City of San Jose - PBCE – Planning Division - Imaging Index Cover Sheet

Address/Location: **between Highway 85 and Monterey Road**

Permit/Project No.: **PDC04-100** Issuance Date: **06/20/06**

Prepped By: **JROCHE** Closed By: **SADVANI** RSN: **1133536**

Category	Document Type	Sub Document Type
☐ (EF) Environmental Files (203)	☐ (PP) Public Project Files (203-03)	☐ (EN) EIR ☐ (DA) Approved Document ☐ (EM) Maps ☐ (AE) Application ☐ (AG) Agency Correspondence ☐ (EG) General Correspondence ☐ (TR) Technical Reports ☐ (RE) Archaeological Reports ☐ (EP) Plans
☐ (GP) General Plan (204)	☐ (GA) General Plan Amendments (204-02)	☐ (AM) Amendment ☐ (AA) Application ☐ (CG) Correspondence
	☐ (GE) Environmental Review (for 204 series GP Amendments)	☐ (GD) Approved Document ☐ (GI) EIR ☐ (GS) Supporting Documents ☐ (GT) Technical Reports ☐ (GR) Archaeological
☑ (DR) Development Review (207)	☐ (PR) Projects (207-02, 207-03, etc.)	☐ (ZN) Zoning ☐ (PE) Permit ☐ (MP) Maps ☐ (AP) Application ☐ (AC) Agency Correspondence ☐ (GC) General Correspondence ☐ (PL) Plans
	☑ (ER) Environmental Review (for 207 series Project Files)	☐ (EA) Approved Document ☑ (EI) EIR Text Page 2 ☐ (ES) Supporting Documents ☐ (ET) Technical Reports ☐ (AR) Archaeological
	☐ (AD) Adjustments (207-12)	☐ (DO) Documents ☐ (PA) Plans
	☐ (PI) Public Info Letters (207-29)	☐ (LE) Letter ☐ (LS) Supporting Docs

FINAL ENVIRONMENTAL IMPACT REPORT
FOR THE:

ISTAR GENERAL PLAN AMENDMENT AND PLANNED DEVELOPMENT ZONING PROJECT

SCH# 2005012046

Volume I of II:
Draft Environmental Impact Report,
First Amendment to the Draft Environmental Impact Report,
Second Amendment to the Draft Environmental Impact Report

City of San José

JUNE 2006

CITY OF SAN JOSE
CAPITAL OF SILICON VALLEY

Department of Planning, Building and Code Enforcement
STEPHEN M. HAASE, AICP, DIRECTOR

December 7, 2005

Ladies and Gentlemen:

SUBJECT: Draft Environmental Impact Report for the iStar Environmental Impact Report, File No. PDC04-100, GP04-02-02, GP03-02-5; SCH # 2005012046

The Planning Commission of the City of San Jose will hold a Public Hearing to consider the Draft Environmental Impact Report (DEIR) prepared for the project described below. A copy of the DEIR is attached for your review.

Your comments regarding the significant environmental effects of this project and the adequacy of the DEIR are welcome. Written comments, submitted to the Department of Planning, Building and Code Enforcement by 5:00 p.m. Monday , January 23, 2006, will be included in the EIR and be considered by the Planning Commission at this public hearing. *If you make comments through a state or regional clearinghouse, please send a copy of your comments to the contact person listed below to insure prompt consideration.* If we receive no comments (nor a request for an extension of time) from you by the specified date, we will assume you have none to make.

Project Description and Location: The scope of the project includes: 1) Change the site's General Plan Land Use/Transportation Diagram designation from Industrial Park to Mixed Use with No Underlying Land Use Designation, and update the General Plan's Mixed Use Inventory via a text amendment; 2) Rezone the site from A(PD) Planned Development zoning district to IP(PD) Industrial Park Planned Development zoning district to allow a commercial and industrial mixed-use project consisting of up to one million square feet of industrial park land uses and up to 450,000 square feet of commercial land uses; 3) Designate one or more new Arterial and/or Major Collector roadways on the General Plan Transportation Diagram; 4) Increase the building height limit on the site from 45 to 120 feet; and 5) Modify the Edenvale Area Development Policy and the Edenvale Redevelopment Area to include and provide for development of the site.
Note: The current proposal would, if approved, supersede the site's existing approved entitlements to build up to 1.5 million square feet of industrial park land uses.
Council District: 2

