXPLORER; LSA ASSOCIATES, INC., 2005.

I:/SJO530 ballpark/figures/Fig_VK1.ai (01/28/06)

Back of color Figure V.K-1

section of Park Avenue and S. Autumn Street (where it becomes Bird Avenue). Views of the project site from Park Avenue looking north are of office buildings on the project site and associated surface parking. There are a limited number of street trees along Park Avenue; however, there are several that border the Fire Training site.

Photo 3: View of Fire Training Site, southwest from the Park Avenue/S. Autumn Street intersection

(3) Bird Avenue. Bird Avenue begins in the Willow Glen neighborhood, south of the project site, and continues north over I-280 to Park Avenue, where it splits into S. Montgomery Street and S. Autumn Street. Photos 4 and 5 are of views across the project site, north from the intersection of Bird Avenue (where it becomes S. Autumn Street) and Park Avenue. Views of the project site from Bird Avenue looking north are of office buildings, commercial buildings, light industrial uses, associated surface parking and street trees.

Photo 4: View of S. Montgomery Street, north from Park Avenue

Photo 5: View of S. Autumn Street, north from Park Avenue

(4) W. San Carlos Street. W. San Carlos Street is a major arterial street that begins east of San Jose State University and continues through the Downtown, passes under SR 87 and continues through the Midtown area west to I-880, where it becomes Stevens Creek Boulevard. W. San Carlos Street is elevated at the southern tip of the project site. Photo 6 looks north from this segment of W. San Carlos Street, across the project site (as does Photo 1, above). Views of the project site from W. San Carlos Street close to Bird Avenue looking north are blocked by the vegetation along Los Gatos Creek. Views of the project site from W. San Carlos Street as it crosses over the rail road tracks are generally of the one- to three-story office, commercial or light industrial buildings, the seven-story training tower, surface parking lots and street trees.

(5) Rail Lines. Caltrain, Altamont Commuter Express (ACE), Amtrak, and Vasona Corridor light rail lines parallel the project site to the west. Trains run frequently through the area and rail passengers have direct views of the backs of buildings adjacent to the tracks as well as intermittent views across the site as trains run adjacent to the project site.

Photo 6: Fire Training Site

e. Urban Throughways. All State and Interstate Highways within the City are designated as Urban Throughways (which are considered scenic routes) in the San Jose 2020 General Plan Scenic Routes and Trails Diagram. An Urban Throughway is defined as the actual right-of-way of the scenic route, the shoulders, and any adjacent public improvements which accompany such a route. Scenic Urban Throughways within 1 mile of the project site include I-280 and SR 87.

(1) Interstate 280. I-280 curves in a northeast-southwest direction approximately a ½-mile south of the project site. Existing views of the project site blend within the City skyline, and it is not directly visible from I-280. The 100-foot tall HP Pavilion is also not immediately visible from I-280, and blends within the City skyline.

(2) State Route 87. SR 87 runs in a north-south direction, less than a ¼-mile east of the project site. SR 87 is partially elevated as it parallels the project site; however, views of the project site are generally blocked by tall vegetation.

f. Other Public Viewpoints. Four other key public viewpoints are located near the project site.

(1) Diridon Station. The historic San Jose Diridon Station is located immediately north of the project site, adjacent to the railroad tracks. The train station is served by Caltrain, Altamont Commuter Express (ACE), and Amtrak rail lines. Existing views of the project site from San Jose Diridon Station are largely blocked by tall trees surrounding the station parking lot (see Photo 7).

Photo 7: View south towards PG&E Substation from Diridon Station

(2) Los Gatos Creek. Los Gatos Creek begins just north of the project site, where it splits from the Guadalupe River at the Arena Green, east of the HP Pavilion.

The creek forms the eastern boundary of the project site and is surrounded by heavy vegetation as shown in Photo 8. There are no trails or pathways along the creek in this location; however, a trail is planned for the entire length of the creek. As discussed in Section V.A, Land Use, Reach 5 of the Los Gatos Creek Trail would be located on the eastern portion of the project site.

Photo 8: View of Los Gatos Creek from W. San Carlos Street overpass

(3) Arena Green. The Arena Green is a public park located directly east of the HP Pavilion, across S. Autumn Street. The approximately 14-acre park is part of the Guadalupe River Park and includes a segment of the Guadalupe River Trail along the confluence of the Guadalupe River and Los Gatos Creek, lawn and picnic areas, and a carousel. The project site is not readily visible from the park, as views are largely obstructed by existing buildings.

(4) HP Pavilion. The HP Pavilion is the dominant feature in the Diridon Area and is approximately 100 feet tall. The HP Pavilion hosts hockey games as well as concerts and other sports and musical events. The project site is not readily visible from the HP Pavilion, as views are largely obstructed by existing buildings. Photo 9 (not located in Figure V.K-1) is a view of the HP Pavilion west from the Arena Green.

Photo 9: View of HP Pavilion, west of Arena Green

g. San Jose 2020 General Plan Policies. The City of San Jose 2020 General Plan provides policies which address aesthetic quality related to both the natural and the built environment. The Plan aims to retain and encourage diversity and individual expression in the built environment, while encouraging quality new construction. Policies relevant to the proposed project include:

Community Development Urban Design

- *Urban Design Policy 6:* Proposed structures adjacent to existing residential areas should be architecturally designed and sited to protect the privacy of the existing residences.
- *Urban Design Policy 8:* Design solutions should be considered in the development review process which addresses security, aesthetics, and public safety.
- *Urban Design Policy 16:* When development is proposed adjacent to existing or planned parks or park chains, that development should include public park-frontage roads, wherever feasible.
- *Urban Design Policy 17:* Development adjacent to creekside areas should incorporate compatible design and landscaping including plant species which are native to the area or are compatible with native species.

2. Impacts and Mitigation Measures

The following section discusses potential impacts related to visual and aesthetic resources that could result from the implementation of the proposed project. The section begins with the criteria of significance, establishing the thresholds to determine whether an impact is significant. The latter part of this section evaluates impacts and recommends mitigation measures, where appropriate.

a. Significance Criteria. Implementation of the proposed project would have significant impacts on visual and aesthetic quality if it would:

- Have a substantial adverse effect on a scenic vista;
- Substantially degrade the existing visual character or quality of the site and its surroundings;
- Substantially damage a scenic resource, including but not limited to, trees and historic buildings;
- Result in the substantial disruption or blocking of existing views or public opportunities to view scenic resources;
- Result in visual resource conditions that would conflict with applicable City of San Jose policies and regulations relating to aesthetics; or
- Introduce new development which would substantially detract from the integrity, character, and/or aesthetic environment of a neighborhood.

b. Less-than-Significant Visual and Aesthetic Resources Impacts. Less-than-significant visual and aesthetic resources impacts of the proposed project are discussed below.

(1) Effect on Scenic Vistas or Disruption of Existing Views. Scenic vistas across the site could include views of the Downtown skyline or distant mountains. However, project site and its vicinity are generally flat and given the urban nature of the site, including the buildings, street trees, and above-ground power lines, views across the project site to the Downtown skyline or distant mountains generally do not exist. In addition the project area and surrounding neighborhoods are urban in nature and surrounded by some of the highest density development in the City. Impacts to scenic vistas within the project site as a result of construction of the proposed baseball stadium and associated parking garage would be less than significant.

The proposed stadium would be visible from public locations at higher elevations several miles away, including the I-280 and SR-87 Urban Throughways and the Santa Cruz and Diablo Mountains ranges. However, at these distances, the proposed stadium would blend within the City skyline. No scenic vistas that would include the project site would be affected by the proposed project.

In addition, the stadium itself would offer scenic views of the City skyline, and the Santa Cruz and Diablo Mountain ranges from the upper elevations of the seating bowl.

(2) Degrade Existing Visual Character. Implementation of the proposed project would result the construction of a 45,000 seat baseball stadium with maximum height of 165 feet, with scoreboards approximately 200 feet and lights approximately 235 feet above finished grade. The visual character of the site is currently defined by one-to three-story commercial, office, light industrial buildings, as well as surface parking and street trees. Because proposed uses are so different from

existing uses in type and intensity, the proposed project would result in a substantial change in the visual character of the project site.

The overall aesthetic quality of the project area is characterized by a mix of uses and transit oriented development, and the architectural styles in the area vary widely. In addition, at approximately 100 feet tall, the HP Pavilion, located two blocks north of the site, is currently the most visually prominent structure in the Diridon Area. Buildings in the downtown core area, less than a ½-mile from the project site, range in height from 25 to 285 feet tall.

The proposed stadium would not degrade the area's visual character, but would contribute to the overall visual character of the area by reinforcing an entertainment and sports related district in the area, and redeveloping the Diridon Area, which would generally compliment the vision set forth in the area plans.

The proposed project has been designed at a conceptual site plan level; detailed design plans have not been developed. The stadium structure, parking garage, and future development site would be subject to design review to ensure the visual character of the site is not degraded.

The potential relocation of the existing substation to the southern tip of the project site would alter the existing visual conditions in this area. The 1.5-acre facility includes 115-kV transmission lines, underground distribution lines, distribution transformers, and electrical switching gear, up to 40 feet in height. The substation, in its current location is visible to train passengers as they approach Diridon Station from the south or motorist parking in the lot south of Diridon Station. The relocated substation would be visible to motorists traveling on W. San Carlos Street and to train passengers as they pass the current Fire Training Center site. However, the relocated substation would not detract from the visual character of the area which includes commercial and industrial uses and appropriate screening techniques and standard design measures would be implemented. Additionally, as discussed in Section V.M, Utilities, the California Public Utilities Commission (CPUC) would determine what additional environmental documentation would be necessary to comply with CEQA prior to relocation approval.

(3) Damage Scenic Resources. Scenic resources may include trees, rock out-croppings, or historic buildings. Cultural resources are considered scenic resources as they often provide visual interest and character. As discussed in Section V.J, Cultural and Paleontological Resources, the proposed project includes the demolition of the KNTV Broadcast Facility, which is listed on the *City of San Jose Historic Resources Inventory* as a Structure of Merit and appears to be both a candidate City Landmark and eligible for the California Register. However, the removal (either by relocation or demolition) of one historic structure from the project site would not result in a significant impact to scenic resources.

(4) Conflict with Policies and Regulations. Continued implementation of the City's 2020 General Plan policies regarding site planning, urban design, and landscaping through the design review process would help ensure that no significant adverse aesthetic impacts would result from the project.

(5) Detract from the Integrity of a Neighborhood. The project site is in the Diridon Area and the Midtown Area of San Jose. The Diridon Area is envisioned as transit and pedestrian oriented

district, with greater connectivity to the traditional downtown center. The Midtown Area includes the Diridon Area and is envisioned as a mixed-use community with high-density commercial and residential uses oriented to transit, while maintaining some industrial and service commercial areas. Consistency with plans for the Diridon Area and Midtown are discussed in Chapter IV, Consistency with Plans and Policies. The proposed stadium would not visually detract from the integrity of the area.

The Delmas Park Neighborhood is east of the project site, bound by Los Gatos Creek, W. Santa Clara Street, SR 87 and I-280. Los Gatos Creek extends north-south and provides a visual barrier to much of the project site. Existing visual characteristics in the vicinity of the Delmas Park Neighborhood include HP Pavilion and the medium- to high-density buildings of the downtown core area. The addition of the proposed stadium would not significantly detract from the integrity of this urban neighborhood.

c. Potentially Significant Visual Resources and Mitigation Measures. The proposed project would adversely impacts scenic resources, including historic resources as described below.

<u>Impact VIS-1</u>: The proposed project would alter the visual character of historic San Jose Diridon Station. (S)

Implementation of Mitigation Measure CULT-2a and CULT-2b would somewhat reduce this impact. However, the alteration of the station's visual setting and feeling would remain a significant impact. (SU)

<u>Impact VIS-2</u>: The removal of all ordinance sized trees on the project site would substantially damage scenic resources. (S)

Mature trees are considered scenic resources as they often provide visual interest and character. As discussed in Section V.E, Biological Resources, construction of the proposed project would result in the removal of all existing on-site trees. A total of 45 ordinance-sized trees occur on the project site. All of these ordinance-sized trees are non-native species or non-local native species except for one blue elderberry and one box elder.

Mitigation Measure BIO-1 requires the loss of ordinance sized trees would be mitigated by implementation of landscaping plans to be reviewed and approved by the City of San Jose. For private projects, the City of San Jose requires tree replacement for those trees greater than 18 inches in diameter with 24-inch box trees at a ratio of 4:1. As a City proposed project, the City would commit to meeting the tree replacement ratio, but given the footprint of redevelopment on the site, replacement trees may be planted beyond the project site in the project area. Implementation of Mitigation Measure BIO-1 would reduce impacts to scenic resources through the loss of trees to a less-than-significant level. (LTS)

L. SHADE/SHADOW AND LIGHT/GLARE

This section evaluates the effects of the proposed project on shade and shadow and light and glare in the project area.

1. Setting

There are 17 structures on the project site, the majority of which are one- to three-story buildings, with large building area footprints. The tallest building on the site, at seven stories in height, is the live fire training tower located on the Fire Training Center site. See Section V.A, Land Use, for a detailed description of the project site as well as Section V.L, Visual and Aesthetic Resources. Currently, buildings on the project site do not cast significant shade or shadows onto adjacent or nearby public spaces or properties.

There are a number of trees on the site; however none of these are wide or tall enough to cast significant adverse shade or shadows. There are a number of trees along the eastern project boundary, located on the banks of Los Gatos Creek. The area within the river bank is dense with trees and other vegetation and is heavily shaded.

Lighting in the project area typically comes from street lights and building security lights. The HP Pavilion is the most significant source of light in the vicinity of the site and is well lighted at all times. The San Jose Diridon Station and the light rail stations in the area are also provide significant sources of light in the area.

a. Public Open Space. There are seven major open space areas within the Downtown that are particularly sensitive to shade and shadow and light and glare impacts: St. James Park, Guadalupe River Park, Plaza of Palms, Plaza de Cesar Chavez, Paseo de San Antonio, McEnery Park, and Confluence Point at the Arena Green. None of these seven major areas is near enough to the project site that shade and shadow or light and glare cast by the proposed stadium and associated structures could reach them.

Public open spaces within the project vicinity include Los Gatos Creek at the project site's eastern boundary and Diridon Station and the associated Station Green.

b. Sensitive Operations. Nearby operations that are sensitive to light and glare created within San Jose are the Norman Y. Mineta San Jose International Airport and the Lick Observatory. The airport is located approximately 1½ miles northeast of the project site. The airport operates three runways and averages 384 commercial and 156 general aviation departures and landings daily. The Lick Observatory is located at the top of Mount Hamilton in the Diablo Mountain range, approximately 20 miles east of San Jose. The Observatory is a major astronomical research and teaching institution and operates several sensitive telescopes and other instruments for projects ranging from observations of the solar system to distant galaxies.

c. Plans and Policies Framework. Plans and policies from two sources are described below.

(1) San Jose 2020 General Plan Policies. The City's General Plan includes the following policies related to shade/shadow and light glare.

Natural Resources, Natural Communities and Wildlife Habitats

- *Riparian Corridors and Upland Wetlands Policy 4:* New development should be designed to protect adjacent riparian corridors from encroachment of lighting, exotic landscaping, noise, and toxic substances into the riparian zone.

Services and Facilities

- *Transportation Policy 38:* Development in the vicinity of airports should be regulated in accordance with Federal Aviation Administration guidelines to: avoid reflective surfaces, flashing lights and other potential hazards to air navigation.

(2) Downtown Strategy 2000. The Downtown Strategy 2000 contains the following policies regarding shade and shadow and light and glare impacts from new development:

Urban Design Concepts, Strategies, and Actions by System

- *Policy 2:* Design exterior lighting and building signage with a conscious effort to create the nighttime cityscape of the downtown, in coordination with the Lick Observatory.
- *Policy 4:* Structures should be oriented such that urban open spaces, such as Plaza de Cesar Chavez, Circle of Palms, Reparatory Plaza, and St. James Park receive adequate direct sun and filtered daylight and are protected from building glare, excessive shade, and wind.
- *Policy 5:* Exterior building materials should be chosen with consideration of their glare-causing potential not only at the street level but also from the view of other neighboring structures.

Design Guidelines

- *Building Character:* Lighting of building exteriors shall highlight facades and noteworthy features, but adjacent areas that are sensitive to nighttime lighting (e.g. the San Jose International Airport and Lick Observatory) shall be considered and respected.

2. Impacts and Mitigation Measures

Implementation of the proposed project could create shade and shadow and light and glare impacts to nearby public or private open space and major light sensitive operations in the area.

a. Shade/Shadow Impacts and Mitigation Measures. Implementation of the proposed project has the potential to create shade and shadow impacts onto nearby public or private open space between September and March.

Shade and shadow impacts occur when a structure's height or its width (or a combination of the two) reduces the access to sunlight enjoyed by another property. It should be remembered that in a built urban environment like a downtown, nearly all structures create for others and, in turn, are subject to, shade and shadows. During the summer months in San Jose when mid-day temperatures rise into the mid-90 degrees and higher levels, shading may even be desirable. In fact, the design of early buildings in San Jose provided for shade in the front of buildings during the warmest times of the year.

The City of San Jose generally identifies significant shade and shadow impacts as occurring when a building or other structure substantially reduces natural sunlight on public open spaces, measured on the spring and fall equinox, when day and night are approximately equal in length (March 21st and September 21st); the winter solstice when the sun is lowest in the sky (December 21st); and the summer solstice when the sun is at its highest point in the sky (June 21st). A series of shadow simulation studies was prepared for the proposed project.[1] Simulations assume a maximum building height for

[1] Environmental Vision, Emeryville, California, 2005.

the proposed stadium at 165 feet and a maximum height of 200 feet for the future development site located on the existing Fire Training site (although the maximum height at this location would not likely exceed the maximum proposed height of the parking garage structure, at 80 feet in height). The project boundary illustrated in the shadow simulations shows maximum building footprint boundaries with 10 foot setbacks from the street to allow for minimal sidewalk width. Simulations also assume a building footprint within no less than 120 feet from the top of the Los Gatos Creek bank.[2] Light standards and scoreboards were not included in the simulations as their flat/narrow design would cast minimal shadow relative to the stadium and parking garage.

Shadow pattern simulations were prepared for the proposed project on the following dates: March 21, June 21, September 21, and December 21. Shadow patterns were calculated and illustrated using software designed for this purpose for three times of day for each of the days: 9:00 a.m., 12:00 p.m. (noon), and 3:00 p.m. The resulting simulations are provided at the end of this section in Figures V.L-1 through V.L-4.

b. Light/Glare Impacts and Mitigation Measures. Implementation of the proposed project has the potential to create light and glare impacts from field and scoreboard lighting to nearby land uses during nighttime ball games and other events. The three forms of unwanted light include:

- *Spill light* – light which is emitted from the facility which falls outside its boundaries;
- *Obtrusive light* – spill light which is annoying, discomforting or distracting to nearby land uses, including airport flights; and
- *Glare* – light that is discomforting or impairs the vision of those who experience it.

Spill light can be accurately calculated and the effects of spill light can also be measured. Glare created by sports-oriented lighting systems can also be measured for one's visual impairment. However, the effects of obtrusive light are more difficult to quantify as individuals have a range of reactions to perceived effects of lighting in the environment.

Table V.L-1: Typical Light Levels

Source of Light	Foot-Candles
Bright and sunny day	3,000
Professional baseball-field lighting	300
Office	50 to 75
Residential lighting at night	7 to 10
Main road junction street lighting	2.5 to 3
Bright moonlight	0.1

Source: San Francisco Giants Ballpark Draft EIR, 1997.

Light is measured in foot candles, which indicate the amount of luminance falling onto a surface. Table V.L-1 shows typical light levels expressed in foot candles. The view of a sports lighting bank against a black sky is measured differently than against normal city lights. The further from the stadium the viewer is, and the more general city lights there are in the normal view along with the stadium lights, the less glare the viewer would experience.[3]

c. Criteria of Significance. Implementation of the proposed project would have a significant shade and shadow impact if it would:

[2] This conservatively assumes a 50 foot setback from the top of the Los Gatos Creek bank and a 70-foot right-of-way for the realignment of S. Autumn Street.

[3] San Francisco, City and County of, 1997. *San Francisco Giants Ballpark at China Basin Draft Environmental Impact Report, Volume I.* March 14.

- Result in a 10 percent or greater increase in the shadow cast onto a major open space area in the Downtown San Jose area (St. James Park, Guadalupe River Park, Plaza of Palms, Plaza de Cesar Chavez, Paseo de San Antonio, McEnery Park, and Confluence Point at the Arena Green); or
- Substantially shadow other public open space (beyond the seven major open space areas) but excluding streets and sidewalks or private open space between September and March.

Implementation of the proposed project would have a significant light and glare impact if it would:

- Produce substantial light or glare such that it poses a hazard or nuisance; or
- Create a new source of substantial light or glare which would adversely affect day or night time views in the area.

d. Less-than-Significant Shade and Shadow Impacts. Implementation of the proposed project would lead to less-than-significant impacts as described below.

The maximum height of the proposed stadium would be 165 feet and the maximum height of the proposed parking structure would be 80 feet. The proposed project site is situated at the western edge of the Downtown area and is more than a ¼-mile away from the nearest major open space areas (Confluence Point at the Arena Green to the north, and McEnery Park to the east). None of the seven major areas is near enough to the project site that shade and shadow cast by the proposed stadium and associated structures could reach them. As such, the proposed project would have less-than-significant shade and shadow impacts on major open space areas.

Reach 5 of the Los Gatos Creek Trail to be located within the 50 foot setback from the Los Gatos Creek top of bank as it parallels the project site is currently in the early planning stages. This trail would be subject to afternoon shading from the proposed project; however this corridor is currently shaded by vegetation along the creek and is in a built environment where existing structures also shade the corridor.

A new public park, Cahill Park, is also located approximately 0.1 miles west of the project site at the intersection of Laurel Grove Way and West San Fernando Street. The park would not experience any increase in shading due to the proposed project.

Los Gatos Creek would be subject to shadows cast by the proposed project during the winter afternoon hours, as shown in Figures V.L-1c and V.L-4c at the end of this section. The most significant shading would occur in the afternoon hours of December 21. However, the creek corridor is already heavily shaded and increased shading of the creek would be a less-than-significant impact. The potential for late afternoon winter shade to result in adverse effects to biological resources along the creek corridor is described in Section V.F, Biological Resources.

In addition, there would be no significant impacts to any open space areas from project shadows during the noon hour throughout the year, as shown in Figures V.L-1b, 2b, 3b, and 4b.

e. Significant Shade and Shadow Impacts. Implementation of the proposed project would lead to a single significant shade and shadow impact, as described below.

The San Jose Diridon Station would be subject to shadows cast by the proposed project during the morning hours throughout most of the year (except in the summer months), as shown in Figures V.L-1a, V.L-1b, V.L-3a, V.L-3b, V.L-4a, and V.L-4b. This would result in the alteration of the character of the station's setting and the experience of pedestrians using the station, especially during the morning commute hours.

Impact SHADE-1: Throughout most of the year in the morning hours, the proposed project would increase the shade and shadow cast on the historic San Jose Diridon Station. (S)

Implementation of Mitigation Measure CULT-2a and CULT-2b would somewhat reduce this impact. However, shadows cast over the station, particularly those that would occur during winter mornings (as exemplified by the shadow simulation for December 21), would remain a significant impact. (SU)

f. Less-than-Significant Light and Glare Impacts. Implementation of the proposed project would lead to less-than-significant light and glare impacts as described below.

The baseball stadium's playing field would be illuminated with eight lighting structures, four in the outfield and four in the infield. These lighting structures would reach 235 feet above the finished grade. Two main scoreboards and several auxiliary boards would reach a maximum height of 200 feet above the finished grade.

These lighting and scoreboard structures would substantially increase light intensities in the project area during the approximately 40 nighttime baseball games per year. Additional events occurring at night throughout the year would also increase the lighting intensity in the area, although not to the extent that baseball uses would, as these events are unlikely to utilize the full capacity of the lighting and scoreboard systems. Lighting associated with baseball games could reach approximately 300 foot-candles, which is considerably higher than existing lighting produced by surrounding land uses.

Los Gatos Creek and the planned Reach 5 of the Los Gatos Creek Trail would be subject to increased lighting during nighttime events. However, as discussed in Section V.F, Biological Resources, of this EIR, increased nighttime lighting cast onto the creek would be a less-than-significant impact. The Los Gatos Creek Trail is part of an urban environment and would also be subject to other sources of light, such as street lighting. Increased lighting from the proposed stadium cast onto the trail would also be a less than significant impact.