Tentative Hearing Date: Wednesday, March 8, 2006

Contact Person: Darren McBain, (408) 535-7822, darren.mcbain@sanjoseca.gov
Department of Planning, Building & Code Enforcement
200 East Santa Clara Street
San José CA 95113-1905

/s/ Akoni Danielsen
Principal Planner

TABLE OF CONTENTS

VOLUME I OF II – EIR TEXT **Page**

TABLE OF CONTENTS

TABLE OF CONTENTS

PHOTOS

TABLE OF CONTENTS, continued

Page

FIGURES

Page

TABLES

TABLE OF CONTENTS, continued

Page

TABLES

VOLUME II OF II – TECHNICAL APPENDICES

F. BIOLOGICAL RESOURCES

The following discussion of biological resources is based upon a site reconnaissance survey and a field survey completed by *H.T. Harvey & Associates* in October 2003 and a field survey completed by *WRA Environmental Consultants* in July 2005.

A tree survey was also conducted by *H.T. Harvey and Associates* in December 2000, and a supplemental survey was conducted by *David J. Powers & Associates, Inc.* in November 2003. In August 2005, an updated tree assessment of specific trees was completed by *HortScience Inc.* The complete site reconnaissance surveys and tree survey information is provided in Appendix F and G, respectively.

1. Setting

The approximately 74-acre project site is located within a developed area of the City of San José. The project site is located north of SR 85, east of Manassas Road, south of Monterey Road, and west of Tuscon Road. Urban development consisting of mostly corporate campuses and residential neighborhoods dominate the surrounding area. The site consists of mostly level ground with large areas covered by non-commercial orchard trees (mostly cherry and plum). There is little to no understory vegetation due to regular disking of the property. In addition to the orchard trees, there are a few groups of larger trees on the site, including oak, eucalyptus, pine, and palm trees.