Stadium lighting and scoreboard structures would be visible from many miles away. However, at these distances, stadium lighting would blend within the City skyline. Stadium lighting would also be visible from adjacent scenic Urban Throughways such as SR-87 and I-280. (See Section V.K.1.d.(5), Visual and Aesthetic Resources, for a detailed discussion of Urban Throughways.) These throughways are considered to be scenic primarily because they afford unique day and nighttime views of the Downtown skyline within the project vicinity. At night, the skyline is filled with light from high-rise office buildings located in the Downtown business district, which contributes to the urban character of the city. The proposed stadium, and associated lighting would enhance these urban views and would therefore have a less than significant impact on nighttime views in the area.

If the existing substation were to be relocated to the southern portion of the site, it would introduce a new source of light to the area. However, substation security lighting would be appropriately screened to minimize light and glare in the area. This would be a less than significant impact.

g. Significant Light and Glare Impacts. Implementation of the proposed project could lead to significant light and glare impacts to existing land uses and area operations which are sensitive to light as described below.

Impact SHADE-2: Obtrusive light and glare resulting from nighttime operation of the proposed stadium could present a nuisance to surrounding land uses, specifically nearby residences and the Lick Observatory. (S)

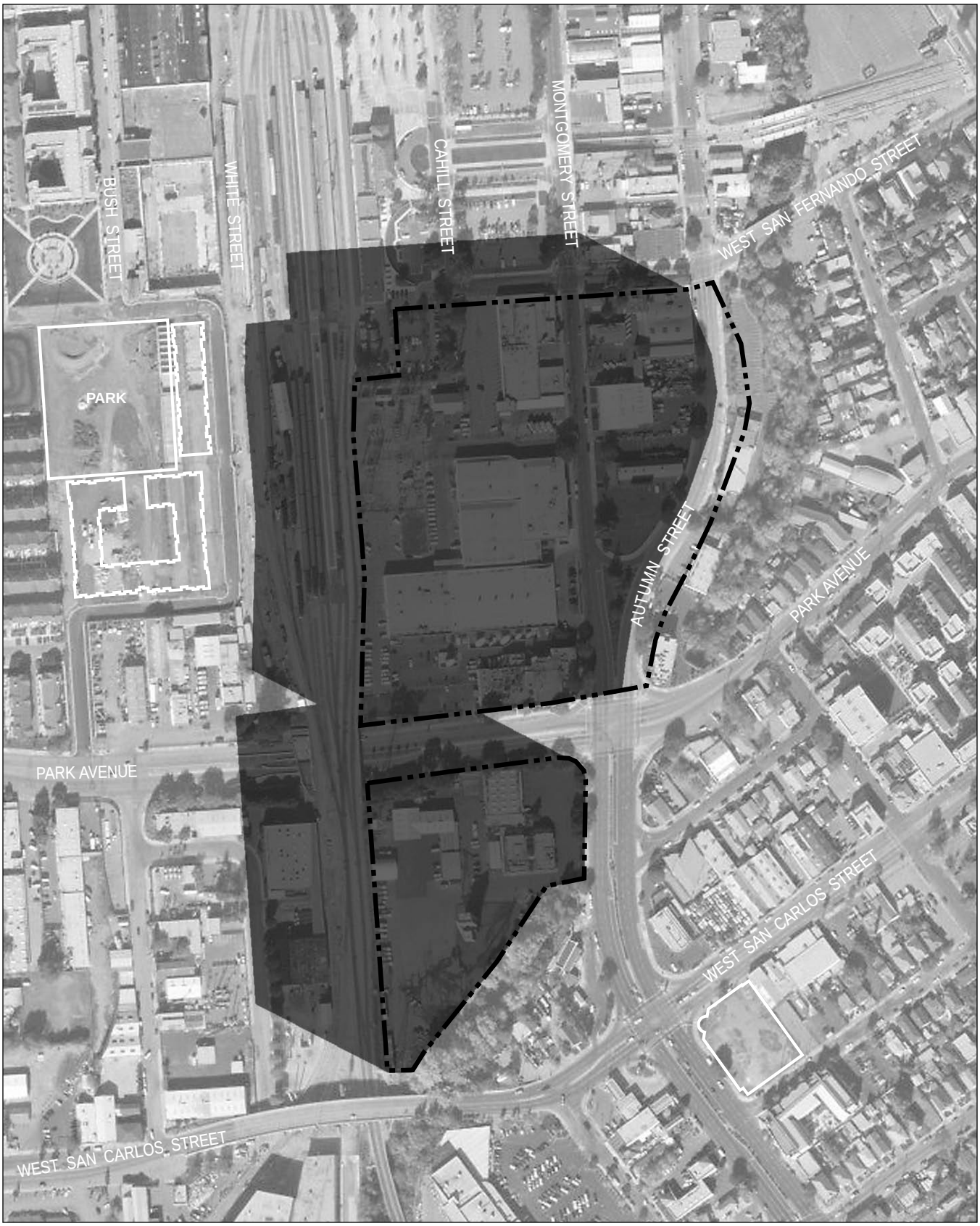
Residential areas exist east and west of the proposed stadium site. These are considered to be the most sensitive receptors for light-producing activities. Although the illumination emitted from the stadium would be seen largely at the source (resulting in a low level of spill light), the contrast between stadium lighting and ambient lighting could be considered obtrusive. Residents in the project vicinity may experience annoyance from lighting effects during nighttime games and events. This would be a localized, temporary, and intermittent effect during the approximately 40 night games per season and to a lesser extent, the approximately 15 to 20 additional events which may occur during the evening hours throughout the year.

In addition, research at the Lick Observatory is dependant upon having a clear night sky unobstructed by city lights. The City currently works with the Observatory to lessen the impacts of urban nighttime lighting, however illumination associated with the proposed stadium could significantly affect the operation of sensitive instruments at the Observatory. Implementation of the mitigation measure discussed below would reduce these impacts, but not to a less-than-significant level.

> Mitigation Measure SHADE-2a: The proposed project shall incorporate lighting controls at the proposed stadium to reduce the potential nuisance associated with obtrusive light and glare resulting from nighttime stadium operation. Lighting banks shall be placed and designed to minimize obtrusive spill light and glare as much as possible (e.g. shielding at the source) and shall be directed towards the playing field and away from the sky.
>
> Mitigation Measure SHADE-2b: After nighttime events, when nighttime stadium cleanup is necessary, the field lights shall be reduced to one-third of their standard intensity and shall remain on no more than one hour after the event to provide lighting for cleanup activities. (SU)

Impact SHADE-3: Light and glare associated with the proposed scoreboards and lighting structures and fireworks displays could interfere with the safe operation of the San Jose International Airport during nighttime events. (S)

As discussed in Section V.A, Land Use, of this EIR, a Determination of No Hazard from the FAA would be required for the proposed project prior to development approval. In addition, implementation of Mitigation Measure LU-1 requires FAA consultation (if required by FAA) for the coordination of fireworks displays. Implementation of this mitigation measure, as well as Mitigation Measures SHADE-2a and SHADE-2b, discussed above, would reduce this significant impact to a less-than-significant level. (LTS)



LSA

FIGURE V.L-1a

N

0 200 400
FEET

PROJECT BOUNDARY
PROJECT SHADOW

Baseball Stadium in the Diridon/Arena Area
Project Shadow Pattern
March 21: 9:00 am

SOURCE: ENVIRONMENTAL VISION, 2005.

I:/SJO530 ballpark/figures/Fig_VL1A.ai (02/10/06)

LSA

FIGURE V.L-1b

N

0 200 400
FEET

PROJECT BOUNDARY
PROJECT SHADOW

Baseball Stadium in the Diridon/Arena Area
Project Shadow Pattern
March 21: 12:00 pm

SOURCE: ENVIRONMENTAL VISION, 2005.

I:/SJO530 ballpark/figures/Fig_VL1b.ai (02/10/06)

LSA

FIGURE V.L-1c

N

0 200 400
FEET

PROJECT BOUNDARY
PROJECT SHADOW

Baseball Stadium in the Diridon/Arena Area
Project Shadow Pattern
March 21: 3:00 pm

SOURCE: ENVIRONMENTAL VISION, 2005.

I:/SJO530 ballpark/figures/Fig_VL1c.ai (02/10/06)

LSA

FIGURE V.L-2a

N

0 200 400
FEET

PROJECT BOUNDARY
PROJECT SHADOW

Baseball Stadium in the Diridon/Arena Area
Project Shadow Pattern
June 21: 9:00 am

SOURCE: ENVIRONMENTAL VISION, 2005.

I:/SJO530 ballpark/figures/Fig_VL2a.ai (02/10/06)

LSA

FIGURE V.L-2c

N

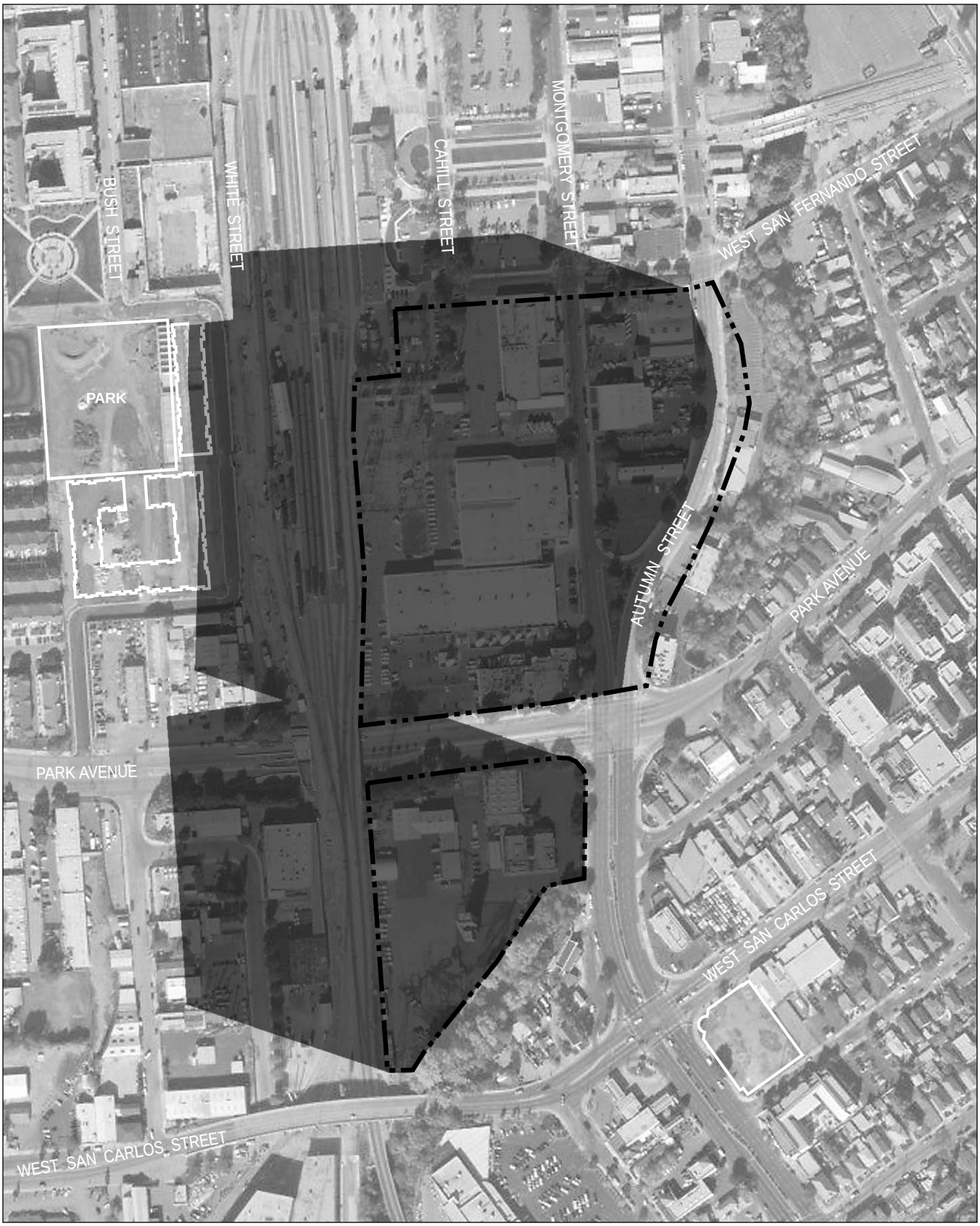
0 200 400
FEET

PROJECT BOUNDARY
PROJECT SHADOW

Baseball Stadium in the Diridon/Arena Area
Project Shadow Pattern
June 21: 3:00 pm

SOURCE: ENVIRONMENTAL VISION, 2005.

I:/SJO530 ballpark/figures/Fig_VL2c.ai (02/10/06)



LSA

FIGURE V.L-3a

N

0 200 400
FEET

PROJECT BOUNDARY
PROJECT SHADOW

Baseball Stadium in the Diridon/Arena Area
Project Shadow Pattern
September 21: 9:00 am

SOURCE: ENVIRONMENTAL VISION, 2005.

I:/SJO530 ballpark/figures/Fig_VL3a.ai (02/10/06)

LSA

FIGURE V.L-3b

N

0 200 400
FEET

PROJECT BOUNDARY
PROJECT SHADOW

Baseball Stadium in the Diridon/Arena Area
Project Shadow Pattern
September 21: 12:00 pm

SOURCE: ENVIRONMENTAL VISION, 2005.

I:/SJO530 ballpark/figures/Fig_VL3b.ai (02/10/06)

LSA

FIGURE V.L-3c

N

0 200 400
FEET

PROJECT BOUNDARY
PROJECT SHADOW

Baseball Stadium in the Diridon/Arena Area
Project Shadow Pattern
September 21: 3:00 pm

SOURCE: ENVIRONMENTAL VISION, 2005.

I:/SJO530 ballpark/figures/Fig_VL3c.ai (02/10/06)

LSA

FIGURE V.L-4a

N

0 200 400
FEET

PROJECT BOUNDARY
PROJECT SHADOW

Baseball Stadium in the Diridon/Arena Area
Project Shadow Pattern
December 21: 9:00 am

SOURCE: ENVIRONMENTAL VISION, 2005.

I:/SJO530 ballpark/figures/Fig_VL4a.ai (02/10/06)

LSA

FIGURE V.L-4b

N

0 200 400
FEET

PROJECT BOUNDARY
PROJECT SHADOW

Baseball Stadium in the Diridon/Arena Area
Project Shadow Pattern
December 21: 12:00 pm

SOURCE: ENVIRONMENTAL VISION, 2005.

I:/SJO530 ballpark/figures/Fig_VL4b.ai (02/10/06)

LSA

FIGURE V.L-4c

N

0 200 400
FEET

PROJECT BOUNDARY
PROJECT SHADOW

Baseball Stadium in the Diridon/Arena Area
Project Shadow Pattern
December 21: 3:00 pm

SOURCE: ENVIRONMENTAL VISION, 2005.

I:/SJO530 ballpark/figures/Fig_VL4c.ai (02/10/06)

M. UTILITIES

This section describes the various utilities systems serving the project site and evaluates the impacts that would result from the implementation of the proposed project. Mitigation measures are recommended, where appropriate.

1. Setting

Existing conditions for the following utilities and infrastructure service systems are described: electricity, natural gas, and telephone service; water supply; sanitary sewer service and wastewater treatment; and solid waste. The information presented was gathered from a variety of sources, including utility operators and service providers.

a. Electricity, Natural Gas, Telecommunications and Cable Television Services. The existing land uses on the project site are currently served with electricity, natural gas and communications services. The Pacific Gas and Electric Company (PG&E) provides natural gas and electricity services throughout the City, including the project site, from a variety of renewable and non-renewable sources both within and outside of the State. Within the City's boundaries, there are a number of facilities that produce and transmit power throughout the City.

Single-mast towers supporting high voltage 115-kV transmission lines parallel the project site, adjacent to the rail road tracks. An existing PG&E substation is located on the northwest portion of the project site adjacent to the railroad tracks. This approximately 1.5 acre facility includes 115-kilovolt transmission lines, underground electrical distribution lines, distribution transformers and electrical switch gear that serve the electrical needs in the downtown area.

The majority of electrical distribution lines within the project vicinity consist of overhead and underground 4- and 12-kV electrical lines. Distribution lines running out of the substation provide electricity to the project site and its vicinity. A number of underground distribution lines run out of the substation beneath Otterson Street and continue south along S. Montgomery Street to Bird Avenue and other lines continue north to W. San Fernando Street. Distribution lines also run under S. Autumn Street.

PG&E natural gas lines in the project area are located beneath W. San Fernando Street, S. Montgomery Street, Otterson Street, and Park Avenue.

AT&T/SBC Communications Inc. provides telecommunications service to the project site and Comcast provides cable services to the project site.

b. Water Supply. A description of existing conditions related to water sources, storage, and retail providers; conservation; and recycling is presented below.

(1) Water Sources, Storage, and Retail Providers. Wholesale water is provided to local water retailers by the Santa Clara Valley Water District (SCVWD). The local water retail agencies in turn supply water to their customers in the City of San Jose. The SCVWD obtains approximately one half of its water from the Santa Clara Valley groundwater basin. The remaining potable water supplies are provided through a combination of local surface water and imported water supplies from the

State Water Project, the Central Valley Project and San Francisco Public Utilities Commission Hetch Hetchy water.

The groundwater basin is divided into three interconnected subbasins: the Santa Clara Valley Subbasin in the northern portion of the County and the Coyote and Llagas Subbasins in the southern portions of the County. The City of San Jose is located in the northern portion of the Santa Clara Valley subbasin. A confined zone of underground water within the northern areas of the Santa Clara Valley subbasin is overlaid with a thick clay layer. The SCVWD manages groundwater supplies through a conjunctive use program, pumping more groundwater in drier years and then replenishing and recharging the groundwater basin during wet and average years. The SCVWD augments natural recharge with a managed recharge program to offset groundwater pumping in order to sustain groundwater storage reserves and minimize the risk of land subsidence and saltwater intrusion. To ensure groundwater levels are sustained, imported surface water from the State Water Project and San Felipe Division of the Central Valley Water Project is stored and recharged via 18 reservoirs, 30 creeks and 71 percolation ponds. Ten reservoirs, with a total storage capacity of approximately 170,000 acre-feet (AF),[1] store runoff from local watersheds.

The SCVWD has a long term agreement with the Semitropic Water Storage District in Kern County and at the San Justo Reservoir in San Benito County, which allows the District to divert some of its surface water allocations for storage for use in future dry years. The Semitropic Water Bank is an "in lieu" storage program, meaning that the District does not retrieve its stored water directly from the groundwater basin at Semitropic. Rather, the District receives its water from Semitropic's State Water Project contract deliveries from the Delta, while Semitropic meets its water needs by increased ground-water pumping of the excesses water stored by the SCVWD allotment during wet and normal water years.[2]

The SCVWD owns and operates an extensive distribution system and three water treatment plants: Penitencia (42 mgd capacity), Rinconada (75 mgd capacity), and Santa Teresa (100 mgd capacity).[3] Upgrades are currently under way at the Rinconada plant to increase production to 100 mgd.

The San Jose Water Company (SJWC) is the water retail service provider for the project site. The SJWC provides water service for an area encompassing 138 square miles, including portions of San Jose, most of Cupertino, the entire cities of Campbell, Monte Sereno, Saratoga, the Town of Los Gatos and parts of unincorporated Santa Clara County. In 2004, 55 percent of SJWC potable water came from SCVWD treatment plants, 36 percent from SJWC groundwater and 9 percent from SJWC surface water sources.[4] Ninety-four active and ten stand-by wells pump groundwater from the major water-bearing aquifers of the Santa Clara Valley Subbasin. These aquifers are recharged naturally by rainfall and artificially by a system of local reservoirs, percolations ponds and an injection well operated by the SCVWD. Treated SCVWD water from the Rinconada, Penitencia and Santa Teresa water treatment plants is piped into the SJWC system at various turnouts after treatment. Surface water in the local watersheds of the Santa Cruz Mountains is collected in a series of dams and automated

[1] Santa Clara Valley Water District, 2005. *Urban Water Management Plan.* December.

[2] Ibid.

[3] Ibid.

[4] San Jose Water Company, 2005. *Urban Water Management Plan.* October.

intakes and then sent to the SJWC's Montevina Filter Plant for treatment prior to entering the distribution system. The SJWC's projected water supply for normal water years is listed in Table V.M.-1.

Table V.M-1: SJWC Projected Potable Water Supply for Normal Water Years

Potable Water Supply (Acre-Feet)	Year
152,942	2005
163,669	2010
175,377	2015
188,474	2020
199,837	2025
211,464	2030

Source: Water Supply Assessment, SJWC, January 31, 2006.

Following the 1987-1991 multi-year drought, the SJWC drafted a Water Shortage Contingency Plan which entails specific actions which prohibit certain uses of water, and provides enforcement mechanisms and possible penalties. Increased water efficiency and conservation measures, water metering programs, increased use of recycled water and other possible supplies such as desalinization are being evaluated to ensure that the SJWC will be able to meet the increasing demand for water within its service area.[5]

SJWC water has extensive water sampling and reporting requirements as required by the California Department of Health Services. The SJWC has a Water Quality Department which includes a large monitoring program and deals with all issues related to water quality.

The existing water supply system to the project area consists of water lines of various sizes within the street rights-of-way, including a 6-inch line on W. San Fernando Street, an 8-inch line on Otterson Street, an 8-inch line in S. Montgomery Street, a 6-inch line in S. Autumn Street, a 12.75-inch line in Park Avenue and an 8-inch line for the San Jose Fire Department Training Facility.

(2) Water Conservation. The City's water conservation and water recycling programs are intended to minimize flows to the sanitary sewer and sewage treatment systems, and to meet future water needs. Elements of the City's water conservation program include: limited landscape watering hours, restrictions on the use of potable water for construction purposes, ultra-low flow toilet incentives, a showerhead retrofit program, landscape ordinances for non-residential new construction, commercial/industrial water audits, financial incentives for commercial/industrial conservation, water use prohibitions, and a ban on cleaning vehicles without an automatic shut-off valve.

(3) Recycled Water. The City of San Jose administers the South Bay Water Recycling (SBWR) Program, a long-term program for the Cities of Milpitas, San Jose, and Santa Clara created to bring a reliable, sustainable, and drought-proof supply of non-potable water to the South Bay area. The SBWR was initially created to reduce the environmental impact of wastewater effluent discharge into the salt marshes of the south end of San Francisco Bay, and to help protect endangered species in the Don Edwards San Francisco Bay National Wildlife Refuge.

Wastewater from the sanitary sewer system travels to the San Jose/Santa Clara Water Pollution Control Plant (SJ/SC WPCP), is treated to tertiary levels, and distributed through the SBWR system. The finished product, SBWR water, is certified by the State Department of Health Services as suitable for non-potable water for uses such as irrigation at golf courses, parks, schools, sports complexes, agricultural lands, and for industrial purposes and cooling towers.[6] All recycled water pipes are color-

[5] Ibid.

[6] City of San Jose, 2005. Environmental Services: South Bay Water Recycling. Website: www.sanjoseca.gov/sbwr/about.htm.

coded purple, the national standard to identify recycled water, and clearly labeled with the words, "Recycled Water- Do not Drink." This follows standard practice that requires separate pipes for drinking water and recycled water. Recycled water produced by the SBWR Program is intended for non-potable uses such as irrigation and industrial use. The recycled water meets the requirements of "unrestricted use" as defined in the State's Title 22 regulations.[7] Recycled water is continually regulated, monitored, and tested using standards set by the U.S. Environmental Protection Agency, Regional Water Quality Control Board and the State Department of Health Services to ensure that recycled water quality far exceeds the quality required for its intended use.[8] In San Jose, recycled water is used primarily for industrial and landscape irrigation purposes.

The recycled water system includes pump stations, reservoirs, and over 105 miles of pipe. During the summer months, between 10 and 16 million gallons of recycled water is distributed to over 500 customers per day.[9] Approximately 2,276 million gallons of recycled water was distributed through the SBWR system in 2004.[10] The San Jose Water Company anticipates a 3 percent annual increase in recycled water use within their service area during the next 25 years.[11]

Existing recycled water facilities in the project area are located on E. San Fernando Street between S. 12th and S. 4th Street east of the project site, and along Autumn Street approximately 400 feet south of Coleman Avenue, north of the project site. Additional recycled water lines currently extend to the Guadalupe Gardens and Colman Street, north of the project site.

c. Sanitary Sewer Service and Wastewater Treatment. The San Jose/Santa Clara Water Pollution Control Plant (Plant) provides wastewater treatment for the project area. The Plant is a regional facility located in North San Jose, and provides tertiary treatment of wastewater from several surrounding cities and sanitation districts. The cities of San Jose and Santa Clara jointly own the facility, but the City of San Jose operates and maintains the Plant.

The Plant's treatment capacity of 167 mgd is allocated between the several agencies served and two co-owners. The average dry weather from the City of San Jose in 2005 was approximately 118 mgd.[12] The City of San Jose currently has a remaining allotment of 49 mgd in unused treatment capacity.[13]

Most of the final treated water from the Plant is discharged as through Artesian Slough and into South San Francisco Bay. The area contains the South San Francisco Bay wetlands, along the Alviso shoreline, which are part of the Don Edwards San Francisco Bay National Wildlife Refuge. About 10 per-

[7] San Jose Water Company, 2005, op. cit.

[8] Ibid.

[9] Geoffrey Blair, Associate Environmental Services Specialist, City of San Jose Environmental Services Department, 2006, Personal communications with the City of San Jose Department of Planning, Building and Code Enforcement. January.

[10] Ibid.

[11] San Jose Water Company, 2005, op. cit.

[12] Pat Kwok, Division Manager, City of San Jose Environmental Services Division, 2006. Personal communication with LSA Associates, Inc. January.

[13] Ibid.

cent is recycled through South Bay Water Recycling pipelines for landscaping, agricultural irrigation, and industrial needs around the South Bay.

In 1989, the San Francisco Bay Regional Water Quality Control Board ordered the Plant to reduce its discharge of metals (copper and nickel) by more than 50 percent to protect aquatic organisms and meet the State and Federal water quality objectives of the South San Francisco Bay. In addition, the Regional Board imposed a 120 mgd flow limit and required the Plant to reduce the quantity of effluent discharged to avoid converting the habitat of two endangered species, the salt marsh harvest mouse and the California clapper rail. The Plant has had programs in place since 1991 to reduce and maintain flows below 120 mgd and is currently in compliance with this requirement. In 2005, the average dry weather effluent flow was approximately 102mgd.[14] Long-term plans to remain in compliance with the 120-mgd requirement include ongoing water conservation and water recycling.

The existing sanitary sewer collection system which serves the project site consists of a system of pipelines, lateral lines and interconnected main lines in the public right-of-way, draining to treatment at the Plant. Wastewater collection is maintained by the City of San Jose Department of Public Works. The treatment of wastewater is under the authority of the Department of Environmental Services. The General Plan provides standards to ensure that sanitary sewer lines maintain a Level of Service (LOS) D, which represents a free flow of wastewater sufficient to prevent "back up" problems.

A 36-inch high density polyethylene (HDP) and concrete protection liner (CPL) sewer main runs beneath the Park Avenue right-of-way and continues north beneath the S. Autumn Street right-of-way. This sewer main eventually increases to a 42-inch vitrified clay pipe (VCP) downstream of the site to the north. Existing land uses on the site are served by 6- to 8-inch VCP sewer lines beneath the Otterson Street and S. Montgomery Street rights-of-way. These lines connect to a 10-inch VCP line beneath the W. San Fernando Street right-of-way.

d. Solid Waste. Commercial solid waste collection in San Jose is provided by private haulers in a competitive, non-exclusive system. Collectors of garbage, rubbish, and mixed recyclables are required to have a franchise issued by the City. Currently, 16 franchised haulers offer commercial garbage and rubbish collection. Seven of these are full-service waste haulers, who provide and service front-load bins and roll-off boxes and also provide recycling services; two provide roll-off service for both garbage and recyclables. An additional nine franchisees provide mixed recycling service only.[15] Many additional firms collect source-separated recyclables, such as corrugated cardboard, beverage containers, office paper, glass, and food waste.[16]

As shown in Table V.M-2, there are five active landfills in San Jose. Four of these are permitted to accept all non-hazardous commercial wastes—Guadalupe Sanitary Landfill, Kirby Canyon Recycling & Disposal Facility, Newby Island Sanitary Landfill, and Zanker Material Processing Facility. The fifth, Zanker Road Class III Sanitary Landfill, is prohibited from accepting putrescible waste (i.e., garbage, as opposed to rubbish). All five landfills have extensive recycling operations, including, at

[14] Ibid.

[15] Stephen Bantillo, Commercial Solid Waste Manager, City of San Jose Environmental Services Department, 2006. Personal communication with Akoni Danielson, City of San Jose. February 3.

[16] Santa Clara County Center for the Development of Recycling. Website: www.recyclestuff.org.

various sites, composting, construction and demolition debris processing, biomass fuel production, salvaging, and recovery of soils and inert materials for daily cover and on-site construction.

The most recently published projections of closure dates for San Jose landfills were in the County of Santa Clara Five-Year Review Report on the Countywide Integrated Waste Management Plan, dated May 2004. The five sites were projected to have 17 to 25 years of life remaining at that time (see Table V.M 2).[17]

Table V.M-2: San Jose Disposal Quantities (2004) and Projected Landfill Closure Dates

Landfill	Maximum Permitted Daily Throughput (Tons)[a]	Average Amount Of Waste Received Per Day (Tons)[b]	Average Permitted Daily Throughput Available (Tons)	Projected Landfill Closure Date[c]
Guadalupe Sanitary Landfill	3,650	1,494	2,156	2023-2028
Kirby Canyon Recycling & Disposal Facility	2,600	1,220	1,380	2022
Newby Island Sanitary Landfill	4,000	3,108	892	2021
Zanker Road Class III Landfill	1,300	672	628	2020
Zanker Material Processing Facility	350	425	-75	2021
Total Disposed In San Jose	**11,900**	**6,919**	**4,981**	

[a] California Integrated Waste Management Board, Solid Waste Information System. Website: http://www.ciwmb.ca.gov/SWIS/Search.asp.
[b] California Integrated Waste Management Board, Disposal Reporting System. Website: http://www.ciwmb.ca.gov/LGCentral/DRS/Reports/.
[c] County of Santa Clara. Five-Year Review Report on the Countywide Integrated Waste Management Plan, May 2004. Website: http://www.ciwmb.ca.gov/agendas/mtgdocs/2004/09/00016898.pdf.

Source: City of San Jose, 2006.

San Jose generated 831,602 tons of waste in 2004 that was reported to the State as landfilled. Of this, 670,979 was disposed and 160,623 was used as Alternate Daily Cover.[18] Several hundred thousand additional tons were used by landfills as clean cover material, inert construction material, or for other "beneficial uses" on-site. Of the 832,000 tons generated in San Jose, 161,000 were sent to landfills outside of the City, or about 19 percent. The main destinations for disposal were Solano, San Joaquin, and Kings Counties. The main destination for Alternate Daily Cover was Alameda County. The 671,000 tons of San Jose waste landfilled at the five sites inside the City make up 45 percent of the 1,475,000 tons reported by those sites. Almost all of the other 804,000 tons of waste disposed of in San Jose originated in Santa Clara County, with smaller amounts (less than 1 percent) coming from each of the other counties in the San Francisco and Monterey Bay Areas.

The Integrated Waste Management Act of 1989 (AB 939) requires all municipalities to divert 50 percent of its solid waste from landfills by the end of calendar year 2000 through the implementation of various strategies, including source reduction, composting, recycling, and yard waste programs. Using a combination of financial incentives, public education, technical assistance, and recycling collection services, the City increased its diversion rate dramatically from 11 percent in 1990 to 44 percent in 1995. In 2002, the City of San Jose diverted 62 percent of the waste stream through a variety of waste diversion programs including curbside recycling, a free waste assessment program, and policy incentives.[19]

[17] California Integrated Waste Management Board, 2005. Website: http://www.ciwmb.ca.gov/agendas/mtgdocs/2004/09/00016898.pdf.

[18] California Integrated Waste Management Board, 2005. *Disposal Reporting System*. Website: http://www.ciwmb.ca.gov/LGCentral/DRS/Reports/Orgin/WFOrgin.asp?VW=SUBMIT.

[19] California Integrated Waste Management Board, 2005. *Jurisdiction Profile for the City of San Jose*. Website: www.ciwmb.ca.gov/profiles/juris.

AB 2176 established requirements for large venues and events (with average daily attendance, including staff, of more than 2,000 people) to plan for solid waste reduction, and requires the largest to annually report the progress of their recycling and waste reduction programs to their local government. It also requires provision of adequate space for the collection and loading of recyclable materials in new development projects as a necessary condition of permit approval. AB 2176 requires that operators of large venues and event facilities meet with recyclers and solid waste handlers to select appropriate waste diversion programs and to prepare a waste reduction plan.

The proposed baseball Stadium will be one of the largest venues in San Jose. Pursuant to AB 2176, its operators will be required to prepare a waste reduction plan and submit it to the Environmental Services Department for approval prior to opening. The operator will also be required to submit annual reports showing the amounts of waste disposed and diverted from disposal, documenting their progress in achieving their waste reduction plan, and explaining any delays in implementing elements of that plan.[20]

The City of San Jose's Construction and Demolition Diversion Deposit Program (CDDD) is an incentive program to encourage the recovery of construction and demolition debris through the use of a deposit that is refunded if the construction and debris are recovered or recycled at a CDDD-certified facility.

e. San Jose 2020 General Plan Policies. The following policies from the *San Jose 2020 General Plan* are related to utilities systems and are relevant to the proposed project.

Natural Resources

- *Water Resources Policy 1:* The City, in cooperation with the Santa Clara Valley Water District, should restrict or carefully regulate public and private development in watershed areas, especially those necessary for the effective functioning of reservoirs, ponds, and streams, and for the prevention of excessive siltation.
- *Water Resources Policy 2:* Water resources should be utilized in a manner which does not deplete the supply of surface or ground water, and efforts to conserve and reclaim water supplies, both local and imported, should be encouraged.
- *Water Resources Policy 5*: The City should protect groundwater recharge areas, particularly creeks and creeksides, and riparian corridors.

Services and Facilities

- *Sewage Treatment Policy 7:* The City should monitor and regulate growth so that the cumulative sewage treatment demand of all development can be accommodated by San Jose's share of the treatment capacity of the San Jose/Santa Clara Water Pollution Control Plant.
- *Sewage Treatment Policy 8:* The operation of the Water Pollution Control Plant should comply with the water quality standards for the South San Francisco Bay established by the Regional Water Quality Control Board and implemented through NPDES (National Pollutant Discharge Elimination System) permits.
- *Sewage Treatment Policy 9:* The City should continue to encourage water conservation programs which result in reduced demand for sewage treatment capacity.
- *Solid Waste Goal 2:* Extend the life span of existing landfills by promoting source reduction, recycling, composting and transformation of solid wastes.

[20] California Integrated Waste Management Board, 2006. *Waste Reduction at Venue Facilities and Large Events.* Website: http://www.ciwmb.ca.gov/venues/.

- *Solid Waste Policy 1:* Monitor the continued availability of long-term disposal capacity to ensure adequate solid waste disposal capacity.
- *Solid Waste Policy 20:* Solid waste reduction techniques including source reduction, reuse, recycling, source separation and energy recovery, should be encouraged.

f. Regulatory Framework. Public electricity providers (such as PG&E) within the State are subject to both State and local jurisdictions' utilities regulations. These regulations are discussed below.

(1) California Public Utilities Commission. The California Public Utilities Commission (CPUC) regulates the activities of private utilities within the State, including privately held electrical service providers such as PG&E. PG&E is required to comply with the provisions of CPUC General Order No. 131-D, when constructing, modifying, or relocating its electrical facilities, specifically substations.[21] General Order No. 131-D, Section III, Need for Commission Authorization, B. Permit to Construct, states:

> No electric public utility shall begin construction in this state of any electric power line facilities or substations which are designed for immediate or eventual operation at any voltage between 50-kV or 200-kV or new or upgraded substations with a high side voltage exceeding 50-kV without the Commission's having first authorized the construction of said facilities by issuance of a permit to construct in accordance with the provisions of Sections IX.B, X, and XI.B.

2. Impacts and Mitigation Measures

The following section evaluates impacts related to utilities and infrastructure service systems that could result from the implementation of the proposed project. The section begins with the criteria of significance, which establish the thresholds to determine whether an impact is significant and concludes with impacts of the project and mitigation measures, if required.

a. Criteria of Significance. Implementation of the proposed project would have significant impacts on utilities and infrastructure service systems if it would have the following effects:

- Exceed wastewater treatment requirements of the Regional Water Quality Control Board (RWQCB);
- Create substantial demand for water beyond the existing or planned City's water supply, requiring additional water storage capacity;
- Interfere with the accomplishment of waste diversion goals mandated by the California Integrated Waste Management Act;
- Require or result in the construction of a new water, stormwater, or wastewater facility or expansion of existing facilities, the construction of which could cause significant environmental effects;
- Result in a determination by the wastewater treatment provider that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments;

[21] Public Utilities Commission of the State of California, 2005. *Rules Relating to the Planning and Construction of Electrical Generation, Transmission/Power/Distribution Line Facilities and Substations Located in California*, General Order No. 131-D, Adopted June 8, 1994, modified August 11,1995.

- Require new or expanded entitlements for water supplies;
- Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs; or
- Directly affect a major energy line or facility.

b. Less-than-Significant Utilities Impacts. The proposed project would create a small increase in demand for each of the utilities and service systems addressed in this section. However, in each case, the extent of the increased draw on those services would be within the physical and financial capability of the provider.

(1) Natural Gas and Telecommunication and Cable Television Services. Facilities providing electricity, natural gas and telephone services are built and maintained by the private utilities that provide these services under their franchise agreements with the State of California. New and expanded facilities are paid for from capital funds financed by fees paid by users. The project site is within an area which is currently urbanized and served by existing electricity, natural gas and telephone infrastructure.

Comcast Cable provides verification of services for new businesses and prior to construction a technician would visit the site to determine where the existing cable network is located, how to provide service to the proposed development and would give Comcast a quote on the cost of installation. Since the proposed project is within an area which is currently developed, it is likely that cable infrastructure would be readily available in the vicinity of the project site. Comcast seeks to expand their customer base and works to provide service to new customers in order to gain new accounts.

AT&T/SBC Communications currently provides communications service to the existing facilities on the project site. Depending on the communication needs of for the proposed project, AT&T/SBC may install a fiber optic cable to provide service to the site. Because the project site is within an urbanized area currently served by communications services, extending additional communication lines to the site would be feasible. Further refinement of the proposed project will determine the communication needs of proposed project and which type of infrastructure AT&T/SBC Communications would utilize to service the project site.

All of the utilities monitor the plans and growth patterns of the urban jurisdictions that they serve and, in doing so, maintain adequate backbone infrastructure to serve new development of the scale of the proposed project. (Potential impacts related to energy supplies are also addressed in Chapter V.O, Energy.)

(2) Water Supply. California Senate Bill 610 (SB 610) requires that water retailers must demonstrate whether their water supplies are sufficient to meet the projected demand of large development projects. The Water Supply Assessment (WSA) prepared for the proposed project by the SJWC determined that the project would increase the demand for water by approximately 54 million gallons per year (165 AF/year).[22] The WSA is included in Appendix H. This amount of water is well within the SJWC's future water demand projections as included in the 2005 UWMP.[23]

[22] San Jose Water Company, 2006. *Water Supply Assessment*. January 31.

[23] Ibid.

New lateral water supply lines within the site would have to be constructed and connected to the main lines described above.

The City would be responsible for the construction of these lines. At the time that a specific project design is finalized, water-conserving technologies and design features would be incorporated into the project. These elements of the project would include both indoor and outdoor features.

Existing recycled water lines are located on E. San Fernando Street east of the project site, and along Autumn Street extending approximately 400 feet south of Coleman Avenue, north of the project site.[24] Additional recycled water lines currently extend to the Guadalupe Gardens and Colman Street, north of the project site. Recycled water could be provided to the project site since planned and existing pipelines are close to the project site and water use at the site would be conducive to use of recycled water.[25] Recycled water is typically used for irrigation, but could also be used in toilets. The proposed project would be similar to the San Jose City Hall. The use of recycled water and conservation measures would minimize the effects on water supply during a drought.

Coordination with South Bay Water Recycling to extend recycled water lines to the site would provide recycled water to be utilized for all non-potable water needs of the proposed project, such as irrigation of the baseball field, water features, landscaping, and in urinals and toilets. The extension of recycled water lines to the site could also provide non-potable water to other locations along the way, including the HP Pavilion and Arena Green. Approved uses of recycled water are administered by South Bay Water Recycling (SBWR) Program and the California Department of Health Services.

(3) Wastewater. Based on an average daily flow rate of 5 gallons[26] per day (gpd) the proposed project would generate an average daily wastewater flow of approximately 225,000 gpd.[27] Using the City of San Jose Department of Public Works peak hour formula, the proposed project would generate a peak hour flow of approximately 650,000 gpd.[28] This increase in wastewater flow could be accommodated by the SJ/SC WPCP, which has a remaining excess treatment capacity of 49 mgd.[29]

The 36-inch HDP sewer line which runs beneath Park Avenue has an available capacity to accommodate 1.5 million gallons per day (MGD.)[30] The average daily flow of 225,000 gpd and the peak flow of 650,000 gpd from the proposed project could be accommodated by the remaining 1.5 million gpd

[24] Geoffrey Blair, Associate Environmental Services Specialist, City of San Jose Environmental Services Department, 2006. Personal communications with the City of San Jose Department of Planning, Building and Code Enforcement. January.

[25] Nicole Quesada, Engineer, South Bay Water Recycling, 2005. Personal communications with LSA Associates, Inc., December.

[26] Kam, Alan, 2006. Associate Engineer, San Jose Public Works Department, Sanitary Sewer section. Personal communication with LSA Associates, Inc., January.

[27] 45,000 seat x 5 gpd per seat = 225,000 gpd, average daily flow

[28] Kam, Alan, 2006, op. cit.

[29] Pat Kwok, Division Manager, City of San Jose Environmental Services Division, 2006. Personal communication with LSA Associates, Inc. January.

[30] Kam, Alan, 2006, op. cit.

capacity in the 36-inch sewer lines beneath Park Avenue. New lateral sanitary sewer lines within the site would have to be constructed and connected to the 36-inch trunk line beneath Park Avenue. Further analysis of the sanitary sewer capacity will be required at the project stage to determine the adequacy of the existing sanitary sewer system to accommodate the proposed project. Improvements and upgrades to the sanitary sewer system may be required to serve the proposed project.

(4) Solid Waste. Waste generation rates from Camden Yards Ballpark in Baltimore, Maryland are approximately 8 tons of solid waste per event.[31] Camden Yards has a seating capacity of 48,200 and therefore the 8-ton waste generation figure would be a conservative estimate for waste generation at the proposed project. The 80 baseball games and 15 to 20 other events that would occur as a result of the implementation of the proposed project would generate approximately 800 tons of solid waste per year. The increased solid waste generation during events at the stadium would constitute less than 1 percent of the remaining permitted daily throughput of the Kirby and Newby Island Landfills.

Large venues such as professional sports stadiums generate substantial quantities of solid waste, primarily corrugated cardboard, food waste and reusable and recyclable materials such as beverage containers, paper and glass. In accordance with AB 2176, the proposed project would be required to provide adequate space for waste reduction, reuse, and recycling activities. The design of the Stadium should include adequate overhead space to accommodate the overhead height requirements of front-end loading waste hauling vehicles or the length required to accommodate roll-off container transportation. If the Stadium waste handling areas are not designed with adequate space for loading and hauling within the site, space would need to be provided so that solid waste containers could be moved adjacent to the street to for hauling.

Additional solid waste could be diverted from the landfill if the recycling program includes recycling of food and organic waste. The HP Pavilion achieved a 97 percent waste diversion rate in 2002 through a comprehensive recycling and composting program.[32] The HP Pavilion recycling program includes:

- Recycling of all glass and plastics from the concessions, restaurants and bar areas;
- Post-game pick-up of recyclables;
- Provision of receptacles for glass and aluminum; and
- Mixed paper and cardboard recycling facilities.

As noted above, sufficient capacity exists at local landfills until 2021. Consistent with City policies, construction and demolition activities will be subject to recycling standards, and the new buildings will be designed to facilitate recycling activities.

[31] Lettieri-McIntyre and Associates, Inc., 1999. *Final Subsequent EIR for the San Diego Ballpark and Ancillary Development Projects.*

[32] U.S. Environmental Protection Agency, 2005. HP Pavilion at San Jose/Shark Tank: An Arena Recycling Success. Website: www.epa.gov/region09/waste/features/stadiumrecycling/.

(5) Storm Sewer. The project site is served by two main storm sewer networks, both of which discharge directly to Los Gatos Creek east of the site.[33] The northern portion of the site is drained by pipes under S. Montgomery Street and W. San Fernando Street. At the Los Gatos Creek outfall, this drainage pipe is 18 inches in diameter. The southern portion of the site is drained by underground pipes in the vicinity of Park Avenue. At the Los Gatos Creek outfall, this drainage pipe is 48 inches in diameter. Further analysis of the storm sewer capacity will be required at the project stage to determine the adequacy of the existing storm sewer system to accommodate the proposed project. Improvements and upgrades to the storm sewer system may be required to serve the proposed project, as discussed in Section V.H, Hydrology and Water Quality, in this EIR.

c. Significant Utilities Impacts. Implementation of the proposed project could result in the following significant adverse impact related to utilities and service systems.

<u>Impact UTIL-1</u>: The water demand of the proposed project could cause a reduction in water pressure for surrounding land uses being served at the lower end of the pressure range. (S)

The project site is located in one of the SJWC's largest water pressure zones and experiences lower than average water pressure. A hydraulic analysis was preformed by the SJWC incorporating the worst case scenario of 3,000 gallons per minute (gpm) demand assuming maximum capacity attendance of an event at the stadium on the day of maximum (peak summer) system-wide water usage.

Current downtown pressures during maximum day conditions have been noted to drop to the 45 to 55 psi range during high usage periods. The SJWC hydraulic analysis projected that a stadium demand of 3,000 gpm would cause a reduction in downtown water pressures by 4 psi.[34] This reduction in pressure would be noticed by other water uses currently being served at the lower end of the pressure range. In order to ensure that the proposed project does not impact water pressures in this zone, the following mitigation measure shall be implemented.

> <u>Mitigation Measure UTIL-1</u>: Prior to the issuance of a certificate of occupancy, the City shall either 1) install one new well in an easement within the area with access to the existing water lines, or 2) install inter-zone regulators at two existing SJWC facility stations to supply water from an adjacent, higher pressure zone.
>
> The SJWC preferred mitigation would be a new well facility located near the stadium (possibly in an easement on the southerly portion of the site adjacent to Los Gatos Creek). The well site would be required to meet all setbacks and requirements of the California Department of Health Services and the SCVWD. This well would pump water from the same basin as all of the SJWC's existing wells, the Santa Clara Valley Groundwater Subbasin. A new well would require approximately 5 feet by 5 feet of space for the above-ground well head with sufficient over-head space for well drilling and pump maintenance. The pump would be located in the well and would connect to existing water transmission line adjacent to the site.

[33] City of San Jose, Department of Public Works, 2002. Storm Drain System, maps 83A and 83C, revision date November 1.

[34] San Jose Water Company, 2006, op. cit.

An alternative to providing an additional well would be installing inter-zone regulators at two of the SJWC's existing facility locations. This would not require additional space, but would require additional piping, telemetry, and site modifications funded by the City. This option is not preferred by the SJWC as it would reduce operational flexibility. (LTS)

Impact UTIL-2: The solid waste generated during the demolition, land clearing and construction could interfere with waste diversion goals mandated by the California Integrated Waste Management Act. (S)

Demolition, land clearing and construction activities would generate a substantial amount of demolition waste. Implementation of the following mitigation measure would ensure that waste diversion and recycling goals of the California Integrated Waste Management Act and the San Jose Green Building Policies are met.

Mitigation Measure UTIL-2: Prior to the demolition of any structure on the site, the City shall prepare a waste management plan for the recycling of construction and demolition materials. The waste management plan shall ensure that a minimum of 50 percent (by weight) of construction, demolition, and land clearing waste is recycled or salvaged. (LTS)

Impact UTIL-3: The proposed project may require the relocation of the existing PG&E substation. (S)

The existing PG&E Substation A located adjacent to the railroad tracks in the northwestern portion of the project site will be modified or may be relocated as part of the proposed project. Should the relocation of the existing PG&E substation be required, the CPUC would be required to review and approve any modifications to or the siting and configuration of the new substation.

The CPUC has exclusive jurisdiction over utility regulation, including the installation of electrical substations, transmission lines, and associated facilities. Local jurisdictions cannot disapprove, impose conditions or environmental mitigation measures, or otherwise assert formal, discretionary jurisdiction over utility projects. Local jurisdictions are requested to supply a position statement during PG&E's preparation of the required Proponent's Environmental Assessment (PEA) and to comment during the CPUC's review process under CEQA.

PG&E is currently in a 90-day process (initiated on December 15, 2005 and expected to be complete March 15, 2006) for the evaluation of the required actions to relocate the substation from the northwest corner of the site to the southern portion of the site, south of Park Avenue.

Underground and overhead distribution lines currently located on the project site may need to be upgraded or modified to accommodate the proposed stadium design. Development of the proposed baseball stadium and associated parking structure and future development site would be required to underground all utility lines within the project site and vicinity.