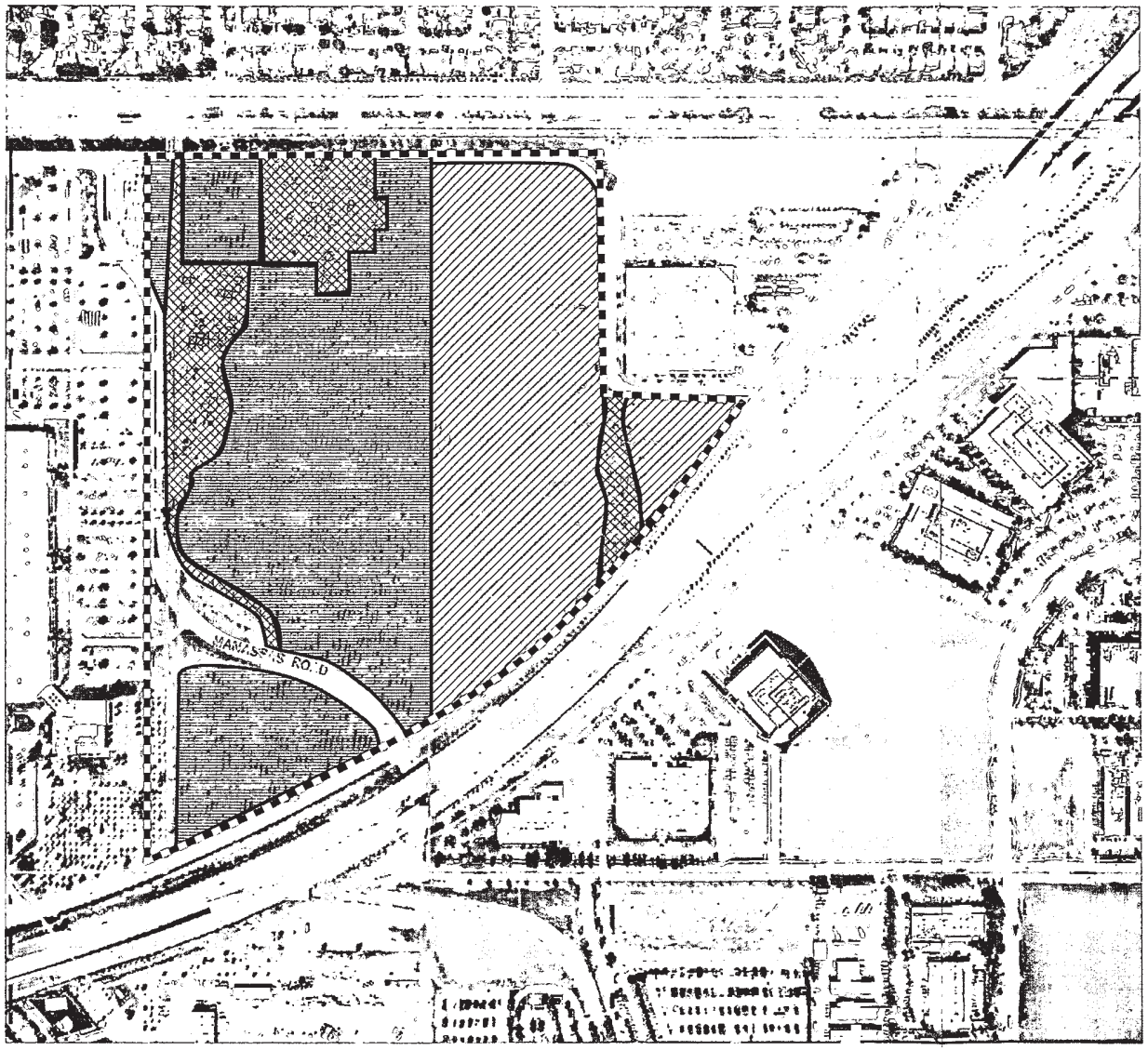
Habitat Types

Three biotic habitats were identified on the project site (refer to Figure 18): ruderal/ornamental, orchard, and agricultural (dryland hay). These habitats are described in more detail below.

Ruderal/Ornamental

Vegetation. Ruderal/ornamental habitat comprises approximately 11 acres of the project site. This habitat includes mature tree stands as remnants from agricultural homesteads which once occupied this land. Mature trees in this habitat include coast redwood, coast live oak, cottonwood, valley oak, fan palm, olive, buckeye, walnut, and blue gum. The understory of these trees is almost entirely absent, except for scattered annual grasses, because the soil appears to be disked or rolled on a regular basis. Other understory areas are dominated by thicket-forming shrubs such as alder, snowberry, and Himalayan blackberry, in addition to scattered annual grasses and thistles.

Wildlife. Mammals found in this type of habitat are those typical of urban habitats, such as house mice, roof rats, fox squirrels, deer mice, and feral cats. Bird species include the European starling, American robin, mourning dove, Brewer's blackbird, and the northern mockingbird, all of which may nest and forage in native and non-native vegetation found in these habitats. The large trees in the ornamental habitat provide potential nesting sites for many raptor species, including American kestrels and red-tailed hawks; the latter was observed in a large cottonwood on the site.



BIOTIC HABITAT MAP

FIGURE 18

Orchards

Vegetation. Approximately 36 acres of the project site consists of various fruit and nut trees forming orchard habitat. These orchard trees included two species of walnut and at least two species of stonefruit. Much of the understory consists of bare ground with some scattered annual grasses and ornamental species.

Wildlife. The lack of understory in the orchards precludes use of the area by most mammals. Mice and rats may live within an oleander thicket, in the grasses along access roads, and in and among the agricultural buildings. Regular disking of most of the orchard likely prevents most fossorial (burrowing) mammals, such as California ground squirrels and Botta's pocket gophers from establishing and maintaining burrows. Songbirds using this area include those listed above for the ruderal/ornamental habitats.

Agricultural (Dryland Hay)

Vegetation. Approximately 26 acres of the project site supported dryland grain crops forming agricultural habitat. Currently, there are no agricultural activities on-site.

Wildlife. Mammals using this habitat include those listed above for ruderal/ornamental and orchard habitats, as well as the Black-tailed hare and California ground squirrels. The California ground squirrels and Botta's pocket gophers have established burrows off-site on the road bank for Highway 85, as well as along the dirt road between Manassas Road and, likely, within the agricultural field. A variety of common songbirds may forage in this field and seek shelter in the adjacent orchards or ruderal vegetation, including red-winged blackbirds, mourning doves, and house finches. Cliff swallows were observed foraging on-site, but are likely nesting under the adjacent Highway 85 overpass.

Regulated Habitats

United States Army Corps of Engineers Jurisdiction

Areas meeting the regulatory definition of "Waters of the United States" (jurisdictional waters) are subject to the jurisdiction of the U.S. Army Corps of Engineers (USACE). The USACE, under provisions of Section 404 of the Clean Water Act (1972) and Section 10 of the Rivers and Harbors Act (1899), has jurisdiction over "Waters of the U.S." These waters may include all waters used, or potentially used, for interstate commerce, including all waters subject to the ebb and flow of the tide, all interstate waters, all other waters (intrastate lakes, rivers, streams, mudflats, sandflats, playa lakes, natural ponds, etc.), all impoundments of waters otherwise defined as Waters of the U.S., tributaries of waters otherwise defined as Waters of the U.S., the territorial seas, and wetlands adjacent to Waters of the U.S.