The new substation would be designed to accommodate the future electrical requirements of the proposed stadium and with additional capacity to serve planned growth in the area.[35] The environmental

[35] Mahyar Congirlu, 2006. Land Agent/Project Coordinator. PG&E. Personal communication with LSA Associates, Inc., January.

impacts associated with the relocation, construction and operation are described throughout this document to the extent they are known at this time. As the design of the substation is finalized, additional detailed environmental review will be performed as required under CEQA.

> Mitigation Measure UTIL-3: The City shall work with PG&E to provide a new substation and transmission and distribution infrastructure. (LTS)

N. PUBLIC SERVICES AND FACILITIES

This section describes the public services and facilities within and in the vicinity of the project site. Potential impacts that could result from the implementation of the proposed project are evaluated and mitigation measures are recommended, where appropriate.

Beyond those services and facilities evaluated herein, others (e.g., schools, libraries) were considered in the environmental checklist/initial study (included in Appendix B) and determined not to face significant adverse impacts as a result of the proposed project.

1. Setting

The public services and facilities setting section includes the following topics: police protection services; fire and emergency medical services; and parks and recreation facilities. The information presented below was gathered from a variety of sources, including City of San Jose departments that administer or provide the public service.

a. Police Protection Services. The City of San Jose Police Department (SJPD) provides police protection services throughout the City. Currently, there are approximately 1,400 sworn officers in the SJPD force.[1]

The SJPD provides services within its jurisdiction to an area that consists of 83 beats, allocated to 16 districts. Beats are identified with a number and the districts are identified with a letter (e.g., N2). The project site is located within District F, Beat 4 and District E, Beat 1. The most frequent calls for service to these Districts include those referred to by the following terms: disturbance, welfare check, suspicious person, alarms and traffic accident.[2]

Police staffing at the HP Pavilion is coordinated through the Traffic Enforcement Unit and the Secondary Employment Unit, which utilizes off-duty officers to provide police security services at the HP Pavilion during events on a contract basis.[3] Staffing levels are dependent on event security requirements.

As is noted in the San Jose 2020 General Plan, the City has established a response time goal for police protection services of 6 minutes or less for 60 percent of Priority 1 calls (defined as involving immediate danger to life or property), and 11 minutes or less for 60 percent of Priority 2 calls (non-emergency situations).[4] The Department's current response time for Priority 1 calls is 6 minutes for 75 percent of calls. The current response time for Priority 2 calls is 11 minutes for 60 percent of all calls.[5]

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[1] Sergeant Bob Nalett, 2005. San Jose Police Department, Research & Development Unit. Personal communications with Dennis Korabiak, San Jose Redevelopment Agency. December.

[2] San Jose Police Department. Crime statistics for 2005. Website: http://public.coronasolutions.com/

[3] Sergeant Bob Nalett, 2005, op. cit.

[4] According to the San Jose 2020 General Plan, this benchmark measure of Citywide service is to be used to evaluate the cumulative impacts of land use changes and development. However, the General Plan specifically states that "these benchmarks are not intended as thresholds for assessing environmental impacts under the California Environmental Quality Act."

[5] Sergeant Bob Nalett, 2005, op. cit.

b. Fire and Emergency Medical Services. Fire protection, rescue and emergency medical services (EMS) within San Jose are provided by the City of San Jose Fire Department (SJFD). The SJFD serves a total of 206 square miles, and responds to all fires, hazardous materials spills, and medical emergencies (including injury accidents).

Table V.N-1: Fire Station Location and Response Capability

Fire Station Number	Address	Distance from Project (Miles)	Response Capability
30	454 Auzerais Avenue	0.8	Engine
1	225 N. Market Street	1.2	Engine, Ladder Truck, Light Unit and Battalion Chief 1
3	89 Martha Street	2.1	Engine, Ladder Truck, Light Unit
4	710 Leigh Avenue	2.3	Engine, Ladder Truck, Light Unit
7	800 Emory Street	1.6	Engine

Source: City of San Jose, 2005.

The SJFD includes 31 fire stations located throughout the City, which house 31 engine companies, eight truck companies, three Urban Search and Rescue (USAR) companies, one Hazardous Materials Incident Team (HIT), five Battalion Chiefs, one Paramedic Supervisor, and one Arson Investigator. The Department maintains a minimum staffing of four positions (e.g., one captain, one engineer, one firefighter paramedic and one firefighter) for engine companies and five positions (e.g., one captain, two engineers, one firefighter paramedic, and one firefighter) for ladder/truck/USAR companies. All of the 31 engine companies and 11 truck/USAR companies have a paramedic firefighter assigned on duty to provide advanced life support (ALS) capabilities.

The Department consists of 716 sworn positions with 695 positions currently assigned to companies. The Department consists of career firefighters only. Citywide daily staffing level for emergency response is 194 personnel on-duty.[6] Fire Station #30 is the closest fire station to the project site with secondary resources responding from four fire stations located in the vicinity of the project site, as shown in Table V.N-1.

The City of San Jose also participates in automatic aid programs with the Cities of Milpitas and Santa Clara and the Santa Clara County Fire Department. These automatic aid programs assign the closest responding first-due units, when available, in several designated areas in San Jose and the other participating jurisdictions.

The City of San Jose also participates in a Countywide Mutual Aid Program with many other fire agencies in Santa Clara County and the California Department of Forestry (CDF). Through this program, should any of the participating jurisdictions need additional assistance in a major emergency, and a significant portion of their own resources are committed to emergency operations, strike teams, composed of designated units from one or more of the program cities, would provide assistance to mitigate the emergency.

Emergency medical services within the City of San Jose are jointly provided by the SJFD and American Medical Response (AMR). The SJFD provides advanced life support (ALS) first responder services from 42 apparatus deployed from 31 stations. AMR provides ALS patient transport. The SFJD

[6] Von Raesfeld, Darryl, 2005. Assistant Chief, San Jose Fire Department. Personal communication with LSA Associates, Inc. December 15.

also maintains five transport-capable Supplemental Transport Ambulance Resources (STAR) units in the event AMR is delayed and immediate patient transport is required.

As noted in the San Jose 2020 General Plan, the City has established an average response time standard of 4 minutes for Fire Department first-due emergency response.[7] The level of service set by the SJFD is based on average conditions (i.e., dry weather, time of day, traffic patterns, etc.) and is measured upon the arrival of the emergency response vehicle to the "curb."

The SJFD uses fractile measures[8] for performance standards in determining resource planning and deployment decisions. The adopted performance objective is 8 minutes or less for 80 percent of emergency responses. For 2004-05 the SJFD's citywide performance is estimated to be 8 minutes for 76 percent of emergency responses. Response times to the project site from Station 30 are predicted to be within 8 minutes for 95 percent of responses.[9]

The southern portion of the project site contains the 5-acre City of San Jose Fire Department Training and General Service Facility. The training site includes approximately 11,680 square feet of offices, classrooms, and locker rooms, 11,730 square feet of vehicle repair and storage space, 5,690 square feet of general storage space, and a seven-story, 4,860-square-foot training tower. The site also includes a specialized piece of concrete called a "Drafting Pit," which acts as a cistern. The Fire Department uses this to draw water through fire truck pumps when testing equipment. There is also a building on the site which houses a water pump to keep the Park Avenue railroad underpass free of standing water during heavy rain events.

Nearby high-tension power lines and hazardous materials transit on adjacent railroad tracks are potential fire hazards in the vicinity of the project site. The collapse of overpass structures bridging major east to west surface streets would prevent the apparatus from Stations 1 and 3 from responding to emergencies on the project site.

c. Parks and Recreation Facilities. The City of San Jose provides park lands, open space and community facilities for public recreation and community services. Parks and recreation facilities vary in size, use, type of service, and provide for city, regional and neighborhood uses. The City Department of Streets and Parks is responsible for the construction, operation and maintenance of all City park and recreation facilities. There are no existing parks on the project site.

As noted in the San Jose 2020 General Plan, the City of San Jose has established level of service measures for park land and community centers. These levels of service are as follows:

- 3.5 acres of neighborhood and community serving recreational lands per 1,000 population, of which a minimum of 1.5 acres must be City owned neighborhood or community park lands and up to 2 acres can be provided by school playgrounds, and all should be located within reasonable walking distance;

[7] See footnote 3, above.

[8] Fractile measures are percentile based figures which use a specific response goal and a percentage that represents the amount of times which the goal is met. Fractile measures provide a more accurate measure of emergency response time which reflects a reliability factor as opposed to relying on an simple average (arithmetic mean) response time, which does not effectively measure reliability.

[9] Darryl Von Raesfeld, 2005. Assistant Chief, San Jose Fire Department, op. cit.

- 7.5 acres of regional/Citywide park lands per 1,000 population; and
- 500 square feet of community center space per 1,000 population.

The following parks are within the vicinity of the project site:

- John P. McEnery Park. (Located ¼-mile east of project site on San Fernando Street, the park contains play structures, picnic tables and lawn areas.)
- Arena Green-Confluence East Park. (Located ¼-mile north of the project site at the corner of W. Santa Clara Street and S. Autumn Street, the park contains a tot lot and playground, a carousel, donor walkway and park ranger and visitor center.)
- Station Green. (Located north of the project site across W. San Fernando Street, Station Green is a grass lawn which serves as a forecourt to Diridon Station.)
- A new public park is being developed in association with the Cahill housing development. (Located ¼-mile west of the project site.)
- A new public park is planned in association with the KB Homes Del Monte housing development on the south side of Auzerais Avenue immediately west of Los Gatos Creek.

The *Midtown Specific Plan* (1992), *San Jose Greenprint, A 20-Year Strategic Plan for Parks and Community Facilities and Programs* (2000), and the *Diridon/Arena Strategic Development Plan* (2002) identify the City owned Fire Training Facility as a possible location for a future park. With a total area of roughly 5 acres, the site is identified in the plan as a possible location for a neighborhood and community serving recreational park that could potentially provide a large athletic field for baseball and softball. This future park site is designated to meet the overall level of service objective of 3.5 acres per 1,000 population in the plan areas which are currently underserved by existing parkland areas.

The *Los Gatos Creek Master Plan* (1985) identifies the Los Gatos Creek corridor as a part a planned open space trail system connecting the San Francisco Bay to the Santa Cruz Mountains. While portions of the trail have been constructed, the trail segment within the project site has not yet been completed. Portions of the project site adjacent to Los Gatos Creek are designated as the future location of the Los Gatos Creek Trail alignment, which currently indicates that the trail would run along the western bank of the creek. As discussed in greater detail in Section V.A, Land Use, Reach 5 of the Los Gatos Creek Trail is an approximately ⅔-mile-long multi-use trail located between Auzerais Avenue and W. Santa Clara Street. The trail will consist of a Class 1, 12-foot-wide paved path, with portions of the trail extending along existing sidewalks. At the time of preparation of this EIR, the Reach 5 project was in the early planning stages.

d. San Jose 2020 General Plan Policies. The following policies from the *San Jose 2020 General Plan* are related to public services and facilities utilities and are relevant to the proposed project.

Services and Facilities, Level of Service

- *Other Services Policy 16:* Utilize the following Citywide level of service measures as benchmarks to be used to evaluate major General Plan land use and policy changes, such as expansions of the Urban Service Area or land use changes from non-residential to residential:
    - For police protection, achieve a response time of six minutes or less for 60 percent of all Priority 1 calls, achieve a response time of eleven minutes or less for 60 percent of all Priority 2 calls.

- For fire protection, a 4-minute average response time to all calls.
- For parks and recreation: 3.5 acres of neighborhood and community serving recreational lands per 1,000 population, of which a minimum is 1.5 acres of neighborhood, community or locally serving regional/City-wide park lands and up to 2 acres of school playgrounds, and all of which is located within a reasonable walking distance of the project; 7.5 acres of regional/City-wide park lands per 1,000 population; and 500 square feet of community center floor area per 1,000 population.
- For libraries, 10,000 square feet of library space per 36,000 population, 18.3 weekly service hours per 10,000 population, and an annual acquisition rate of 1 volume per 6 people for the first 500,000 population and 1 volume per 8 people over 5000,000 population.
- The City recognizes that these performance measures are limited reflections of all City services and may change over time to reflect increasing diversity, new methods of service delivery or to reflect changing needs and priorities that are determined in the budgetary process. The details of these performance measures may also be addressed in the new or existing service planning documents of the relevant City departments that provide these services.

- *Other Services Policy 17:* In reviewing major land use or policy decisions, the City should consider the availability of police and fire protection, parks and recreation, and library services to the affected area as well as the potential impacts of the project on existing service levels.
- *Other Services Policy 18*: Fire service facilities should be located so that essential services can be most efficiently provided.

2. Impacts and Mitigation Measures

The following section evaluates impacts related to public services and facilities that could result from the implementation of the proposed project. The section begins with the criteria of significance, which establish the thresholds to determine whether an impact is significant and concludes with impacts of the project and mitigation measures, if appropriate.

a. Criteria of Significance. Implementation of the proposed project would have significant impacts on public services and facilities if it would have the following effects:

- Result in an increased demand for police and fire services exceeding existing or planned staffing levels, facilities, or equipment.
- Result in the removal of a neighborhood park or open space area.

b. Less-than-Significant Public Services Impacts. Implementation of the proposed project would result in the following less-than-significant impacts to public services and facilities.

(1) Police Protection Services. Analysis of police services for the proposed project is based on the SJFD's current services provided at the HP Pavilion, which has a similar type of land use and provided a guide for the Department in determining what types of services would be required and how sporting and other public events at the site would be managed by the SJFD. Police staffing of the HP Pavilion is coordinated through the Traffic Enforcement Unit and the Secondary Employment Unit, which utilizes off-duty officers to provide security for sports and other types of events at the HP Pavilion. Beat officers would respond primarily to assist positions already staffed at the proposed stadium. Staffing levels at the Arena are based on the number of attendees and range from 3 to 13 law enforcement personnel, depending on the type of event.

SJPD records show that from December 2004 to December 2005 there were 861 calls for service with an area including 1,000 feet of the Arena, and 198 calls for service specifically from the Arena facility.[10]

As required in the Unique Building Ordinance and by the SJFD (see additional discussion below), the SJPD would require emergency vehicle access to the field area. The proposed project includes a 1,000-square-foot police event operations facility with two holding cells and an approximately 500-square-foot command center with a view of the stadium to direct police, fire or medical response resources. The facility would be in operation during stadium events.

As with the HP Pavilion, staffing levels for the ballpark will be dependent on event security requirements. A Ballpark Event Operations Plan would be developed, and appropriate police staffing needs could be identified and coordinated through the Traffic Enforcement Unit and the Secondary Employment Unit, as it is with the HP Pavilion, which utilizes off-duty officers to provide police security services at the HP Pavilion during events on a contract basis.

(2) Fire and Emergency Medical Response. The following discussion is based on the SJFD's comments from their initial review of the proposed project.

Event specific emergency medical response is contracted through AMR. Depending on the event type, fire response personal and equipment may be required. As a County-contracted ambulance vendor, AMR has the ability to hire additional staff as needed to accommodate the proposed stadium.

The Fire Department relies on surface streets for access as it responds to fire and medical emergencies. Any potential obstructions or conditions limiting travel speeds will impede or reduce or lessen response time performance. Traffic congestion is the most common impedance, but Fire Department staff emphasize that potential catastrophic infrastructure failures (e.g., overpass or underpass retaining walls), in the event of a large earthquake, could pose magnified health and safety risks when affecting access to up to 45,000 stadium attendees.

In order to ensure adequate emergency access to the stadium, the proposed project would include the following elements:

- Preliminary building plans shall be reviewed and approved by the SJFD. The facility would be required to comply with all applicable elements of the Uniform Building and Fire Codes, California Building and Fire Codes, and San Jose Building and Fire Codes at the time of construction. Minimum street widths would be maintained for emergency vehicle access as well as access through any traffic calming devises (typically ingress and egress routes for emergency response vehicles to the field and facility would have a minimum lane width of 12 feet and 14 feet of vertical clearance).[11] The City of San Jose Fire Code requires that fire apparatus must be able to get with 150 feet of entrances to the building.[12] In the event that structural design elements cannot accommodate vehicle turning radius, width and height requirements to reach the field and other to-be-determined areas within the structure, additional specialized equipment would be required.

[10] Sergeant Bob Nalett, 2005, op. cit.

[11] Darryl Von Raesfeld, 2005, op. cit.

[12] City of San Jose Municipal Code, 2005. Chapter 17.12.445 Additional safety requirements for multi-story and other buildings presenting unique firefighting challenges.

- The design of the facility and associated walkways, elevators and pedestrian "choke" points would be designed to permit ambulance rolling cot/gurney access and transit. A command post, staging area and casualty collection point for emergency operations within the complex would be included, in addition to other design/engineering requirements as defined in City of San Jose Fire Code. In order to ensure that these design details are incorporated into the proposed stadium and related structural elements, the SJFD would be consulted during the design and review of the facility. One of the objectives of this consultation would be to establish maximum distances between access points to the field and to-be-determined specified areas. In addition, large-scale sports facilities typically provide citizen access to life-saving automatic external defibrillators (AEDs); the SJFD would consider and provide a recommendation as to the usefulness of including AEDs at designated locations within the proposed stadium.
- The City would prepare an emergency preparedness plan addressing, among other issues, how stadium attendees would exit the facility and the Downtown area in the event of a major natural (e.g., earthquake) or human-made (e.g. terror attack) disaster during a well attended event.

The existing training facility on the project site is the only site that provides training for the Department (including all classroom training [recruit, driver and officer], a driving course, and a seven-story live fire training tower). Adoption of the Midtown Plan included plans to relocate the Fire Training Facility in order to develop a planned park on the southern portion of the project site. While the City has not identified an alternative site for the Fire Training Facility at this time, the City is currently planning on providing an alternative site independent of the proposed project. If the proposed project proceeds, the City will determine a suitable alternative site for relocation of the Fire Training Facility to replace all of the functions that are currently provided at the existing training site. Once a relocation site is identified, additional environmental review will be conducted prior to the relocation of the Fire Training Facility.

(3) Parks and Recreation Facilities. The proposed project does not include housing for additional residents and would therefore not require additional park space in accordance with established level of service measures. Because there are no existing parks on the project site, implementation of the proposed project would not result in the removal of a neighborhood park or open space area. Preliminary stadium design plans show entry plazas which would provide public open space.

However, the Fire Training Facility is designated as a future potential park site in the *Midtown Specific Plan* (1992), *San Jose Greenprint, A 20-Year Strategic Plan for Parks and Community Facilities and Programs* (2000), and the *Diridon/Arena Strategic Development Plan* (2002). The Capital Action Plan of the *Greenprint* calls for the development of three new parks in the Midtown Area, including a future park at the Fire Training Facility site. The *Greenprint* notes that the project site is within Council District 6, which is expected to experience a substantial increase in residential population by 2020, which will require an additional 70.54 acres of neighborhood/community serving parkland in order to serve this population with adequate levels of park space.[13] The park planned at the Fire Training Facility would represent 5 acres of this needed parkland. Development of the proposed project would result in the elimination of the planned park site at the Fire Training Facility, contributing the overall shortfall in parkland area for the Midtown/Diridon area. In order to ensure that the loss of

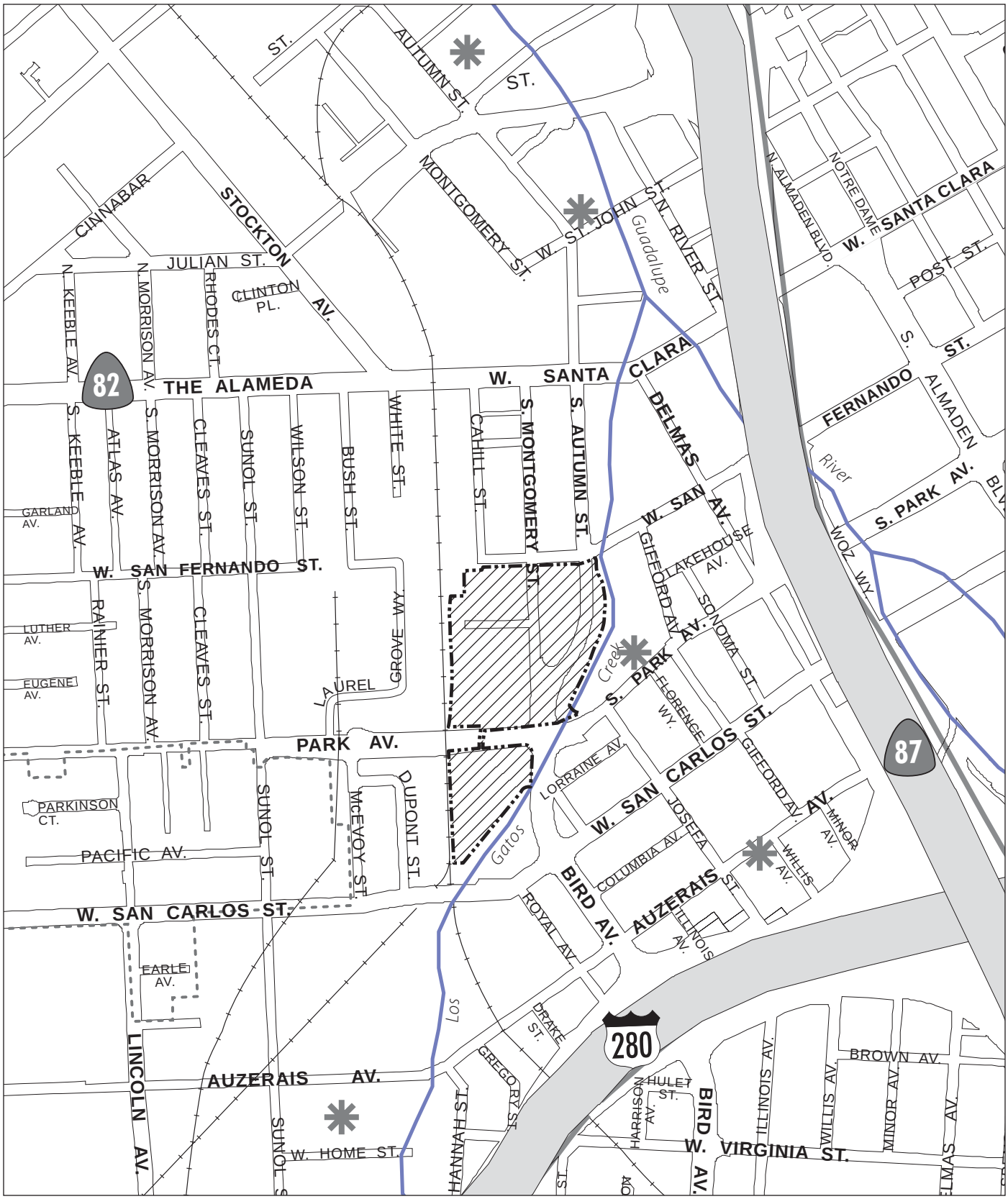
[13] David Mitchell, 2006. Parks Planning Manager, City of San Jose Department of Parks, Recreation and Neighborhood Services. Personal communications with the City of San Jose Department of Planning, Building and Code Enforcement. January.

the future park site at the Fire Training Facility does not contribute to the overall shortfall in park space for this area, the City has identified several potential future alternative park sites in the vicinity of the project site that could be explored to address the recreational needs of the neighborhood, as shown in Figure V.N-1. Should the City pursue development of the Fire Training Facility site in association with the ballpark, and identify a preferred location(s) to pursue additional park facilities to offset the loss of the planned park at the Fire Training Center, additional environmental review would be conducted prior to, and to inform, the City decision to develop a park at that location(s). This change in proposed land use is also discussed in Chapter IV, Consistency with Plans and Policies.

As noted in Chapter V.F, Biological Resources, the *Riparian Corridor Policy Study*[14] established setback requirements and development guidelines for sites adjacent to the riparian corridors. The planned open space trail along Los Gatos Creek identified in the *Los Gatos Creek Master Plan* (1985) could be located within the proposed average 50-foot setback from Los Gatos Creek top of bank. The proposed project includes re-vegetation of this area and would complement the eventual development of the Los Gatos Creek Trail.

c. Significant Public Services Impacts. Implementation of the proposed project would not result in any significant impacts to public services and facilities within the City of San Jose.

[14] The Habitat Restoration Group and Jones and Stokes Associates, Inc., 1999, op. cit.



LSA

N

0 400 800
FEET

PROJECT SITE

CITY LIMITS

PARK SITES

NOTE: THESE REPRESENT GENERAL LOCATIONS.
EXACT BOUNDARIES TO BE FURTHER STUDIED.

FIGURE V.N-1

Baseball Stadium in the Diridon/Arena Area

Oportunity Sites for Parks
in the Project Vicinity

SOURCE: LSA ASSOCIATES, INC.; CITY OF SAN JOSE, 2005-6.

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VI. CUMULATIVE IMPACTS

A. CUMULATIVE PROJECTS

CEQA defines cumulative impacts as "two or more individual effects which, when considered together, are considerable, or which can compound or increase other environmental impacts." Section 15130 of the *CEQA Guidelines* requires that an EIR evaluate potential environmental impacts when the project's incremental effect is cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects. These impacts can result from a combination of the proposed project together with other projects causing related impacts. "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."

When evaluating cumulative impacts, CEQA allows the use of either a list of past, present, and probable future projects, including projects outside the control of the lead agency, or a summary of projections in an adopted planning document. Generally, this EIR bases its cumulative analysis on the buildout of the projects listed in Table VI-1 and shown in Figure VI-1.

Table VI-1: List of Cumulative Projects

Project # (See Figures)	Project Name/Location	Project Size (acres)	Description
1	Downtown San Jose/Strategy 2000	1,920	Allow for 45,000 jobs, 10,000 du's, 2,500 hotel rooms.
2	Marburg Way at U.S. 101 (GP03-03-16)	3	Δ industrial to residential
3	Berryessa Rd., west of UPRR (GP03-04-08)	13	Δ industrial to residential
4	Murphy Ave., east of Oakland (GP04-04-08)	4	Δ industrial to indust./comm.
5	Tully Rd. at S. 10th St. (GP02-07-03)	14	Δ public to mixed use
6	Lewis Rd., east of Garden (GP03-07-06)	6	Δ industrial to residential
7	Story Rd. at McLaughlin Ave. (GP04-07-02)	1	Δ industrial to commercial
8	Del Monte Residential Projects (PDC03-071)	11.1	Development of a high density residential project.
9	San Jose Water Project (PDC02-046)	7.7	Development of a mixed use retail and residential center
10	Cahill South, north of Park Ave. /west of UPRR (PDC00-116)	4	Development of a high density residential project
11	Park Avenue Townhomes, immediately west of UPRR tracks (PDC05-037)	1.9	Development of a mixed use retail and residential project.

Source: City of San Jose, 2005.

LSA

FIGURE VI-1

NOTE: INDIVIDUAL PROJECT SITE NUMBERS CORRESPOND TO TABLE VI-1.

NOT TO SCALE

Baseball Stadium in the Diridon/Arena Area

Location of Cumulative Projects

SOURCE: GOOGLE MAPS, 2006

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B. CUMULATIVE IMPACT ANALYSIS BY TOPIC

Potentially significant cumulative impacts to which the proposed project may contribute are discussed below for each topic evaluated in Chapter V.

1. Land Use

a. Cumulative Impacts. In cumulative impact terms, land use compatibility can be divided into short-term and long-term impacts. Short-term impacts occur during construction and primarily affect existing sensitive land uses, such as hospitals, schools, and residential development near the construction site. These impacts include the noise and dust generated by grading and excavation activities and the use of heavy machinery, and the use of hazardous materials such as solvents. These specific impacts are discussed in greater detail in Chapter V, Sections V.D, Noise; V.E, Air Quality; and V.I, Hazards and Hazardous Materials, of this EIR.

Locating incompatible land uses within close proximity of one another also creates the potential for long-term conflicts between the two land uses. Although the proposed project itself would appear to be inconsistent with at least some General Plan policies, as discussed in Chapter V.A, Land Use, the proposed project would be generally consistent with existing entertainment-related land uses in the Diridon Area. As such, operation of the proposed project would not result in long-term land use impacts per se. Projects included in the cumulative analysis would all be required to conform with General Plan policies and to conform to residential and industrial design guidelines that are intended to minimize land use conflicts. While the proposed project, and those listed in Table VI-1, would result in land use changes, such changes are generally consistent with the City's goals and policies that are found in the General Plan and *Strategy 2000*. The proposed project, along with the cumulative projects discussed in this analysis would have a less-than-significant cumulative land use impact.

b. Cumulative Mitigation Measures. No mitigation measures would be necessary for cumulative land use impacts.

2. Population, Employment and Housing

a. Cumulative Impacts. As discussed in Chapter V.B, Population, Employment, and Housing, the proposed project would generate a large number of jobs and no housing units. However, the proposed project would not impact the jobs-to-housing balance within the city. Projects on the cumulative projects list would provide both jobs and housing within the project vicinity. While the proposed project and cumulative projects would contribute to the number of jobs and households in San Jose, the increase would not be substantial enough to adversely impact the projected balance between jobs and housing within the City.

b. Cumulative Mitigation Measures. No mitigation measures would be necessary for cumulative population, employment, and housing impacts.

3. Transportation, Circulation, and Parking

a. Cumulative Impacts. Cumulative traffic conditions were calculated using a different methodology than the project list analyzed in this Chapter. To represent other potential development, build-out of downtown San Jose under the *Strategy 2000* plan was assumed. These trips were added to the simultaneous-events project scenario to represent cumulative conditions. It should be noted that under

the *Strategy 2000* buildout, intensified development was assumed for the stadium site: mostly residential development. This intensified development was not subtracted from the overall level of development modeled here (i.e., this cumulative scenario includes a small component of double-counted trips). Whereas the cumulative scenario here analyzes the 6:00-7:00 p.m. time period for intersection impacts (because this is when project impacts will be greatest), the *Strategy* 2000 traffic study focused on the PM peak hour of commute traffic, which is 4:30-5:30 PM. To represent the 6:00-7:00 PM time period, the downtown trips were factored by 70 percent, which is the relationship between the time periods found in existing traffic counts. The analysis of cumulative freeway impacts focuses on the 5:00-6:00 p.m. time period.

(1) Intersection Levels of Service. Table VI-2 shows that the following four intersections would operate below the City of San Jose standard of LOS D under cumulative conditions: Julian and SR 87 NB Ramps (LOS F); Santa Clara and SR 87 NB Off-ramp (LOS E); Delmas and Park (LOS F); and Bird and San Carlos (LOS E).

Table VI-2: Cumulative Intersection Levels of Service – Simultaneous-Events Scenario

Intersection	LOS	Average Delay	Average Criterion Delay
SR 87 and Julian Street (E)*	**F**	**98.1**	**110.3**
SR 87 and Julian Street (W)*	C	32.9	51.3
SR 87 and W. Santa Clara Street*	**E**	**70.0**	**97.6**
I-280 and Bird Avenue (N)*	D	35.0	56.7
I-280 and Bird Avenue (S)*	D	48.8	80.3
S. Autumn Street and W. Santa Clara Street*	D	54.6	71.3
Bird Avenue and W. San Carlos Street*	**E**	**74.3**	**102.6**
SR 87 and Woz Way	A	9.1	8.3
S. Autumn Street and San Fernando	D	42.2	38.8
Bird Avenue and Auzerais Avenue	C	30.3	36.7
Delmas Avenue and Auzerais Avenue	B	15.8	16.7
Woz Way and Auzerais Avenue	B	11.8	5.8
Delmas Avenue and Park Avenue[a]	**F**	**124.8**	**138.4**
Delmas Avenue and W. San Carlos Street	C	30.3	34.5
S. Autumn Street and Park Avenue	C	30.5	34.7
Woz Way and Park Avenue	C	26.7	29.7
Woz Way and W. San Carlos Street	C	28.7	32.5
Delmas Avenue and San Fernando Street	D	52.9	65.0

* Denotes CMP intersection.

Note: **Bold** indicates a significant cumulative impact.

Source: Hexagon Transportation Consultants, 2006.

(2) Freeway Analysis. The *Strategy 2000* traffic study showed that of the seven freeway segments studied in this stadium traffic study, three would operate at LOS F under downtown buildout conditions: SR 87 southbound between Coleman and Julian; SR 87 southbound between Julian and I-280; and SR 87 southbound between I-280 and Alma. The ballpark would add traffic of greater than one percent of capacity to the first two of these segments. Therefore, the ballpark would have a significant impact on two freeway segments under cumulative conditions. To improve these freeway segments to LOS E would require widening the freeway, which is infeasible given right-of-way constraints and costs. Therefore, these impacts would be significant and unavoidable.

b. Cumulative Mitigation Measures. All intersections experiencing significant cumulative impacts are within the San Jose Downtown area and, thus, are exempt from the City's Level of Service policy. Three of these intersections also were shown to operate at LOS E or F in the *Strategy 2000* traffic study. Mitigation measures to address these intersection LOS shortcomings were described in that study and are as follows:

Julian and SR 87 NB Ramps. The language from the *Strategy 2000* traffic study states, "At this intersection numerous improvements have been identified. These improvements include the Autumn Street extension from Julian Street to Coleman Avenue as identified in the City's General Plan, addition of exclusive through and right-turn lanes from Notre Dame Street, addition of an exclusive westbound right-turn lane from Julian Street, and changes to the signal phasing. The implementation of these improvements would improve intersection level of service to LOS D and E under the AM and PM peak hours, respectively. In accordance to CMP standards, this is an acceptable level of service." These same improvements would mitigate the stadium impact at this intersection under cumulative conditions.

Delmas and Park. The mitigation in the *Strategy 2000* traffic study is the addition of a second southbound through lane. This already has been assumed in this ballpark cumulative analysis, and the Level of Service still is LOS F. The reason for the LOS F operation is the amount of greentime needed for pedestrian crossings to get to the ballpark. Further physical improvements would not be feasible or prudent. Therefore, this impact should be considered significant and unavoidable. It is possible that under long-range conditions more stadium and HP Pavilion attendees would use transit to access those two facilities, and pedestrian flows would be more manageable. Transit usage could be encouraged through advertising campaigns.

Bird and San Carlos. The *Strategy 2000* traffic study showed this intersection to operate at LOS F with downtown buildout, improving to LOS E with the addition of a second northbound to westbound left turn lane. The present stadium study includes the additional left turn lane as part of the Bird Avenue improvements that will be completed by the project. The present stadium study shows the same LOS E as the *Strategy 2000* traffic study for this intersection with the improvement. Since LOS E still does not meet the City's typical LOS D standard, the *Strategy 2000* traffic study includes the following language: "this intersection would continue to operate at an unacceptable level of service during the PM peak hour. The impact at this intersection is significant and unavoidable."

The intersection of Santa Clara and the SR 87 NB Off-ramp was not shown to operate poorly in the *Strategy 2000* EIR. The reason for the poor level of service shown in this downtown stadium analysis is the large number of cars that would be exiting the freeway to access parking under the simultaneous-events scenario. There are no feasible physical improvements that could ameliorate the LOS impact at this intersection. The downtown traffic study describes a planned improvement that would increase the capacity of the I-280 off-ramp to 7th Street. This would provide an alternative route to access downtown and would reduce traffic exiting the freeway at Santa Clara Street. However, the 7th Street ramp improvements are unfunded, but would be required mitigation associated with development of Phase III of the *Strategy 2000*. Even with the completion of the 7th Street ramp improvements associated with Phase III of *Strategy 2000*, the impact to the Santa Clara and SR 87 NB Off-ramp intersection would be significant and unavoidable.

4. Air Quality

a. Construction Impacts. Projects in the San Jose area that would be under construction simultaneously with the proposed project are listed in Table VI-1. Depending on construction schedules and actual implementation of projects in the area, generation of fugitive dust and pollutant emissions during construction may result in substantial short-term increases in air pollutants. The cumulative construction of projects could contribute to short-term air quality impacts. However, each individual project would be subject to the rules and regulations, and other mitigation requirements during con-

struction that are recommended by the Bay Area Air Quality Management District (BAAQMD) to reduce all construction related emissions to a less-than-significant level.

b. Attainment of PM_{10} and Ozone Standards. Currently, the San Francisco Air Basin is in non-attainment for PM_{10} and Ozone.

Impact CUMULATIVE AIR-1: Construction and operation of the proposed project, in conjunction with other planned developments within the cumulative study area and the subregion, would contribute to the existing non-attainment status. Thus, the proposed project would exacerbate non-attainment of air quality standards within the subregion and air basin and contribute to adverse cumulative air quality impacts. (S)

Mitigation Measure CUMULATIVE AIR-1: Mitigation Measure AIR-1 and AIR-2, would help to address the project's contribution to this cumulative impact. Mitigation Measure AIR-1 would reduce the project's cumulative contribution to construction period impacts to a less-than-significant impact. However, the project's contribution to cumulative ozone precursor emissions would remain significant and unavoidable. (SU)

5. Noise

a. Construction Impacts. The construction of the proposed project and other cumulative projects in the area would result in short-term noise and disturbance at various locations throughout the City. Projects in the San Jose area that would be under construction simultaneously with the proposed project are listed in Table VI-1. Impacts from cumulative construction noise would be less than significant because the cumulative project sites are scattered throughout the City and will likely have different construction schedules. Construction noise mitigation measures are also included as part of each project, especially major development and public projects. Implementation of construction Mitigation Measure NOISE-5 would reduce construction noise impacts to a less-than-significant level. Construction noise would not contribute to off-site cumulative noise impacts from other planned and future projects.

b. Project-Related Traffic. Project-related traffic would contribute to cumulative traffic noise impacts in the vicinity of the project site.

Impact CUMULATIVE NOISE-1: The increase in noise levels from project-related traffic of more than 3 dBA is substantial and the project would contribute to the cumulative increase in traffic noise. (S)

Mitigation Measure CUMULATIVE NOISE-1: No additional mitigation measures, besides those identified in Chapter V.E, Noise, would reduce the project's contribution to a less-than-significant level. Therefore, this cumulative impact would remain significant and unavoidable. (SU)

c. Project Operational Noise. Noise associated with stadium events such as baseball games, concerts and fireworks displays would contribute to the cumulative ambient noise in the vicinity of the project site. As listed in Table VI-1, additional development is planned for the area which will result in additional noise sources typical of urban areas such as night club music, public address sys-

tems at restaurants, or noise from people on active streets. Such cumulative noise sources are to be expected in a downtown area as envisioned by the City's *Strategy 2000* plan.

Impact CUMULATIVE NOISE-2: The increase in ambient noise from project operations would contribute to the cumulative noise increase. (S)

Mitigation Measure CUMULATIVE NOISE-2: Mitigation measures identified in Chapter V.E, Noise, would reduce the impacts of baseball game event noise. However, no additional mitigation measures would reduce the project's contribution to cumulative noise levels in the downtown area to a less-than-significant level. Therefore, this cumulative impact would remain significant and unavoidable. (SU)

6. Biological Resources

a. Cumulative Impacts. Implementation of the proposed project would require the removal of 45 ordinance-size trees from the project site. The proposed project as well as cumulative projects listed in this analysis are required to develop landscape plans in conformance with City of San Jose Landscape and Irrigation Guidelines and City of San Jose Planning Department specifications. The City requires tree replacement for trees greater than 18 inches in diameter with 24-inch box trees at a ratio of 4:1 (trees planted to trees removed). In addition, ordinance-size trees on the project site are located in an urban downtown area designated for substantial redevelopment. Their removal, with implementation of mitigation measures discussed in Chapter V.F, Biological Resources, would represent a less-than-significant cumulative impact.

b. Cumulative Mitigation Measures. No mitigation measures besides those identified in Chapter V.F, Biological Resources would be necessary.

7. Geology, Soils and Seismicity

a. Cumulative Impacts. The proposed project would not contribute considerably to any cumulative impacts related to geology. Implementation of the project in conjunction with other cumulative development would increase the number of people and employees that could be exposed to regional seismic risks in the seismically active San Francisco Bay Area, but this impact is not expected to be significant with incorporation of standard geotechnical mitigation measures, and no other impact related to geology, soils or seismicity would result.

b. Cumulative Mitigation Measures. No additional mitigation measures besides those identified in Chapter V.G, Geology, Soils and Seismicity would be necessary.

8. Hydrology and Water Quality

a. Surface Water Quality Impacts. The project site discharges directly into Los Gatos Creek, a tributary to the Guadalupe River. Both of these water bodies are listed as water quality impaired by the RWQCB. The RWQCB has designated Los Gatos Creek as water quality impaired for diazinon (a pesticide); the Guadalupe has been designated water quality impaired for diazinon and mercury.[1] If there is a chance that the project could increase the load of any of these pollutants discharged to these

[1] Regional Water Quality Control Board (RWQCB), San Francisco Bay Region, 2003. 2002 CWA Section 303(d) List of Water Quality Limited Segment, Approved by USEPA. July.

surface water bodies, then a significant impact would be expected to occur (the RWQCB has determined that the assimilative capacity of the Bay for these pollutants has already been exceeded).

Diazinon has been one of the most widely used insecticides in the U.S. for household as well as agricultural pest control. A December 2000 agreement with the technical registrants is phasing out and canceling all indoor and outdoor residential uses in order to reduce risks to children and others.[2] The only remaining approved use is for some agricultural crops, and is therefore not available for legal use at the project site. Mercury would not be used at the site and discharges of this contaminant would not be expected to be affected by the project. Therefore, the project would not be expected to result in cumulative impacts to surface water quality.

b. Stormwater Quality Impacts. Construction of the proposed project, in addition to other projects, could create an increase in volume of storm water runoff and contaminants carried in the runoff, adversely affecting the waters of Los Gatos Creek, the Guadalupe River and the San Francisco Bay. Project-specific mitigation measures required for each of the projects would be incorporated into their design and operation to reduce the impacts to a less-than-significant level.

c. Cumulative Mitigation Measures. No additional mitigation measures, besides those identified in Chapter V.H, Hydrology and Water Quality, would be necessary.

9. Hazards

a. Cumulative Impacts. As discussed in Chapter V.I, Hazards and Hazardous Materials, development of the project site could expose construction workers and/or the public to hazardous materials releases during and following construction activities. Operation of the proposed baseball stadium as well as the operation of the relocated substation could also result in the release of hazardous materials. Construction activities at the site as well as operation of the electrical substation, stadium complex, and any other businesses at the project site that use, store, or dispose of hazardous materials would be required to comply with federal, State, and local requirements for managing hazardous materials. No significant unavoidable impacts related to hazards would result from construction or operation of the proposed project and the project would not contribute to any cumulative hazards impacts.

b. Cumulative Mitigation Measures. No additional mitigation measures, besides those identified in Chapter V.I, Hazards and Hazardous Materials would be necessary.

10. Cultural and Paleontological Resources

a. Historic Resources Impacts. As discussed in Chapter V.J, Cultural and Paleontological Resources, the proposed project would result in the removal of a structure listed on the *City of San Jose Historic Resources Inventory* as a Structure of Merit, which also appears to be both a candidate City Landmark and eligible for the California Register. In addition, the proposed project would alter the character of the San Jose Diridon Station, a City Landmark listed on the National Register. The alteration of the setting and character of a structure listed on the National Register is a significant

[2] US Environmental Protection Agency, 2005. Pesticides: Topical and Chemical Fact Sheets, Diazinon, available on EPA's website: http://www.epa.gov/REDs/factsheets/diazinon_ired_fs.htm.

unavoidable impact that would result from the proposed project. These impacts to historic resources would have a cumulatively considerable impact on historic resources within the Diridon Area.

Projects on the cumulative project list may also result in the alteration of historic structures. While it is unlikely that the individual impacts associated with these projects and the proposed project would combine to create a cumulative impact of greater severity upon any one historic period or type of resource, the cumulative alteration or loss of historic structures within the City, especially the Downtown Area, would be significant. The combined impacts to historic resources that would result from implementation of the proposed projects listed would result in a cumulatively significant loss of historic resources. The proposed project would contribute to that cumulatively significant impact.

b. Archaeological and Paleontological Resources Impacts. No significant unavoidable impacts related to archeological or paleontological resources would result.

c. Cumulative Mitigation Measures. No additional mitigation measures, beyond those identified in Chapter V.J, Cultural and Paleontological Resources, would reduce impacts to historic resources to a less-than-significant level. The alteration of a historic resource within the project site vicinity would result in a significant unavoidable cumulative impact.

No additional mitigation measures, besides those identified in Chapter V.J, Cultural and Paleontological Resources, would be necessary for archeological and paleontological resources impacts.

11. Visual and Aesthetic Resources

a. Cumulative Impacts. The alteration of the visual setting and feeling of historic buildings within the project vicinity would substantially damage scenic resources in the area resulting in a significant unavoidable visual resources impact. This, in combination with the alteration of other existing visually significant historic structures would be a significant unavoidable cumulative impact.

In addition, the proposed project would remove 45 ordinance-size trees from the project site. Ordinance-size trees are considered significant visual resources; however, as discussed above in the Biology sub-section of this Chapter, the removal of ordinance-size trees would not be a cumulatively considerable impact.

b. Cumulative Mitigation Measures. No additional mitigation measures, beyond those identified in Chapter V.K, Visual and Aesthetic Resources, would reduce impacts to historic visual resources to a less-than-significant level. The removal of five historic visual resources from the project site would be a significant unavoidable cumulative impact.

No additional mitigation measures, besides those identified in Chapter V.K, Visual and Aesthetic Resources, would be necessary for the removal of ordinance-size trees.

12. Shade/Shadow and Light/Glare

a. Cumulative Shade/Shadow Impacts. The proposed project, along with cumulative projects, would increase the amount of shade and shadow cast in and around the project site. However, given the amount of development and the location of the project in Downtown San Jose, this would be considered a less-than-significant impact.

b. Cumulative Shade/Shadow Mitigation Measures. No additional mitigation measures, besides those identified in Chapter V.L, Shade/Shadow, would be necessary.

c. Cumulative Light/Glare Impacts. The proposed project, along with cumulative projects, would increase the amount of light and glare in and around the project site.

Impact CUMULATIVE SHADE-1: Obtrusive light and glare resulting from nighttime operation of the proposed stadium, in conjunction with other planned developments within the cumulative study area, could present a nuisance to surrounding land uses, specifically nearby residences and the Lick Observatory. (S)

Mitigation Measure CUMULATIVE SHADE-1: Mitigation Measures SHADE-2a and 2b would help to address the project's contribution to this cumulative impact. However, this cumulative impacts would remain significant and unavoidable (SU)

13. Utilities

a. Cumulative Impacts. The proposed project, and those projects listed in Table VI-1, would increase the demand for water service, wastewater service, and other utilities. However, given the size of the service area and overall demand, the cumulative impact on utilities would be less-than=significant. In addition, utility service providers maintain long term projections for demand for their services within the City based on the City's General Plan, and have developed strategies to meet anticipated future demand levels.

b. Cumulative Mitigation Measures. No mitigation measures would be necessary for cumulative utilities impacts.

14. Public Services and Facilities

a. Cumulative Impacts. The proposed project, in addition to the projects listed in Table VI-1, would increase the demand for police and fire services. These services go through an annual budgeting process during which citywide priorities are established and service levels monitored, allowing for adjustment where needed. The cumulative impact to public services and facilities would be considered less than significant.

b. Cumulative Mitigation Measures. No mitigation measures would be necessary for cumulative public services and facilities impacts.

15. Energy

a. Cumulative Impacts. The development of the proposed project, in addition to the cumulative projects identified in Table VI-1, would require connection to electrical and natural gas transmission and distribution systems maintained and served by Pacific Gas & Electric (PG&E). All expansion of electrical or natural gas facilities and services would be undertaken in accordance with Title 24 and the City’s General Plan policies related to energy savings. The application of these policies would ensure that the cumulative effect of this development on energy would be less than significant.

b. Cumulative Mitigation Measures. No mitigation measures would be necessary for cumulative energy impacts.

C. CONCLUSION

The proposed project would have the following cumulatively considerable impacts:

- The increase in project traffic on SR-87 and I-280 would contribute to an increase in freeway traffic in the City;
- Project construction activities and operation would exacerbate non-attainment of air quality standards within the subregion and air basin.
- The increase in noise levels from project-related traffic would contribute to increases in traffic noise in the Downtown Area.
- The loss of a structure which appears to be both a candidate City Landmark and eligible for the California Register and alteration of the setting and feeling of a structure listed on the National Register would substantially damage cultural resources; and
- The alteration of the setting and feeling of a structure listed on the National Register would substantially damage cultural resources.
- The increase in light and glare from nighttime operation of the stadium would contribute to the amount of light and glare in the area.

These effects constitute significant cumulative impacts. In all other environmental topical areas, the project's contribution would be reduced or eliminated by project mitigation measures to the point that the project would not contribute considerably to any other significant cumulative impacts.

VII. ALTERNATIVES

The *CEQA Guidelines* require analysis of a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the project's basic objectives and avoid or substantially lessen any of the significant effects of the project. 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.[1] The Baseball Stadium in the Diridon/Arena Area project has been described and analyzed in the previous chapters with an emphasis on significant impacts and recommended mitigation measures to avoid these impacts. The following discussion is intended to inform the public and decision-makers of feasible alternatives to the proposed project.