Areas not considered to be jurisdictional waters include non-tidal drainage and irrigation ditches excavated on dry land, artificially-irrigated areas, artificial lakes or ponds used for irrigation or stock watering, small artificial water bodies such as swimming pools, and water-filled depressions.

Construction activities within jurisdictional waters are regulated by the USACE. The placement of fill into such waters must be in compliance with permit requirements of the USACE. No USACE permit will be approved in the absence of state water quality

certification pursuant to Section 401 of the Clean Water Act. State Water Resources Control Board is the state agency charged with implementing water quality certification in California.

A reconnaissance-level field survey was conducted in May 2000 for areas that meet the regulatory definition of Waters of the U.S. No areas of potential jurisdictional waters on the site were observed. In addition, the National Wetland Inventory map does not reveal any wetland resources on site.

California Department of Fish and Game Jurisdiction

Activities that result in the diversion or obstruction of the natural flow of a stream, or which substantially change its bed, channel or bank, or which utilize any materials (including vegetation) from the streambed requires that the project applicant enter into a Streambed Alternation Agreement with the CDFG, under Sections 1601-1603 of the state Fish and Game Code. The CDFG potentially extends the definition of stream to include "intermittent and ephemeral streams, rivers, creeks, dry washes, sloughs, blue-line streams (USGS), and watercourses with subsurface flows. Canals, aqueducts, irrigation ditches, and other means of water conveyance can also be considered streams if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife."

No areas potentially subject to the jurisdiction of CDFG, under Section 1600 of the California Fish and Game Code were identified during the field survey.

City of San José Tree Ordinance

The City of San José maintains the urban natural landscape partly by promoting the health, safety, and welfare of the City by controlling the removal of ordinance trees on private property. Ordinance-size trees are defined as trees over 56 inches or more in circumference at a height of 24 inches above natural grade.[22] The removal of mature trees detracts from the scenic beauty of the City; causes erosion of topsoil; creates flood hazards; increases the risk of landslides; reduces property values; increases the cost of construction and maintenance of drainage systems through the increased flow and diversion of surface waters; and eliminates one of the prime oxygen producers and prime air purification systems in this area.[23]

A tree survey showed there were 2,330 trees located on the project site. The vast majority of trees on the site are orchard trees. Fifty-five of the 2,330 trees are ordinance-size trees. The ordinance-size trees are scattered throughout the site and clustered along Little Avenue, south of the former nursery area, and south of the Equinix Colocation building (refer to Figure 19). The ordinance-size trees on the western portion of the site are all in excellent health. The ordinance-size trees on the eastern portion of the site range from poor to excellent health.

Of the 55 ordinance size trees on-site, six are native trees. The native trees include coast live oaks and a valley oak. According to the tree assessments completed in 2000 and 2003, these native trees are in excellent health and their circumference ranges from 83 inches to 130 inches. Ordinance-size coast redwood, western red cedar, and northern California black walnut trees are also native to California, but they are not locally native to Santa Clara Valley and have been planted on the site. The largest ordinance-size trees include coast redwoods

[22] City of San José Civil Code (13.32.020).
[23] City of San José Civil Codes (Prior code Section 8930; Ordinance 13.32.010).

that are clustered along Little Avenue, south of the former nursery area. These redwoods are visibly distinguishable from the other trees along Little Avenue: they are twice the height of the surrounding trees.