The objectives of the proposed project are an important part of the context for evaluating alternatives to the proposed project. The project's objectives are restated here for reference:

- An open-air stadium of 45,000 seats and associated facilities meeting major league standards for size and quality of improvements expected in modern stadiums;
- a site that is at least 14 acres, located within the Greater Downtown area of San Jose, and of a configuration capable of accommodating the above-described stadium and associated facilities;
- a site that is readily accessible (within ¾ mile) by substantial public transportation opportunities, especially regional transit;
- a site that offers potential for using a high number of existing parking facilities (within ¾ mile) and offers the potential for dedicating up to 150 spaces on-site for exclusive use by the stadium ;
- a site that possesses views of the Downtown San Jose skyline and the sense of Silicon Valley between the Santa Cruz and Diablo Mountain Ranges;
- the ability to use the stadium's seating capacity for occasional major civic and entertainment events;
- the ability to convert the ballpark's infield area during the off-season to a small enclosed temporary amphitheater with a capacity of 5,000 to 15,000 seats for music, concerts and entertainment; and
- a site that can provide an appropriate context for designing a modern structure in the architectural tradition of old ballparks.

This chapter discusses a total of seven alternatives to the proposed Project:

The **No Development** alternative would involve the multi-parcel site remaining physically as it presently is. The multiple-block site would maintain its commercial, light industrial, transportation, utility and office uses. The fire training center south of Park Avenue would continue to operate in its cur-

[1] *CEQA Guidelines*, 2006, Section 15126.6.

rent location. Autumn Street would maintain its current alignment, and Otterson and Montgomery Streets would not be vacated.

The **Existing Plan** alternative would involve the development of the site in accordance with the development outlined in the Diridon/Arena Strategic Development Plan, the Midtown Specific Plan and the Burbank/Del Monte Neighborhood Improvement Plan. The project site north of Park Avenue would be developed with transit oriented mixed use development. The project site south of Park Avenue would be developed with a public park.

The **Submerged Stadium** alternative would involve the excavation of the site by 24 to 28 feet to submerge the stadium and achieve a consequent reduction in overall height by the same 24 to 28 feet. The parking garage would also be submerged to a similar level. Pedestrian access to the interior of the stadium facilities would vary from the proposed (at-grade) concept, but this alternative assumes that the remainder of the project's characteristics would not change.

Over the past several years the City of San Jose has considered many locations for a baseball stadium. **Alternate Locations Considered and Rejected** summarizes locations that have been considered by the City, but which do not meet the basic size requirements or other critical project objectives, or which have other fatal flaws.

In order to most clearly distinguish the trade-off in potential impacts—both *beneficial* and *adverse*—several alternate locations for the project have been selected.

The **FMC/Coleman Avenue Location** alternative evaluates the same development program as the proposed project, but at another location within the City of San Jose. The FMC/Coleman Avenue Location alternative is an approximately 92.5-acre site bounded by Coleman Avenue to the northeast, Newhall Street to the southeast, Southern Pacifica Railroad lines to the southwest and the jurisdictional boundary of the City of Santa Clara to the northwest. This site was analyzed (for another type of development project) in the EIR prepared for the FMC/Coleman Avenue Planned Development Rezoning (July 2003).

The **Del Monte Location** alternative evaluates the same development program as the proposed project, but at another location within the City of San Jose. The Del Monte Location alternative is an approximately 17.5-acre site at 801 Auzerais Street, generally south of W. San Carlos Street, west of Los Gatos Creek, north of W. Home Street and east of Sunol Street and the Vasona LRT line. This site was analyzed (for another type of development project) in the EIR prepared for the KB Home Monte Vista Residential Planned Development Zoning Project (March 2005).

The **Berryessa Flea Market Location** alternative evaluates the same development program as the proposed project, but at another location within the City of San Jose. The Berryessa Flea Market Location alternative is an approximately 120-acre site at 1590 Berryessa Road, generally south of Chessington Drive and Bellemade Street, north of Maybury Street, west of Caltrain tracks and east of Coyote Creek. This site was analyzed (for another type of development project) in the EIR prepared for the San Jose Flea Market General Plan Amendment (November 2002).

The **Reed and Graham Location** alternative evaluates the same development program as the proposed project, but at another location within the City of San Jose. The Reed and Graham Location

alternative is an approximately 16-acre site at 854 Savaker Avenue, generally bounded by Los Gatos Creek to the west, I-280 to the south, railroad lines to the west and Savaker Avenue to the north. This site was analyzed as an alternative in the EIR prepared for the KB Home Monte Vista Residential Planned Development Zoning Project (March 2005).

Each alternative is compared to the proposed project, and discussed in terms of its various mitigating or adverse effects on the environment. Analysis of the alternatives follows the same topical order as for the proposed project in Chapter V, and focuses on those topics for which significant adverse impacts would result from the proposed project.

A. NO DEVELOPMENT ALTERNATIVE

1. Description of No Development Alternative

The No Development alternative is the circumstance under which the project does not proceed, and the comparison involves the effects of the property remaining in its existing state versus the effects which would occur if the project were implemented. The multiple-block site would maintain its commercial, light industrial, transportation, utility and office uses. The fire training center south of Park Avenue would continue to operate in its current location. None of the 17 buildings on the project site would be demolished. Autumn Street would maintain its current alignment, and Otterson and Montgomery Streets would not be vacated.

2. Analysis of No Development Alternative

To maintain the project site as it is today would avoid each of the significant and unavoidable impacts that would result from the proposed project.

- The use of fireworks as part of the baseball stadium on the site would not present a hazard to the safe operation of the San Jose International Airport.
- It would not lead to exacerbated transportation level-of-service impacts at impacted intersections, nor would development here add to the congestion on the select segments of SR 87 and I-280.
- The No Development alternative would also avoid the contribution made by the proposed project to regional air pollution as well as short-term, localized air pollution from fireworks.
- There would be no air quality or noise impacts related to construction.
- There would be no noise impacts as a result of increased traffic in the area.
- There would be no noise impacts as a result of baseball games, concerts or fireworks.
- The No Development alternative would avoid the loss of ordinance size trees and the potential disturbance of nesting hawks and other raptors.
- No new structures would be exposed to or damaged by seismically-induced groundshaking, expansive soils, differential settlement or soil liquefaction.
- Local drainage patterns would not be altered.
- Water quality would not be impacted during construction or operation of a proposed development, and dewatering the site with the risk of exposing construction workers to contaminants would not occur.

- The No Development alternative would not expose construction workers or the public to hazards materials in soil and groundwater during construction activities.
- There would be no risk of improper use or transport of hazardous materials.
- There would be no risk to construction workers or the public associated with the demolition of buildings that may contain lead based paint and/or asbestos.
- Future land uses on the project site would not be subject to the hazards posed by the electrical substation.
- There would be no demolition of a structure that appears to be a Candidate for City Landmark and appears eligible for listing in the California Register of Historical Resources. There would be no impacts to a cultural resource adjacent to the project site.
- There would be no disturbance to potential prehistoric archaeologic, historic archaeologic, paleontologic resources or human remains.
- The No Development alternative would not impact visual resources through the removal of ordinance sized trees.
- The No Development alternative would not increase light and glare which could be a nuisance to surrounding land uses and interfere with the safe operation of the San Jose International Airport.
- The No Development alternative would not impact visual resources through the removal of ordinance sized trees.
- There would be no reduction in water pressure for surrounding land uses.
- There would be generation of solid waste as a result of demolition, land clearing and construction that could interfere with waste diversions goals mandated by the California Integrated Waste Management Act.
- The existing PG&E substation on the northwest corner of the project site would not need to be relocated to the southern end of the project site.

While this alternative would be environmentally superior in the technical sense that these aforementioned impacts would not occur, it would also fail to achieve any of the project's objectives summarized at the beginning of this chapter. The creation of a baseball stadium in this area, in the greater downtown area, with access to public transit as well as existing parking, and on an site that could be readily assembled and secured, would be foregone.

B. EXISTING PLAN ALTERNATIVE

1. Description of Existing Plan Alternative

The Existing Plan alternative would involve the development of the site in accordance with the development outlined in the Diridon/Arena Strategic Development Plan, the Midtown Specific Plan and the Burbank/Del Monte Neighborhood Improvement Plan. The project site north of Park Avenue would be developed with transit oriented mixed use development. Transit Oriented Mixed Use in the Diridon/Arena Strategic Development Plan is adopted from the Midtown Specific Plan and is defined as follows:

> The primary use is high-density residential – up to 150 dwelling units per acre. Residential units can be combined with office, retail, restaurant, child care, and public/quasi-public, and entertainment uses. Ground floor pedestrian oriented uses are encouraged, with emphasis on uses that support area residents. Neighborhood park space should be developed to support the residential uses.

The development area north of Park Avenue would be approximately 14.5 acres. The Existing Plan Alternative would not include the relocation of the PG&E substation and would not include residential or office or commercial development east of S. Autumn Street. Up to 725 dwelling units, 700,000 square feet of office, 200,000 square feet of retail, and 300 hotel rooms would be developed on the site as part of this alternative.

A public park would be developed between S. Autumn Street and Los Gatos Creek.

That portion of the project site located south of Park Avenue, currently the location of the Fire Training Facility, would be developed with a neighborhood park and playing fields.

2. Analysis of Existing Plan Alternative

a. Land Use. Development of up to 725 dwelling units and 900,000 square feet of office and retail uses on the project site would change the land use from commercial, light industrial, transportation, utility and office uses to residential, office, and retail uses, unlike the proposed project, development of the Existing Plan alternative would require rezoning. Similar to the proposed project, residential, office and commercial uses on this site would not divide an established community or introduce new land uses that would conflict with established or proposed land uses. If the height of structures on the project site would exceed the FAA's imaginary surface standards, both the proposed project and the Existing Plan Alternative would be required to receive a Determination of No Hazard prior to development permit approval.

b. Population, Employment and Housing. Similar to the proposed project, the Existing Plan alternative would not displace housing or people that would necessitate the construction of replacement housing elsewhere. The City of San Jose has an average of 3.15 persons per household.[2] The construction 725 dwelling units would increase the population by approximately 2,280 people. This increase in population is consistent with the vision of the area. This alternative would generate approximately 2,700 jobs, approximately 900 more jobs than the proposed project. Similar to the proposed project, the Existing Plan alternative would benefit the City's overall current and long term jobs-to-housing balance.

c. Transportation, Circulation and Parking. Development of residential and commercial uses proposed under the Existing Plan alternative would generate a substantial number of AM and PM peak hour trips on a daily basis to the areas surround the project site. The plan would however, reduce the total PM peak hour period traffic when compared to the peak hour of traffic from a stadium event. The Existing Plan alternative would also substantially increase the off-peak period effect on intersection congestion and freeway segments. Transit service and bicycle and pedestrian facilities would be impacted to a lesser extent than during a stadium event scenario. The Existing Plan alternative would

[2] ABAG. Projections 2005. December 2004. San Jose Household Population 2005: 930,686 divided by San Jose Households 2005: 309,020 equals 3.15 persons per household.

have a greater impact on transit, bicycle and pedestrian facilities on a daily basis and during off-peak periods when compared to the proposed project.

d. Air Quality. Construction and operation of the Existing Plan alternative would have a greater impact on air quality than development of the proposed project. While the Existing Plan alternative would generate fewer trips daily than the proposed project events, it would increase the number of trips to and from the site over existing conditions over time as stadium events are limited to a select number of days and nights annually. While the proposed stadium would exceed the daily emission standards established by the BAAQMD, it would not exceed the standard established for annual emissions. The Existing Plan alternative would operate on a daily basis and would generate annual emissions that would likely exceed the BAAQMD emission standards.

e. Noise. The noise effects caused by construction and traffic associated with the Existing Plan alternative would be similar to those generated by the proposed project. Existing Plan alternative noise levels traffic would impact the surrounding areas similar to the proposed project. The Existing Plan alternative would not include the noise of baseball games, concerts or fireworks and as such it would expose the surrounding uses to less of these types of noise than the proposed project. Noise impacts related to smaller discrete construction projects within the Existing Plan alternative could be mitigated to less-than-significant levels; construction noise from the proposed project would be significant unavoidable.

f. Biological Resources. The Existing Plan alternative would develop the majority of the project site and, similar to the proposed project, would include setbacks from Los Gatos Creek. Impacts to biological resources would be similar or slightly reduced under the Existing Plan alternative. Up to 45 ordinance-size trees would be removed, and their removal would be mitigated with implementation of a landscape plan which includes replacement of ordinance-size trees at a ratio of 4:1 in the project area. The implementation of a Storm Water Pollution Prevention Plan would reduce potential impacts to water quality in Los Gatos Creek and related habitat to less-than-significant levels. With preconstruction surveys and other mitigation, impacts to nesting hawks and other raptors would be less-than-significant.

g. Geology, Soils and Seismicity. Construction and operation of the Existing Plan alternative would have similar impacts on geology, soils and seismicity as the proposed project. Implementation of commonly used mitigation measures including the preparation of a design-level geotechnical investigation, following the recommendations presented in the *Guidelines for Evaluating Seismic Hazards in California*, and following the mitigation measures, design criteria, and specifications set forth in the geotechnical and soils report could reduce geology, soils and seismicity impacts to less-than-significant levels.

h. Hydrology and Water Quality. Construction and operation of the Existing Plan alternative would have similar impacts on hydrology and water quality as the proposed project. Implementation of commonly used mitigation measures including a detailed hydraulic analysis that demonstrates that implementation of the proposed drainage plan would be in compliance with City standards as well as the County NPDES permit, compliance with the City's Post Construction Urban Runoff Management Policy, the preparation of a Storm Water Pollution Prevention Plan and inclusion of Best Management Practices in the project design could reduce hydrology and water quality impacts to less-than-significant levels.

i. Hazards and Hazardous Materials. Historical and current land uses on the project site have resulted in onsite soils contamination. With mitigation, potential impacts of hazardous materials could be reduced to less-than-significant levels. Implementation of the following commonly used mitigation measures prior to demolition could reduce hazards impacts to less-than-significant levels: preparation of Phase I site assessments for the site; preparation of Phase II assessments as recommended; preparation of Human Health Risk assessments as recommended; preparation and implementation of Construction Risk Management Plans; and, if lead-based paint and asbestos are determined to be present, removal in accordance with the appropriate regulations. Under the Existing Plan alternative, the PG&E substation would not be relocated and potential hazards associated with that component of the proposed project would be avoided.

j. Cultural and Paleontological Resources. Construction of the Existing Plan alternative would have similar impacts on Cultural and Paleontological Resources as the proposed project. Ground disturbing activities could impact historic or prehistoric archaeological resources and/or disturb buried human remains. With mitigation, these potential impacts could be reduced to less-than-significant levels. Redevelopment of the project site would require the demolition of one structure that appears to be a Candidate for City Landmark and appears eligible for listing in the California Register of Historical Resources, the KNTV Broadcast Facility, 645 Park Avenue. Demolition of this resource would be significant and unavoidable. The proposed project would impact a cultural resource adjacent to the project site, the Diridon Train Station, and it is assumed that the Existing Plan alternative could avoid this impact.

k. Visual Resources. Both the Existing Plan alternative and the proposed project would have less-than-significant impacts on scenic vistas, existing views, existing visual character, and neighborhood integrity. However, the Existing Plan alternative would contribute to the overall aesthetic quality of the project area in ways that would be more consistent with the vision for the area that has been set forth to date, in various planning documents. The removal of ordinance sized trees associated with the redevelopment of the project site would substantially damage scenic resources; with mitigation this impact would be reduced to a less-than-significant level.

l. Shade/Shadow and Light/Glare. Construction and operation of the Existing Plan alternative would generate fewer impacts on shade and shadow than the proposed project. Similar to the proposed project, the individual structures of the Existing Plan alternative would have less than significant shade and shadow impacts, with the possible exception of impacts to Diridon Station. This alternative would not include light and glare associated with the nighttime operation of a stadium that could present a nuisance to surrounding land uses, or interfere with operation of the Lick Observatory, or the safe operation of the San Jose International Airport. It would, however, create light and glare that is typical of recent commercial and residential development in downtown San Jose.

m. Utilities. Construction and operation of the Existing Plan alternative would lead to an increase in demand for utilities. As described for the proposed project, the site is within an area currently urbanized and served by providers of electricity, natural gas, telecommunications and cable. These utility providers monitor the plans and growth patterns in the areas they serve and in doing so maintain adequate infrastructure to serve new development. The Existing Plan alternative would demand

less water and wastewater than the proposed project.[3] Consistent with General Plan policies related to water and wastewater, the City would review individual development proposals to ensure that the project could be adequately served by the City's water supply and Water Pollution Control Plant prior to the approval of any specific development plan. Redevelopment of the project site under the Existing Plan alternative would generate waste during demolition, land clearing, and construction and, similar to the proposed project, would require the preparation of a waste management plan to reduce this impact to a less-than-significant level. This alternative would not relocate the PG&E substation on the project site.

n. Public Services and Facilities. Construction and operation of the Existing Plan alternative would lead an increase in demand for public facilities and services, including police and fire services. While the gradual introduction of a greater number of residents, employees, and built space in the area would require periodic operational and capital improvement choices, such a development pattern would not lead to significant environmental impacts. Unlike the proposed project, the Existing Plan alternative would increase demand for school services; impacts to the provision of school services and facilities would be less than significant. The Existing Plan alternative would require the relocation of the Fire Training Center but would not require the consideration of opportunity site for parks in the project area. Similar to the proposed project, impacts to park and recreation facilities would be less than significant.

o. Energy. Construction and operation of the Existing Plan alternative would lead an increase in demand for energy. However, similar to the proposed project, it is not anticipated that this alternative would substantially increase demand or use energy in a wasteful manner.

C. SUBMERGED STADIUM ALTERNATIVE

1. Description of Submerged Stadium Alternative

The Submerged Stadium alternative would involve the excavation of 75 to 80 percent of the site by 24 to 28 feet to submerge the stadium and achieve a consequent reduction in overall height by the same 24 to 28 feet. The parking garage would also be submerged to a similar level. Pedestrian access to the interior of the stadium facilities would vary from the proposed (at-grade) concept, but this alternative assumes that the remainder of the project's characteristics would not change.

[3] Assuming a residential water demand of 0.081 gallons per day (gpd) per square foot, and assuming an average residence size of 1,000 square feet, the residential component of the Existing Plan alternative would demand approximately 21.5 million gallons per year (gpy) (725 residences x 1,000 square feet x 0.081 gallons per square foot per day x 365 days per year = 21,434,625 gpy). Assuming an office water demand of 0.014 gpd/sf; office use would demand approximately 3.6 million gpy. Assuming a retail water demand of 0.073 gpd/sf; retail use would demand approximately 5.3 million gpy. The proposed project is estimated to demand approximately 30.4 million gpy. Wastewater is typically 85 percent of potable water. It is assumed that if water demand is less than that estimated for the proposed baseball stadium, than wastewater is less as well.

With the below grade design, approximately 556,600 additional cubic yards of soil would need to be removed from the project site.

2. Analysis of Submerged Stadium Alternative

a. Land Use. Similar to the proposed project, the Submerged Stadium alternative would not divide an established community and it would not substantially conflict with established or proposed uses surrounding the project site. Under this alternative the stadium and associated structures would continue to exceed the FAA's imaginary surface standards by as much as 100 feet; however, they would not present a hazard to the safe operation to the airport as appropriate. FAA clearance would be obtained prior to project approval. Similar to the proposed project, the implementation of mitigation measures, the hazards that fireworks could present to the safe operation of the San Jose International Airport would be reduced to a less-than-significant level.

b. Population, Employment and Housing. The proposed project and the Submerged Stadium alternative would have the same, less-than-significant impacts to population, employment and housing. Each would remove one existing house next to Patty's Inn and approximately 320 jobs from the site. Each would create 1,500 to 1,800 new jobs.

c. Transportation, Circulation and Parking. The Submerged Stadium alternative would have similar traffic impacts to those associated with the proposed project. Each alternative would generate the same number of trips during a stadium event. However, the Submerged Stadium alternative would require the off-haul of approximately 556,600 additional cubic yards of soil. This translates to approximately 37,000 additional truck trips during project construction. If this additional excavation were to require three months to accomplish, the rate of trucks departing from the site would be approximately two per minute over the course of each 12-hour day. The impact of additional truck trips on the roadways would be less than impacts identified for opening day of the proposed project.

d. Air Quality. In terms of pollutant emissions, the Submerged Stadium alternative impacts would be similar to the proposed project. Operational emissions would exceed BAAQMD daily emission thresholds and would be considered significant. The additional excavation required for this alternative would require the use of trucks for hauling excavated material from the site. The use of diesel trucks for this process would increase the amount of toxic air pollutants for project construction over the proposed project. The Submerged Stadium alternative would also be subject to the mitigation measures required by the BAAQMD, which would reduce construction impacts to a less than significant level.

e. Noise. Similar to the proposed project, increased traffic noise on surrounding roadways would be significant and unavoidable. Baseball game events could result in noise impacts on adjacent residential uses; mitigations related to the P.A. system, stadium design and noise attenuation measures for affected property owners would reduce this impact, but not to a less-than-significant level. Noise impacts from concerts and fireworks displays at the stadium would also be significant and unavoidable. Similar to the proposed project, standard mitigation measures would address noise impacts during construction; however, given the extent and duration of construction activities, this impact is designated significant and unavoidable. Noise impacts during construction would be greater for this alternative due to the increased excavation and off-haul.

f. Biological Resources. The Submerged Stadium alternative would develop the majority of the project site and, similar to the proposed project, would include setbacks from Los Gatos Creek. Impacts to biological resources would be similar under the Submerged Stadium alternative. Up to 45 ordinance-size trees would be removed, and their removal would be mitigated with implementation of a landscape plan which includes replacement of ordinance-size trees at a ratio of 4:1 in the project area. The implementation of a Storm Water Pollution Prevention Plan would reduce potential impacts to water quality in Los Gatos Creek and related habitat to less-than-significant levels. With preconstruction surveys and other mitigation, impacts to nesting hawks and other raptors would be less-than-significant.

g. Geology, Soils and Seismicity. Construction and operation of the Submerged Stadium alternative would have similar or slightly increased impacts on geology, soils and seismicity than the proposed project. Implementation of commonly used mitigation measures including the preparation of a design-level geotechnical investigation, following the recommendations presented in the *Guidelines for Evaluating Seismic Hazards in California*, and following the mitigation measures, design criteria, and specifications set forth in the geotechnical and soils report could reduce geology, soils and seismicity impacts to less-than-significant levels.

h. Hydrology and Water Quality. Construction and operation of the Submerged Stadium alternative would have similar or slightly increased impacts on hydrology and water quality as the proposed project. Implementation of commonly used mitigation measures including a detailed hydraulic analysis that demonstrates that implementation of the proposed drainage plan would be in compliance with City standards as well as the County NPDES permit, compliance with the City's Post Construction Urban Runoff Management Policy, the preparation of a Storm Water Pollution Prevention Plan and inclusion of Best Management Practices in the project design could reduce hydrology and water quality impacts to less-than-significant levels. The Submerged Stadium alternative would include construction approximately 10 feet below area ground water levels and design and construction of this alternative would require additional engineering systems to pump water as necessary.

i. Hazards and Hazardous Materials. Historical and current land uses on the project site have resulted in soil contamination. With mitigation, potential impacts of hazardous materials could be reduced to less-than-significant levels. Implementation of the following commonly used mitigation measures prior to demolition could reduce hazards impacts to less-than-significant levels: preparation of Phase I site assessments for the site; preparation of Phase II assessments as recommended; preparation of Human Health Risk assessments as recommended; preparation and implementation of Construction Risk Management Plans; and, if lead-based paint and asbestos are determined to be present, removal in accordance with the appropriate regulations. The Submerged Stadium alternative would require the off-haul of approximately 556,600 additional cubic yards of soil. This additional excavation and off-haul, would require addition soil and groundwater sampling, a Construction Risk Management Plan for a larger area, and the potential for increased disposal and transport of hazardous materials during construction activities.

j. Cultural and Paleontological Resources. Construction of the Submerged Stadium alternative would have similar impacts on Cultural and Paleontological Resources as the proposed project. Ground disturbing activities could impact historic or prehistoric archaeological resources and/or disturb buried human remains. With mitigation, these potential impacts could be reduced to less-than-

significant levels. Redevelopment of the project site would require the demolition of one structure that appears to be a Candidate for City Landmark and appears eligible for listing in the California Register of Historical Resources; demolition of this resource would be significant and unavoidable. The Diridon Train Station, a City Landmark and listed in the National Register, would sustain indirect impacts due to the change in character in the area; this impact would be significant and unavoidable.

k. Visual Resources. Both the Submerged Stadium alternative and the proposed project would have less-than-significant impacts on scenic vistas, existing views, existing visual character, and neighborhood integrity. However, as the Submerged Stadium alternative would be approximately 25 feet lower than the proposed project, its impacts would be slightly less. The removal of ordinance sized trees associated with the redevelopment of the project site would substantially damage scenic resources; with mitigation this impact would be reduced to a less-than-significant level.

l. Shade/Shadow and Light/Glare. Construction and operation of the Submerged Stadium alternative would generate slightly reduced shade and shadow impacts than the proposed project. The Submerged Stadium alternative would reduce the shade and shadow cast on the historic San Jose Diridon Station; this impact would remain a significant unavoidable impact. It would include light and glare associated with the nighttime operation of a stadium that could present a nuisance to surrounding land uses, potentially interfere with operation of the Lick Observatory, and/or the safe operation of the San Jose International Airport. Potential impacts to the surrounding neighborhood and Lick Observatory remain significant unavoidable impacts, impacts to the airport could be reduced to less-than-significant levels.

m. Utilities. The construction and operation of the Submerged Stadium alternative would lead to increases in demand for utilities at a level similar of that of the proposed project. Potentially significant utility impacts relate to water pressure, compliance with California Integrated Waste Management Act, and the relocation of the PG&E substation. With mitigation these impacts would all be reduced to less-than-significant levels.

n. Public Services and Facilities. The construction and operation of the Submerged Stadium alternative would lead an increase in demand for public facilities and services, including police and fire services at a level similar to that of the proposed project. Opportunity sites for a future park would need to be explored and the Fire Training Facility would be relocated. Similar to the proposed project, these impacts would be less than significant.

o. Energy. Construction and operation of the Submerged Stadium alternative would lead an increase in demand for energy similar to the proposed project. It is not anticipated that this alternative would substantially increase demand or use energy in a wasteful manner.

D. ALTERNATE LOCATIONS CONSIDERED AND REJECTED

Over the past several years the City of San Jose has considered many locations for a baseball stadium. Some of the locations that have been considered by the City simply do not meet the basic size requirements or other critical project objectives, or which have other fatal flaws. These locations are discussed below.

1. San Jose Water Company, Delmas Avenue and W. Santa Clara Street (8.9 acres)

This site is located on both sides of Delmas Avenue, between Santa Clara and San Fernando Streets, immediately west of State Route 87. It has close proximity to mass transit with a light rail station immediately south of the property. Being located within three blocks of the Caltrain station, it is conveniently located near to existing mass transit and a future BART station. However, the site is only 8.9 acres in size. Because it is bordered by the Los Gatos Creek and the Guadalupe River to the west and east, respectively, and the Vasona light rail line to the south, there is no potential for site expansion to the 14-acre minimum necessary to accommodate the ballpark facilities program. Due to the properties insufficient size, this site would not be a feasible alternative location.

2. Arcadia Property, 2218 Quimby Road (81.77 Acres)

The Arcadia property is an 81-acre site that is located just south of the Eastridge Shopping Mall. The site is bounded by Quimby Road on the north, commercial uses and Capitol Expressway on the east, Meadowfair Park and LeyVa Middle School on the south, and single-family residences on the west. The privately-owned site is currently undeveloped. With the exception of the Eastridge Shopping Center, there is no substantial inventory of publicly accessible parking in the vicinity.

The Arcadia property is located approximately 2,600 feet south of Reid-Hillview Airport. Land use conflicts associated with airports typically center on the issues of noise and safety. The Arcadia property is located outside of the Reid-Hillview noise impact area, as defined by both the existing and future (2007) 60-dB noise contours. A 12-acre portion of the site is located within one of the Airport's designated safety zones. As with the proposed Diridon site, nighttime lighting associated with a ballpark at the Arcadia site would have the potential for such lighting to interfere with aircraft operations because this location is under the final approach flight path for nearby Reid-Hillview Airport. This type of lighting – without proper design - could potentially interfere with pilots' vision during a critical phase of aircraft operations. Additionally, the ALUC height limitation for the Arcadia property at the most restrictive location is approximately 280 feet above mean sea level (msl). Since the elevation of the property is approximately 140 feet msl, total building height could not exceed 140 feet, which would restrict the proposed ballpark height.

The entire 81-acre site is also nesting and foraging habitat for the burrowing owl, a California Species of Concern. Development of the site with a ballpark could result in the abandonment of active burrowing owl nests and/or direct mortality to individual burrowing owls, as well as the loss of important owl habitat. For all of these reasons, this site would not be a feasible alternative location.

3. Old Landfill, north of Story Road, east of 12 Street, south of I-280 (44 acres)

This City-owned site is the former location of a public dump and a brick factory. It contains 44 acres, which is of sufficient size for both a ballpark and parking. Parking could be accommodated in a combination of surface and structured facilities. It is conveniently located immediately south of Interstate 280 (I-280), west of the McLaughlin and east of the 10th and 11th Street exits. The site would lend itself to a high visibility location being directly adjacent to I-280. While the site has nearby bus service, there is no existing or planned expansion of light or heavy rail near the site. Since the site was a former dump site, site preparation, including removal of all existing landfill material would be very costly, complex, and time-consuming. Access through 10th and 11th Streets would route traffic through a residential area containing a combination of single and multiple family housing. Due to the

potentially significant hazardous materials cleanup for a site previously used as a landfill, and its lack of proximity to mass transit, this site would not be a feasible alternative location.

4. County Parking/National Guard, 950 N. San Pedro (29 acres)

This property is under the ownership of the federal government, State of California, and Santa Clara County. The site has good freeway access from Highway 87, I-880 and US 101, and is served by light rail transit and bus lines, but is too far north of Downtown to support Downtown revitalization efforts. Because this site is owned by other governmental entities, it is not considered available to the City of San Jose for development as a ballpark and therefore infeasible.

5. Municipal Stadium, 588 E. Alma Avenue (11.6 acres)/Central Service Yard, 1660 Center Road (22 acres)

This site is the potential combination of two adjacent City-owned properties: the Municipal Stadium and the City Central Service Yard. The Muni Stadium, located on the east side of Senter Road, south of Alma Avenue and near the San Jose State University Spartan Stadium, currently is home to the minor league San Jose Giants baseball team and, at 11.6 acres, is too small for a major league baseball stadium. There may be an opportunity to expand the site by the acquisition of an adjacent to railroad right of way. The site is served by nearby bus routes and, due to the fact that the surrounding neighborhood is primarily light and heavy industrial, this site is not planned for future mass transit. The site could possibly be expanded by incorporating some or all of the City Central Service Yard located immediately south of this site, which is 22 acres in size. However, the City has made substantial investment in developing the Central Service Yard, and is continuing to invest in a new phase of development at the site that will facilitate the planned consolidation of facilities and activities currently located at the City's 6th Street Corporation Yard in Japantown to allow development of that site with a mixed-use project consistent with the Japantown Redevelopment Plan and the Jackson-Taylor Residential Strategy. Due to its lack of proximity to mass transit and the inadequate size of the Municipal Stadium, this site is not considered feasible.

E. ALTERNATE LOCATION – FMC/COLEMAN AVENUE

1. Description of FMC/Coleman Avenue Location Alternative

In order to most clearly distinguish the trade-off in potential impacts—both *beneficial* and *adverse*—several alternate locations for the project have been selected. The **FMC/Coleman Avenue Location** alternative evaluates the same development program as the proposed project, but at another location within the City of San Jose. The FMC/Coleman Avenue Location alternative is an approximately 92.5-acre site, located at 1125 Coleman Avenue, bounded by Coleman Avenue to the northeast, Newhall Street to the southeast, Southern Pacifica Railroad lines to the southwest and the jurisdictional boundary of the City of Santa Clara to the northwest (see Figure VII-1). Surrounding land uses include industrial uses to the southwest and northwest, the San Jose International Airport to the northeast and mixed industrial/residential uses to the southeast. This site was analyzed (for another type of development project) in the EIR prepared for the FMC/Coleman Avenue Planned Development Rezoning (July 2003).[4]

[4] City of San Jose. 2003. Final Environmental Impact Report for FMC/Coleman Avenue Planed Development Rezoning (PDC98-104). July.

LSA

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NOT TO SCALE

1 FMC/COLEMAN AVENUE

2 DEL MONTE

3 BERRYESSA FLEA MARKET

4 REED AND GRAHAM

FIGURE VII-1

Baseball Stadium in the Diridon/Arena Area

Alternate Project Locations

SOURCE: GOOGLE MAPS, 2006

I:/SJO530 ballpark/figures/Fig_VII1.ai (2/16/06)

This alternate location would not include the relocation of the PG&E Substation.

2. Analysis of FMC/Coleman Avenue Location Alternative

a. Land Use. Development of the baseball stadium and parking structure on the FMC/Coleman Avenue site would change the land use from industrial and manufacturing. Similar to the proposed project, the FMC/Coleman Avenue Location alternative would not divide an established community and it would not substantially conflict with established or proposed uses surrounding the project site. The location alternative is adjacent to the San Jose International Airport; the baseball stadium would have a maximum height of 165 feet, with scoreboards approximately 200 feet and lights approximately 235 feet above finished grade. Depending on projects siting, elements greater than 160 feet may exceed the aviation easement elevation. Similar to the proposed project location, elements in this area would not present a hazard to the safe operation to the airport appropriate FAA clearance would be obtained prior to project approval. It is assumed no buildings would be proposed for the southeast corner of the site which is located within the ALUC Safety Zone for Airport Runway 11-29. With the implementation of mitigation measures, the hazards that fireworks could present to the safe operation of the San Jose International Airport would be reduced to a less-than-significant level.

b. Population, Employment and Housing. The proposed project and the FMC/Coleman Avenue Location alternative would have the similar, less than significant impacts to population, employment and housing. This site is developed with approximately 1.1 million square feet of manufacturing, office, storage and testing facilities; however, the majority of the buildings are currently vacant or utilized. Under this alternative no residences would be displaced and jobs from the existing businesses on the site would be lost or relocated. Each location for stadium development would create 1,500 to 1,800 new jobs.

c. Transportation, Circulation and Parking. Based on the findings presented in the FMC/ Coleman Avenue Planned Development Rezoning EIR, to reduce impacts of a maximum of 3 million square feet of office/research and development (R&D) space or a baseball stadium, improvements to the City of San Jose intersections of Coleman Avenue and Taylor Street, Coleman Avenue and Hedding Street, and Coleman and Aviation Way would have to be made. Mitigation measures would reduce impacts at these intersections to less-than-significant levels. The proposed project would impact freeway segments in the area and impacts to these segments would be significant and unavoidable.

The FMC/Coleman Avenue Location alternative is located along several bus lines, but it is not adjacent to light rail transit or Caltrans facilities. On a 92.5-acre site, stadium parking could be accommodated; however the proposed project location could utilize existing parking facilities in the Downtown area for less cost, less construction costs and less land use opportunity costs. Similar to the proposed project, a future BART station is planned in the vicinity of the FMC/Coleman Avenue Location alternative.

d. Air Quality. Similar to the proposed project, mitigation measures required by the BAAQMD would address air quality impacts during construction. Additional mitigation measures recommended by the BAAQMD for projects that exceed standards established for ozone precursor emissions would address emissions resulting from increased vehicle trip generation.

e. Noise. The FMC/Coleman Avenue Location alternative is adjacent to the San Jose International Airport. Aircraft noise exposure contours indicate noise levels on the site and surrounding uses to be 60 to 75 dBA CNEL. The Noise Element of the San Jose 2020 General Plan considers arenas for outdoor spectator sports to be compatible with an CNEL of up to 75. Therefore, the noise levels on the project site would be acceptable for the proposed project.

The closest residential structures are located 150 feet from the southern boundary of the project site. Similar to the proposed project, increased traffic noise on surrounding roadways would be significant and unavoidable. Baseball game events could result in noise impacts on nearby residential uses; mitigations related to the P.A. system, stadium design and noise attenuation measures for affected property owners would reduce this impact, but not to a less-than-significant level. Noise impacts from concerts and fireworks displays at the stadium would also be significant and unavoidable. Similar to the proposed project, standard mitigation measures would address noise impacts during construction; however, given the extent and duration of construction activities, this impact will be designated significant and unavoidable.

f. Biological Resources. Development of the proposed project site would require the removal of 45 ordinance-sized trees and may impact nesting hawks and other raptors on the project site. Development of the entire 92-acre FMC/Coleman Avenue site may require the removal of 147 ordinance sized trees and may impact Burrowing Owls, a California Species of Special Concern. Similar to the proposed location, with mitigation, impacts to biological resources could be reduced to less-than-significant levels.

g. Geology, Soils and Seismicity. Construction and operation of the FMC/Coleman Avenue Location alternative would have similar impacts on geology, soils and seismicity than the proposed project. Implementation of commonly used mitigation measures including the preparation of a design-level geotechnical investigation, following the recommendations presented in the *Guidelines for Evaluating Seismic Hazards in California*, and following the mitigation measures, design criteria, and specifications set forth in the geotechnical and soils report could reduce geology, soils and seismicity impacts to less-than-significant levels.

h. Hydrology and Water Quality. Construction and operation of the FMC/Coleman Avenue Location alternative would have similar impacts on hydrology and water quality as the proposed project. Implementation of commonly used mitigation measures including a detailed hydraulic analysis that demonstrates that implementation of the proposed drainage plan would be in compliance with City standards as well as the County NPDES permit, compliance with the City's Post Construction Urban Runoff Management Policy, the preparation of a Storm Water Pollution Prevention Plan and inclusion of Best Management Practices in the project design could reduce hydrology and water quality impacts to less-than-significant levels.

i. Hazards and Hazardous Materials. Similar to the proposed location, historical and current land uses on the FMC/Coleman Avenue location have resulted in soil and groundwater contamination. With mitigation, potential impacts of hazardous materials could be reduced to less-than-significant levels. Implementation of the following commonly used mitigation measures prior to demolition could reduce hazards impacts to less-than-significant levels: preparation of Phase I site assessments for the site; preparation of Phase II assessments as recommended; preparation of Human Health Risk assessments as recommended; preparation and implementation of Construction Risk Management

Plans; and, if lead-based paint and asbestos are determined to be present, removal in accordance with the appropriate regulations.

j. Cultural and Paleontological Resources. No prehistoric, historic, or architectural resources have been identified within or immediately adjacent to the FMC/Coleman Avenue site. While no indicators of archaeological resources are present on the site, the general area is considered to be moderately to highly sensitive for buried cultural resources; implementation of an archaeological monitoring program would reduce impacts to less-than-significant levels. Impacts to cultural resources on the FMC/Coleman Avenue site would be less than those on the proposed project site. Redevelopment of the FMC/Coleman Avenue site would not require the demolition of a structure that appears to be a Candidate for City Landmark and appears eligible for listing in the California Register of Historical Resources, and would not impact an adjacent historic resource. Impacts to historic cultural resources would be significant and unavoidable under the proposed Diridon project site.

k. Visual Resources. Both the FMC/Coleman Avenue Location alternative and the proposed project would have less-than-significant impacts on scenic vistas, existing views, existing visual character, and neighborhood integrity. The removal of ordinance sized trees associated with the redevelopment of the project site would substantially damage scenic resources; with mitigation this impact would be reduced to less-than-significant levels.

l. Shade/Shadow and Light/Glare. Construction and operation of the FMC/Coleman Avenue Location alternative would generate slightly fewer shade and shadow impacts than the proposed project. Similar to the proposed location, it is not near any major open space. Unlike the proposed site, this location is not adjacent to a creek corridor or other open space. The FMC/Coleman Avenue Location would not increase the shade and shadow cast on a historic structure, such as the San Jose Diridon Station. Both locations would include light and glare associated with the nighttime operation of a stadium that could present a nuisance to surrounding land uses, potentially interfere with operation of the Lick Observatory, and/or the safe operation of the San Jose International Airport. Potential impacts to the surrounding neighborhood and Lick Observatory remain significant unavoidable impacts, impacts to the airport could be reduced to less than significant levels.

m. Utilities. The construction and operation of the FMC/Coleman Avenue Location alternative would lead to increases in demand for utilities at a level similar of that of the proposed project. Water pressure is not an issue that has been identified for the FMC/Coleman Avenue site. Mitigation measures would reduce impacts related to compliance with California Integrated Waste Management Act to less-than-significant levels. This alternative would not relocate the PG&E substation on the proposed Diridon project site.

n. Public Services and Facilities. The construction and operation of the FMC/Coleman Avenue Location alternative would lead to an increase in demand for public facilities and services, including police and fire services at a level similar to that of the proposed project. Opportunity sites for a future park would not need to be explored and the Fire Training Facility would not be relocated as part of the proposed project.

o. Energy. Construction and operation of the FMC/Coleman Avenue Location alternative would lead an increase in demand for energy similar to the proposed project. It is not anticipated that this alternative would substantially increase demand or use energy in a wasteful manner.

F. ALTERNATE LOCATION – DEL MONTE

1. Description of Del Monte Location Alternative

The **Del Monte Location** alternative evaluates the same development program as the proposed project, but at another location within the City of San Jose. The Del Monte Location alternative is an approximately 17.5-acre site at 801 Auzerais Street, generally south of W. San Carlos Street, west of Los Gatos Creek, north of W. Home Street and east of Sunol Street and the Vasona LRT line (see Figure VII-1). Surrounding land uses include industrial uses to the north, south and east, and commercial, industrial and residential uses to the west, across Los Gatos Creek. This site was analyzed (for another type of development project) in the EIR prepared for the KB Home Monte Vista Residential Planned Development Zoning Project (March 2005).[5]

This alternate location would not include the relocation of the PG&E Substation.

2. Analysis of Alternate Location Alternative

a. Land Use. Development of the baseball stadium and parking structure on the Del Monte site would change the land use from industrial and manufacturing. Similar to the proposed project, the Del Monte Location alternative would not divide an established community and it would not substantially conflict with established or proposed uses surrounding the project site. The location alternative is adjacent to industrial and commercial uses to the north, south and west. Los Gatos Creek forms the site boundary to the east. This location is approximately two miles south of the San Jose International Airport; the heights of proposed baseball stadium and associated structures may be subject to FAA limitations. Similar to the proposed project location, elements in this area would not present a hazard to the safe operation to the airport appropriate FAA clearance would be obtained prior to project approval. With the implementation of mitigation measures, the hazards that fireworks could present to the safe operation of the San Jose International Airport would be reduced to a less-than-significant level.

b. Population, Employment and Housing. The proposed project and the Del Monte Location alternative would have the similar, less than significant impacts to population, employment and housing. Under this alternative no residences would be displaced and jobs from the existing businesses on the site would be lost or relocated. Each location for stadium development would create 1,500 to 1,800 new jobs.

c. Transportation, Circulation and Parking. Based on the findings presented in the KB Home Monte Vista Residential Planned Development Zoning Project EIR, development of residential land use or a baseball stadium would result in additional transportation impacts. Current level of service operations is acceptable. The addition of vehicle trips associated with the proposed baseball stadium would likely require similar roadway improvements to those identified for the proposed Diridon pro-

[5] City of San Jose. 2005. Final Environmental Impact Report, KB Home Monte Vista Residential Planned Development Zoning Project (Del Monte Plant #3 Site). PDC 03-071. March.

ject site. Similar to the proposed project site, the Del Monte site is located near a future station of the Vasona LRT line, which would reduce number of total vehicle trips from the proposed project. The site is also accessible to pedestrian and bicycle facilities. Therefore, transportation impacts would be similar to those of the proposed project.

d. Air Quality. Similar to the proposed project, mitigation measures required by the BAAQMD would address air quality impacts during construction. Additional mitigation measures recommended by the BAAQMD for projects that exceed standards established for ozone precursor emissions would address emissions resulting from increased vehicle trip generation.

e. Noise. The Del Monte location is a site that currently has noise levels ranging from 64 dBA to 74 dBA L_{dn}. The Noise Element of the San Jose 2020 General Plan considers arenas for outdoor spectator sports to be compatible with a CNEL or L_{dn} of up to 75. Therefore, the noise levels on the project site would be acceptable for the proposed project.

Similar to the proposed project, increased traffic noise on surrounding roadways would be significant and unavoidable. Baseball game events could result in noise impacts on nearby residential uses; mitigations related to the P.A. system, stadium design and noise attenuation measures for affected property owners would reduce this impact, but not to a less-than-significant level. Noise impacts from concerts and fireworks displays at the stadium would also be significant and unavoidable. Similar to the proposed project, standard mitigation measures would address noise impacts during construction; however, given the extent and duration of construction activities, this impact will be designated significant and unavoidable.

Noise impacts associated with locating a stadium adjacent to heavily used railroad tracks would be less significant due to existing noise environment. The net noise impacts associated with this alternative would be less than the proposed site due to the existing noise environment.

f. Biological Resources. The Del Monte site is an industrial site adjacent to the Los Gatos Creek. Development of this alternate location site would require the removal of several ordinance-sized trees and may impact nesting hawks and other raptors on the project site. Similar to the proposed location, with mitigation, impacts to biological resources could be reduced to less-than-significant levels. The demolition of the cannery building on the Del Monte site could impact roosting special-species bats during construction if they were to move on site; this impact could be mitigated to less-than-significant levels.

g. Geology, Soils and Seismicity. Construction and operation of the Del Monte Location alternative would have similar impacts on geology, soils and seismicity than the proposed project site. Implementation of commonly used mitigation measures including the preparation of a design-level geotechnical investigation, following the recommendations presented in the *Guidelines for Evaluating Seismic Hazards in California*, and following the mitigation measures, design criteria, and specifications set forth in the geotechnical and soils report could reduce geology, soils and seismicity impacts to less-than-significant levels.

h. Hydrology and Water Quality. Construction and operation of the Del Monte Location alternative would have similar impacts on hydrology and water quality as the proposed project site. Implementation of commonly used mitigation measures including a detailed hydraulic analysis that

demonstrates that implementation of the proposed drainage plan would be in compliance with City standards as well as the County NPDES permit, compliance with the City's Post Construction Urban Runoff Management Policy, the preparation of a Storm Water Pollution Prevention Plan and inclusion of Best Management Practices in the project design could reduce hydrology and water quality impacts to less-than-significant levels.

i. Hazards and Hazardous Materials. Similar to the proposed location, historical and current land uses on the Del Monte location have resulted in soil and groundwater contamination. With mitigation, potential impacts of hazardous materials could be reduced to less-than-significant levels. Implementation of the following commonly used mitigation measures prior to demolition could reduce hazards impacts to less-than-significant levels: preparation of Phase I site assessments for the site; preparation of Phase II assessments as recommended; preparation of Human Health Risk assessments as recommended; preparation and implementation of Construction Risk Management Plans; and, if lead-based paint and asbestos are determined to be present, removal in accordance with the appropriate regulations.

j. Cultural and Paleontological Resources. Buildings on the Del Monte site were constructed over a period of 100 years; demolition of the historic cannery buildings would result in a significant unavoidable impact. Similar to the proposed Diridon project site, development of the Del Monte site may disturb prehistoric or historic archaeological resources, or paleontological resources. Implementation of a monitoring program would reduce potential impacts to less-than-significant levels.

k. Visual Resources. Both the Del Monte Location alternative and the proposed Diridon project site would have less-than-significant impacts on scenic vistas, existing views, existing visual character, and neighborhood integrity. The removal of ordinance sized trees associated with the redevelopment of the Del Monte site or the proposed project site would substantially damage scenic resources; with mitigation this impact would be reduced to less-than-significant levels. The removal of historic structures on the Del Monte site would substantially damage scenic resources; this impact would be significant and unavoidable.

l. Shade/Shadow and Light/Glare. Similar to the proposed project location, the Del Monte site it is not near any major open space but is adjacent to the Los Gatos Creek corridor. The creek corridor in this area, similar to the proposed project location appear to be heavily vegetated and impacts from increased shade and shadow would be less than significant. The Del Monte Location alternative would not increase the shade and shadow cast on a historic structure, such as the San Jose Diridon Station. Both locations would include light and glare associated with the nighttime operation of a stadium that could present a nuisance to surrounding land uses, potentially interfere with operation of the Lick Observatory, and/or the safe operation of the San Jose International Airport. Potential impacts to the surrounding neighborhood and Lick Observatory remain significant unavoidable impacts, impacts to the airport could be reduced to less than significant levels.

m. Utilities. The construction and operation of the Del Monte Location alternative would lead to increases in demand for utilities at a level similar of that of the proposed project. Water pressures is not an issue that has been identified for the Del Monte site. Mitigation measures would reduce impacts related to compliance with California Integrated Waste Management Act to less-than-significant levels. This alternative would not include the relocation of a PG&E substation.

n. Public Services and Facilities. The construction and operation of the Del Monte Location alternative would lead an increase in demand for public facilities and services, including police and fire services at a level similar to that of the proposed project. Opportunity sites for a future park planned at the Fire Training Facility would not need to be explored and the Fire Training Facility would not be relocated as part of the proposed project. However, the park planned on the south side of Auzerais Avenue west of Los Gatos Creek as part of the KB Homes Del Monte residential development would not occur.

o. Energy. Construction and operation of the Del Monte Location alternative would lead an increase in demand for energy similar to the proposed project. It is not anticipated that this alternative would substantially increase demand or use energy in a wasteful manner.