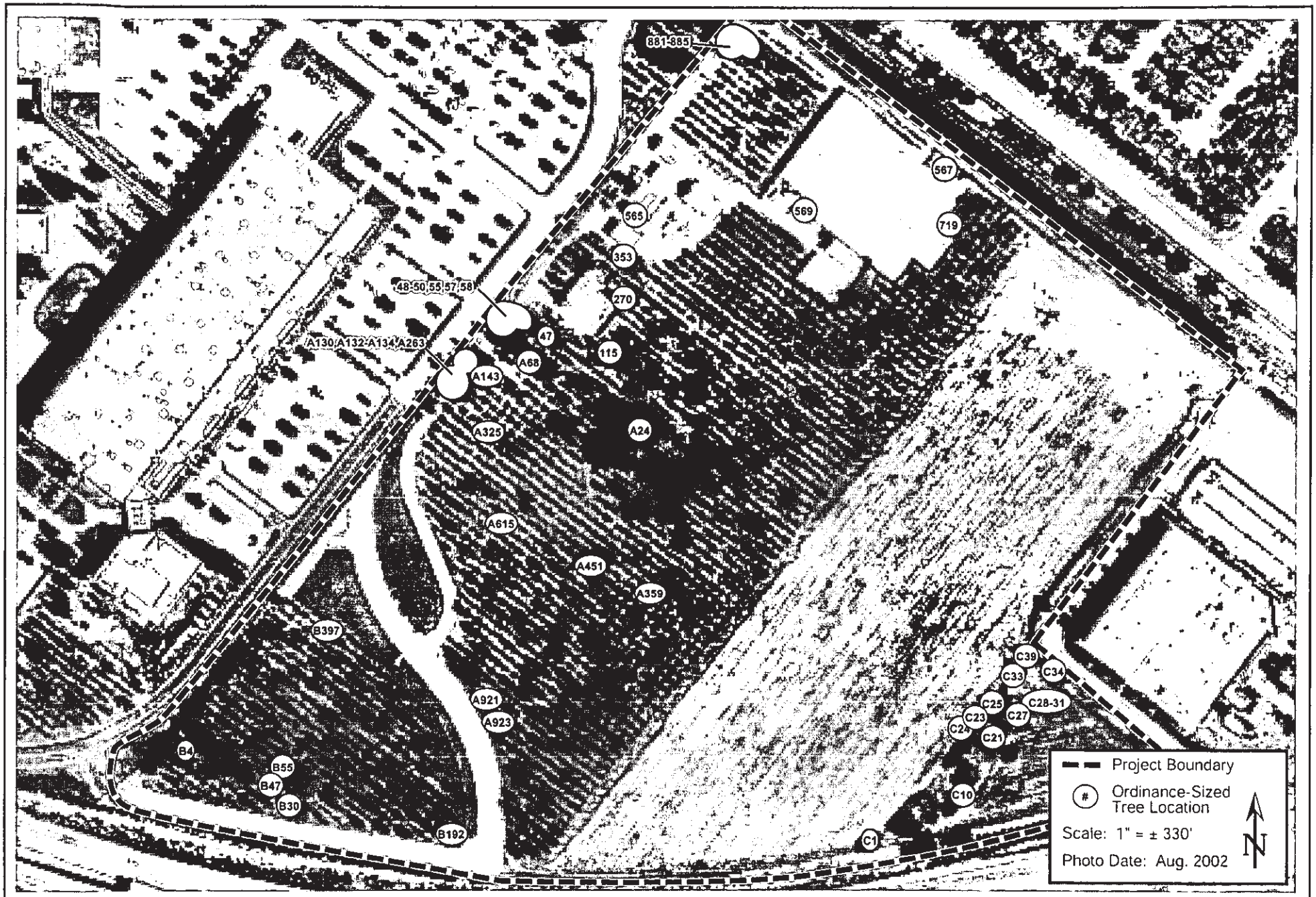
Table 21 lists and identifies the ordinance-size trees and their size and health condition. Figure 19 shows the location of the ordinance-size trees on the site.

Table 21
Ordinance-Size Trees

Tree #[1]	Common Name[3]	*Scientific Name*	Circumference at 2 feet Above Grade (inches)	Health and Vigor (0-5)[2]
47	Coast redwood	*Sequoia sempervirens*	159	5
48	Coast redwood	*Sequoia sempervirens*	158	5
49	**Coast live oak**	***Quercus agrifolia***	**83**	**5**
50	**Coast live oak**	***Quercus agrifolia***	**105**	**5**
55	Coast redwood	*Sequoia sempervirens*	86	5
57	Coast redwood	*Sequoia sempervirens*	63+105=168	5
58	Coast redwood	*Sequoia sempervirens*	59	5
115	Howard walnut, grafted	*Juglans sp.*	28+25+25=79	5
270	Peruvian pepper tree	*Schinus molle*	69	5
353	Peruvian pepper tree	*Schinus molle*	82	5
565	Unknown tree		75	5
567	Peruvian pepper tree	*Schinus molle*	75	5
569	Tree-of-Heaven	*Ailanthus altissima*	22+25+28=75	5
719	Howard walnut, grafted	*Juglans sp.*	22+22+22+16=82	4
845	Cherry	*Prunus sp.*	63	5
862	Cherry	*Prunus sp.*	57	5
881	Coast redwood	*Sequoia sempervirens*	110	4
882	Coast redwood	*Sequoia sempervirens*	135	5
883	Western red cedar	*Thuja plicata*	97	5
884	Coast redwood	*Sequoia sempervirens*	130	5
885	Coast redwood	*Sequoia sempervirens*	137	5
A24	Howard walnut, grafted	*Juglans sp.*	22+19+16=57	5
A68	Black oak	*Quercus kelloggii*	119	5
A130	Acacia	*Acacia sp.*	59+41=100	5
A132	**Coast live oak**	***Quercus agrifolia***	**130**	**5**
A133	Coast redwood	*Sequoia sempervirens*	167	5
A134	**Coast live oak**	***Quercus agrifolia***	**90**	**5**
A143	Avocado	*Persea*	73	5
A263	Avocado	*Persea*	64	5
A325	Coast redwood	*Sequoia sempervirens*	120	5
A359	Cherry	*Prunus sp.*	57	5
A451	Cherry	*Prunus sp.*	57	5
A615	Cherry	*Prunus sp.*	57	5
A921	Cherry	*Prunus sp.*	66	5