G. ALTERNATE LOCATION – BERRYESSA FLEA MARKET

1. Description of Berryessa Flea Market Location Alternative

The **Berryessa Flea Market Location** alternative evaluates the same development program as the proposed project, but at another location within the City of San Jose. The Berryessa Flea Market Location alternative is an approximately 120-acre site at 1590 Berryessa Road, generally south of Chessington Drive and Bellemade Street, north of Mabury Street, west of the Caltrain tracks and east of Coyote Creek (see Figure VII-1). Surrounding land uses include industrial uses to the east, west and south, and residential uses to the north. This site was analyzed (for another type of development project) in the EIR prepared for the San Jose Flea Market General Plan Amendment (November 2002).[6]

2. Analysis of Berryessa Flea Market Location Alternative

a. Land Use. Development of the baseball stadium and parking structure on the Berryessa Flea Market Location site would change the land use from retail (flea market). Similar to the proposed project, the Berryessa Flea Market Location alternative would not divide an established community and it would not substantially conflict with established or proposed uses surrounding the project site. The location alternative is adjacent to industrial uses to the south, east and west. There are residential uses to the north. This location is approximately two miles east of the San Jose International Airport; the heights of proposed baseball stadium and associated structures may be subject to FAA limitations. Similar to the proposed project location, elements in this area would not present a hazard to the safe operation to the airport. Appropriate FAA clearance would be obtained prior to project approval. With the implementation of mitigation measures, the hazards that fireworks could present to the safe operation of the San Jose International Airport would be reduced to a less-than-significant level.

b. Population, Employment and Housing. The proposed project and the Berryessa Flea Market Location alternative would have similar, less than significant impacts to population, employment and housing. Under this alternative no residences would be displaced, although future high density housing planned near a future BART station would not occur. Jobs from the existing flea market on the site would be lost or relocated. Each location for stadium development would create 1,500 to 1,800 new jobs.

[6] City of San Jose. 2002. Final Environmental Impact Report for San Jose Flea Market General Plan Amendment (GP02-04-02). November.

c. Transportation, Circulation and Parking. Based on the findings presented in the San Jose Flea Market General Plan Amendment EIR, a maximum of 10,000 square feet of retail, 925,250 square feet of office/industrial, and 3,904 housing on the project site or a baseball stadium, would increase the City of San Jose segments of northbound Charcot, Brokaw, and US 101, east of North 10th Street would operate at deficient levels of service as well as the segments east of North 10th Street: westbound US 101, westbound Hedding, and westbound Taylor Street. Mitigation measures consisting of a BART extension and implementation of City of San Jose General Plan Policies would reduce impacts to a less-than-significant level. Should the project site be built prior to completion of BART, it would result in significant unavoidable traffic impacts.

The Berryessa Flea Market Location alternative is located near several bus lines, but it is not adjacent to light rail transit or Caltrans facilities. On a 120-acre site, stadium parking could be accommodated – approximately 8,000 parking spaces currently exist on surface lots associated with the Flea Market; however the proposed Diridon project location could utilize existing parking facilities in the Downtown area for less cost, less construction costs and less land use opportunity costs.

d. Air Quality. Similar to the proposed project, mitigation measures required by the BAAQMD would address air quality impacts during construction. Additional mitigation measures recommended by the BAAQMD for projects that exceed standards established for ozone precursor emissions would address emissions resulting from increased vehicle trip generation.

e. Noise. Similar to the proposed project, the Berryessa Flea Market Location alternative would increase traffic noise on surrounding roadways would be significant and unavoidable. Baseball game events could result in noise impacts on adjacent residential uses; mitigations related to the P.A. system, stadium design and noise attenuation measures for affected property owners would reduce this impact, but not to a less-than-significant level. Noise impacts from concerts and fireworks displays at the stadium would also be significant and unavoidable. Similar to the proposed project, standard mitigation measures would address noise impacts during construction; however, given the extent and duration of construction activities, this impact will be designated significant and unavoidable.

f. Biological Resources. With the exception of the Penitencia Creek corridor south of Berryessa Road, the entire 120-acre site is paved for use as the flea market. The Coyote Creek corridor is adjacent to the project site on the west. It is assumed for this alternative, the proposed development would be set back 100 feet from the top of bank given the site's size, shape and location. The Berryessa Flea Market Location alternative would require the removal of a few ordinance-sized trees may impact nesting hawks and other raptors on the project site. Similar to the proposed location, with mitigation, impacts to biological resources could be reduced to less-than-significant levels.

g. Geology, Soils and Seismicity. Construction and operation of the Berryessa Flea Market Location alternative would have similar impacts on geology, soils and seismicity than the proposed project. Implementation of commonly used mitigation measures including the preparation of a design-level geotechnical investigation, following the recommendations presented in the *Guidelines for Evaluating Seismic Hazards in California*, and following the mitigation measures, design criteria, and specifications set forth in the geotechnical and soils report could reduce geology, soils and seismicity impacts to less-than-significant levels.

h. Hydrology and Water Quality. Construction and operation of the Berryessa Flea Market Location alternative would have similar impacts on hydrology and water quality as the proposed project. Implementation of commonly used mitigation measures including a detailed hydraulic analysis that demonstrates that implementation of the proposed drainage plan would be in compliance with City standards as well as the County NPDES permit, compliance with the City's Post Construction Urban Runoff Management Policy, the preparation of a Storm Water Pollution Prevention Plan and inclusion of Best Management Practices in the project design could reduce hydrology and water quality impacts to less-than-significant levels.

i. Hazards and Hazardous Materials. The Berryessa Flea Market site was used for various agricultural and business purposes until the 1960's when the San Jose Flea Market was founded. The Flea Market itself is classified as a large quantity generator of hazardous waste. Although no leaks or accidental releases are know to have occurred, the possibility of on-site contamination from this or a previous use cannot be precluded. Similar to the proposed location, with mitigation, potential impacts of hazardous materials could be reduced to less-than-significant levels. Implementation of the following commonly used mitigation measures prior to demolition could reduce hazards impacts to less-than-significant levels: preparation of Phase I site assessments for the site; preparation of Phase II assessments as recommended; preparation of Human Health Risk assessments as recommended; preparation and implementation of Construction Risk Management Plans; and, if lead-based paint and asbestos are determined to be present, removal in accordance with the appropriate regulations.

j. Cultural and Paleontological Resources. While there are no known prehistoric or historic archaeological resources on the Berryessa Flea Market site, the project is situated in an area of high archaeological sensitivity; implementation of an archaeological monitoring program would reduce impacts to less-than-significant levels. The site is the location of the San Jose Flea Market, a major cultural and economic site within the region, which was established in 1960. While only 46 years old, this facility may be eligible for the California Register. Without additional research the removal of this potential resource is considered significant unavoidable. Redevelopment of the proposed Diridon project site would require the demolition of one structure that appears to be a Candidate for City Landmark and appears eligible for listing in the California Register of Historical Resources, and would impact the Diridon Train Station. Impacts to historic cultural resources would be significant and unavoidable under the proposed Diridon project site.

k. Visual Resources. Both the Berryessa Flea Market Location alternative and the proposed project would have less-than-significant impacts on scenic vistas, existing views, existing visual character, and neighborhood integrity. The removal of ordinance sized trees associated with the redevelopment of the Berryessa Flea Market site or the proposed project site would substantially damage scenic resources; with mitigation this impact would be reduced to less-than-significant levels. The removal of the potential historic Flea Market on this site could substantially damage scenic resources; this impact would be significant and unavoidable.

l. Shade/Shadow and Light/Glare. Similar to the proposed project location, the Berryessa Flea Market site it is not near any major open space. While the Berryessa Flea Market site is near not one but two creek corridors, they both appear to be heavily vegetated and impacts from increased shade and shadow would be less than significant. The Berryessa Flea Market Location alternative would not increase the shade and shadow cast on a historic structure, such as the San Jose Diridon Station. Both locations would include light and glare associated with the nighttime operation of a stadium that

could present a nuisance to surrounding land uses, potentially interfere with operation of the Lick Observatory, and/or the safe operation of the San Jose International Airport. Potential impacts to the surrounding neighborhood and Lick Observatory remain significant unavoidable impacts. Impacts to the airport could be reduced to less-than-significant levels.

m. Utilities. The construction and operation of the Berryessa Flea Market Location alternative would lead to increases in demand for utilities at a level similar of that of the proposed project. Water pressure is not an issue that has been identified for the Berryessa Flea Market site. Mitigation measures would reduce impacts related to compliance with California Integrated Waste Management Act to less-than-significant levels. This alternative location would not relocate the PG&E substation on the project site.

n. Public Services and Facilities. The construction and operation of the Berryessa Flea Market Location alternative would lead to an increase in demand for public facilities and services, including police and fire services at a level similar to that of the proposed project. Opportunity sites for a future park would not need to be explored and the Fire Training Facility would not be relocated as part of the proposed project.

o. Energy. Construction and operation of the Berryessa Flea Market Location alternative would lead an increase in demand for energy similar to the proposed project. It is not anticipated that this alternative would substantially increase demand or use energy in a wasteful manner.

H. ALTERNATE LOCATION – REED AND GRAHAM

1. Description of Reed and Graham Location Alternative

The **Reed and Graham Location** alternative evaluates the same development program as the proposed project, but at another location within the City of San Jose. The Reed and Graham Location alternative is an approximately 16-acre site at 854 Savaker Avenue, generally bound by Los Gatos Creek to the west, I-280 to the south, railroad lines to the west and Savaker Avenue to the north (see Figure VII-1). Surrounding land uses include industrial uses to the north, south and east, and residential uses to the west, across Los Gatos Creek. This site was analyzed as an alternative in the EIR prepared for the KB Home Monte Vista Residential Planned Development Zoning Project (March 2005).[7]

The alternate location would not include the relocation of the PG&E Substation.

2. Analysis of Reed and Graham Location Alternative

a. Land Use. Development of the baseball stadium and parking structure on the Reed and Graham site would change the land use from industrial and manufacturing. Similar to the proposed project, the Reed and Graham Location alternative would not divide an established community and it would not substantially conflict with established or proposed uses surrounding the project site. The location alternative is adjacent to industrial uses to the north and west. Los Gatos Creek forms the site boundary to the east and I-280 forms the boundary to the south. This location is approximately 2.25 miles

[7] City of San Jose. 2005. Final Environmental Impact Report, KB Home Monte Vista Residential Planned Development Zoning Project (Del Monte Plant #3 Site). PDC 03-071. March.

south of the San Jose International Airport; the heights of proposed baseball stadium and associated structures may be subject to FAA limitations. Similar to the proposed project location, elements in this area would not present a hazard to the safe operation to the airport. Appropriate FAA clearance would be obtained prior to project approval. With the implementation of mitigation measures, the hazards that fireworks could present to the safe operation of the San Jose International Airport would be reduced to a less-than-significant level.

b. Population, Employment and Housing. The proposed project and the Reed and Graham Location alternative would have the similar, less-than-significant impacts to population, employment and housing. Under this alternative no residences would be displaced and jobs from the existing businesses on the site would be lost or relocated. Each location for stadium development would create 1,500 to 1,800 new jobs.

c. Transportation, Circulation and Parking. Based on the findings presented in the KB Home Monte Vista Residential Planned Development Zoning Project EIR, development residential land use or a baseball stadium would result in additional transportation impacts. The site is located near existing or future transit stations, although a further distance than the proposed Diridon project site. In addition, the Reed and Graham site is further from existing and planned parking facilities that would serve the stadium.

d. Air Quality. Similar to the proposed project, mitigation measures required by the BAAQMD would address air quality impacts during construction. Additional mitigation measures recommended by the BAAQMD for projects that exceed standards established for ozone precursor emissions would address emissions resulting from increased vehicle trip generation.

e. Noise. The Reed and Graham location is a site that currently is within the 65 dB CNEL noise contour. The Noise Element of the San Jose 2020 General Plan considers arenas for outdoor spectator sports to be compatible with a CNEL of up to 75. Therefore, the noise levels on the project site would be acceptable for the proposed project.

Similar to the proposed project, increased traffic noise on surrounding roadways would be significant and unavoidable. Baseball game events could result in noise impacts on nearby residential uses; mitigations related to the P.A. system, stadium design and noise attenuation measures for affected property owners would reduce this impact, but not to a less-than-significant level. Noise impacts from concerts and fireworks displays at the stadium would also be significant and unavoidable. Similar to the proposed project, standard mitigation measures would address noise impacts during construction; however, given the extent and duration of construction activities, this impact will be designated significant and unavoidable.

Noise impacts associated with locating a stadium adjacent to a freeway are often less significant due to existing traffic noise. The net noise impacts of the project on its surroundings with this alternative would be less than the proposed site due to the existing noise environment.

f. Biological Resources. The Reed and Graham site is an industrial site adjacent to the Los Gatos Creek. Development of this alternate location site would require the removal of several ordinance-sized trees and may impact nesting hawks and other raptors on the project site. Similar to the pro-

posed location, with mitigation, impacts to biological resources could be reduced to less-than-significant levels.

g. Geology, Soils and Seismicity. Construction and operation of the Reed and Graham Location alternative would have similar impacts on geology, soils and seismicity than the proposed project site. Implementation of commonly used mitigation measures including the preparation of a design-level geotechnical investigation, following the recommendations presented in the *Guidelines for Evaluating Seismic Hazards in California*, and following the mitigation measures, design criteria, and specifications set forth in the geotechnical and soils report could reduce geology, soils and seismicity impacts to less-than-significant levels.

h. Hydrology and Water Quality. Construction and operation of the Reed and Graham Location alternative would have similar impacts on hydrology and water quality as the proposed project site. Implementation of commonly used mitigation measures including a detailed hydraulic analysis that demonstrates that implementation of the proposed drainage plan would be in compliance with City standards as well as the County NPDES permit, compliance with the City's Post Construction Urban Runoff Management Policy, the preparation of a Storm Water Pollution Prevention Plan and inclusion of Best Management Practices in the project design could reduce hydrology and water quality impacts to less-than-significant levels.

i. Hazards and Hazardous Materials. Similar to the proposed location, historical and current land uses on the Reed and Graham location have resulted in soil and groundwater contamination. With mitigation, potential impacts of hazardous materials could be reduced to less-than-significant levels. Implementation of the following commonly used mitigation measures prior to demolition could reduce hazards impacts to less-than-significant levels: preparation of Phase I site assessments for the site; preparation of Phase II assessments as recommended; preparation of Human Health Risk assessments as recommended; preparation and implementation of Construction Risk Management Plans; and, if lead-based paint and asbestos are determined to be present, removal in accordance with the appropriate regulations.

j. Cultural and Paleontological Resources. There are no known prehistoric or historic archaeological resources, or paleontological resources have been identified within or immediately adjacent to the Reed and Graham site. Implementation of a monitoring program would reduce potential impacts to less-than-significant levels. There are no known historic structures on or adjacent to the Reed and Graham site. Redevelopment of the Reed and Graham site would not require the demolition of a structure that appears to be a Candidate for City Landmark and appears eligible for listing in the California Register of Historical Resources, and would not impact an adjacent historic resource. Impacts to historic cultural resources are significant and unavoidable under the proposed Diridon project site.

k. Visual Resources. Both the Reed and Graham Location alternative and the proposed project site would have less-than-significant impacts on scenic vistas, existing views, existing visual character, and neighborhood integrity. The removal of ordinance sized trees associated with the redevelopment of the Reed and Graham site or the proposed project site would substantially damage scenic resources; with mitigation this impact would be reduced to less-than-significant levels.

l. Shade/Shadow and Light/Glare. Similar to the proposed project location, the Reed and Graham site it is not near any major open space but is adjacent to the Los Gatos Creek corridor. The

creek corridor in this area, similar to the proposed project location, appears to be heavily vegetated and impacts from increased shade and shadow would be less than significant. The Reed and Graham Location alternative would not increase the shade and shadow cast on a historic structure, such as the San Jose Diridon Station. Both locations would include light and glare associated with the nighttime operation of a stadium that could present a nuisance to surrounding land uses, potentially interfere with operation of the Lick Observatory, and/or the safe operation of the San Jose International Airport. Potential impacts to the surrounding neighborhood and Lick Observatory remain significant unavoidable impacts, impacts to the airport could be reduced to less than significant levels.

m. Utilities. The construction and operation of the Reed and Graham Location alternative would lead to increases in demand for utilities at a level similar of that of the proposed project. Water pressure is not an issue that has been identified for the Reed and Graham site. Mitigation measures would reduce impacts related to compliance with California Integrated Waste Management Act to less-than-significant levels. This alternative would not include the relocation of a PG&E substation.

n. Public Services and Facilities. The construction and operation of the Reed and Graham Location alternative would lead to an increase in demand for public facilities and services, including police and fire services at a level similar to that of the proposed project. Opportunity sites for a future park would not need to be explored and the Fire Training Facility would not be relocated as part of the proposed project.

o. Energy. Construction and operation of the Reed and Graham Location alternative would lead an increase in demand for energy similar to the proposed project. It is not anticipated that this alternative would substantially increase demand or use energy in a wasteful manner.

I. ENVIRONMENTALLY SUPERIOR ALTERNATIVE

Designation of the environmentally superior alternative can be a complicated task for an in-fill project, proposed for development on a historically urbanized site. The complications revolve around the very definitions of “impacts” as well as the likelihood that some impacts would occur, or continue to occur, if they are already present in the existing condition. Some impacts are forecast to occur under baseline future conditions, with or without the proposed project. Such is the case with the stadium project.

The No Development alternative is considered the environmentally superior alternative in the strict sense that its implementation would result in the smallest number of and least noticeable environmental impacts of all the scenarios examined (including the proposed project). To maintain the project site as it is today would avoid each of the significant and unavoidable impacts that would result from the proposed project.

In cases like this where the No Development alternative is technically the environmentally superior alternative, CEQA requires that the second most environmentally superior alternative be identified. Comparison of the environmental impacts associated with each alternative as described above, indicates that each of the other “build” alternatives (i.e., Existing Plan, Alternate Location) would lead to a complex mix of impacts that would be greater and/or lesser than the proposed project, depending on the topic.

The Submerged Stadium alternative would generally represent the next-best alternative in terms of the fewest impacts. The Submerged Stadium alternative would have greater short-term impacts than the proposed project related to: construction traffic, noise and air quality; hydrology and water quality; hazards and hazardous materials; and cultural resources. The Submerged Stadium alternative would have reduced long-term impacts related to: land use; operational noise; visual resources; shade/shadow and light/glare. It would meet the City's objectives to the same extent as the proposed project (as expressed in bulleted form at the beginning of this chapter).

The Existing Plan alternative would come close to the Submerged Stadium alternative in terms of the fewer impacts. The Existing Plan alternative would have greater impacts than the proposed project related to traffic and air quality, but it would have fewer impacts related to: land use; population, employment and housing; noise; visual resources; shade/shadow and light/glare. However, it would not meet the City's objectives for the proposed project, which is to develop an open-air stadium of 45,000 seats and associated facilities (as expressed in bulleted form at the beginning of this chapter).

Among the alternative locations, the FMC/Coleman Avenue Location alternative would generally lead to the fewest impacts. The FMC/Coleman Avenue Location alternative would not have any greater impacts than the proposed project, and it would have fewer impacts related to: land use; noise; biological resources; cultural resources; visual resources; shade/shadow and light/glare. However, the FMC/Coleman Avenue Location adjacent to the International Airport would subject stadium attendees to an unpleasant level and frequency of noise, possibly falling short of the public's expectations for such a facility and in that way, ultimately failing to achieve other basic objectives for the project.

VIII. SIGNIFICANT UNAVOIDABLE EFFECTS

As discussed throughout the various topical sections of Chapter V of this EIR, the Baseball Stadium in the Diridon/Arena Area Project would result in the following significant unavoidable adverse impacts:

- State Route 87 would experience a significant impact from project traffic along two of the analyzed segments; I-280 would experience a significant impact from project traffic along two of the analyzed segments.
- Long-term project-related regional emissions would exceed the BAAQMD thresholds of significance for ozone precursors.
- Traffic noise levels along W. San Fernando Street would exceed the City's short-range noise standards.
- Stadium events would increase the ambient noise level resulting in impacts to nearby residential land uses.
- Construction activities would result in short-term increases in noise.
- Temporary fireworks displays would result in isolated increases in noise.
- A structure listed on the *City of San Jose Historic Resources Inventory* as Structures of Merit, which also appears to be both a candidate City Landmark and eligible for the California Register would be demolished.
- The San Jose Diridon Station, a City landmark listed in the National Register, would sustain indirect impacts due to demolition of adjacent buildings and direct impacts due to the alteration of the character of the Station's setting.
- Nighttime operation of the stadium would increase light and glare in the area and present a nuisance to surrounding land uses.

The baseball stadium project, in conjunction with other foreseeable projects, would also result in significant unavoidable cumulative impacts to transportation and circulation, air quality, noise, visual resources, light and glare, and historic resources.

All other significant impacts associated with the baseball stadium project could be mitigated to a less-than-significant level with implementation of mitigation measures identified in this EIR.

IX. GROWTH-INDUCING IMPACTS

A project is considered growth-inducing if it would: directly or indirectly foster economic or population growth or the construction of additional housing; if it would remove obstacles to population growth or tax community service facilities to the extent that the construction of new facilities would be necessary; or if it would encourage or facilitate other activities that cause significant environmental effects.[1]

The project site is located within the City and would not result in an expansion of urban services or the pressure to expand beyond the City's existing Sphere of Influence. It would not open additional undeveloped land to future growth or provide expanded utility capacity that would be available to serve future development. Instead, it would facilitate the anticipated revitalization of underutilized land in an existing urban setting that is conveniently served by transit facilities and services. The proposed project would not cause any direct population growth and the scale of employment growth would not induce substantial indirect growth in population or employment.

As discussed in Chapter IV, Consistency with Plans and Policies, the proposed project would enhance the desirable qualities of the community. The proposed project would generally meet the goals of *Strategy 2000* and complement the visions set forth in other area plans.

In addition, the proposed project would encourage transit and pedestrian-oriented redevelopment activity and associated growth in the Diridon Area. This would benefit the region by promoting the redevelopment and revitalization of the area with infill development. In addition to benefiting the Diridon Area, the proposed stadium would benefit the Greater Downtown Area as a whole by better connecting the Downtown to the major transit center and by expanding and enhancing entertainment activities within the City.

[1] *CEQA Guidelines*, 2005, Section 15126.2(d).

X. SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

An EIR must identify any significant irreversible environmental changes that would be caused by the proposed project being analyzed. Irreversible environmental changes may include current or future commitments to the use of non-renewable resources, or secondary or growth-inducing impacts that commit future generations to similar uses. Irreversible commitments of resources should be evaluated to assure that such current consumption is justified.[1] The *CEQA Guidelines* describe three categories of significant irreversible changes that should be considered, as further detailed below.

A. CHANGES IN LAND USE WHICH WOULD COMMIT FUTURE GENERATIONS

As described throughout this EIR, the Baseball Stadium in the Diridon/Arena Area Project would allow for the redevelopment and intensification of land uses in an area that is underutilized. This land use change would occur in the form of infill development of urbanized parcels that have been developed since the late 1800s. In the same manner that the current uses and structures are being proposed for redevelopment after years of usefulness, so too could a baseball stadium undergo renovation or change after another 50 to 100 years. In this way, the proposed project would commit 2 to 3 generations to this land use change. Such a commitment would not constitute a significant adverse effect.

B. IRREVERSIBLE CHANGES FROM ENVIRONMENTAL ACTIONS

The loss of a historic structure from the project site and the alteration of the character of an adjacent historic structure would result in a significant irreversible change in the environment. As discussed in Section V.J, Cultural and Paleontological Resources, these are significant unavoidable impact of the proposed project.

The only other irreversible changes to the physical environment that could occur as a result of a project like this one would stem from the accidental release of hazardous materials associated with development. However, compliance with hazardous materials regulations and policies, and the remediation of existing conditions within the project site, as outlined in Chapter V.I, Hazards and Hazardous Materials, are expected to maintain this potential impact at a less-than-significant level. No other irreversible changes – such as those which might result from construction of a large-scale mining project, a hydroelectric dam project, or other industrial project – would result from development of a baseball stadium.

[1] *CEQA Guidelines*, 2005, Section 15126.2(c).

C. CONSUMPTION OF NONRENEWABLE RESOURCES

Consumption of nonrenewable resources includes increased energy consumption, conversion of agricultural lands to urban uses, and lost access to mineral reserves. No agricultural lands would be converted and no access to mining reserves would be lost with construction of the proposed project. The project would redevelop underutilized parcels and construct public infrastructure and amenities and expand an entertainment serving district on the western side of the Greater Downtown Area. While this would require additional energy of several types for construction and for on-going use, it would not require the construction of major new lines to deliver energy, and service providers anticipate being able to provide the capacity to serve these levels of development. Furthermore, to the extent that growth throughout San Jose is partly an expression of regional demand, the redevelopment of existing neighborhoods would represent a more efficient allocation of non-renewable resources than would some other types or patterns of growth.

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