Table 21 Ordinance-Size Trees				
Tree #[1]	**Common Name[3]**	***Scientific Name***	**Circumference at 2 feet Above Grade (inches)**	**Health and Vigor (0-5)[2]**
A923	Cherry	*Prunus sp.*	58	5
B4	Cherry	*Prunus sp.*	58	5
B30	Peruvian pepper tree	*Schinus molle*	152	5
B47	Almond	*Prunus sp.*	74	4
B55	**Valley oak**	***Quercus lobata***	**157**	**5**
B192	Cherry	*Prunus sp.*	58	5
B397	Cherry	*Prunus sp.*	57	5
C1	Cottonwood	*Populus sp.*	113	2
C10	Persimmon	*Diospyros sp.*	36+27=63	2
C21	Olive	*Olea sp.*	116	4
C23	Almond	*Prunus sp.*	37+42+34=113	3
C24	Northern California Black Walnut	*Juglans californica var. hindsii*	46+35=81	3
C25	Northern California Black Walnut	*Juglans californica var. hindsii*	163	3
C27	Northern California Black Walnut	*Juglans californica var. hindsii*	91	3
C28	Canary Island Palm	*Phoenix canariensis*	170	4
C29	Elm	*Ulmus sp.*	119	4
C30	Fan Palm	*Washingtonia filifera*	129	3
C31	**Coast Live Oak**	***Quercus agrifolia***	**104**	**4**
C33	Northern California Black Walnut	*Juglans californica var. hindsii*	176	3
C34	Northern California Black Walnut	*Juglans californica var. hindsii*	42+39+35+35=151	3
C39	Northern California Black Walnut	*Juglans californica var. hindsii*	79	3

Notes:
***Bold** = trees native to the Santa Clara Valley.*
[1] For location of ordinance-size trees, refer to Figure 19.
[2] 0=Dead; 1=Very Low Vigor; 2=Low Vigor; 3=Moderate Vigor; 4=High Vigor; 5=Very High Vigor.
[3] Coast Redwood, Western red cedar, and Northern California black walnut are native to California, however, they are not locally native to the Santa Clara Valley and have been planted on the site.



ORDINANCE-SIZE TREE LOCATIONS

FIGURE 19

Updated Tree Assessment

An additional tree assessment was completed in August 2005 to reassess the six, ordinance-size, native trees on the site (tree numbers 49, 50, 132, 134, B55, and C31 in Table 22). An update of the health of these six trees is provided in Table 22 below. The updated tree assessment identifies tree number 135 is an ordinance-size native tree; it was not previously identified as an ordinance-size native tree in the previous survey.

Table 22
Updated Tree Assessment for Ordinance Size Native Trees

Tree #	Common Name	December 2000/ November 2003 Tree Assessment		August 2005 Tree Assessment	
		Circumference at 2 ft. Above Grade	Health and Vigor	Circumference at 2 ft. Above Grade	Health and Vigor
49	Coast Live Oak	83	5	88	3
50	Coast Live Oak	105	5	107	4
A132	Coast Live Oak	130	5	126	1
A134	Coast Live Oak	90	5	94	3
A135	Coast Live Oak	50	5	60	3
B55	Valley Oak	157	5	157	2
C31	Coast Live Oak	104	4	104	4

Though there are minor discrepancies in the circumference of the ordinance size native trees, they are all still considered to meet the City's definition of ordinance size trees. The health and vigor of all these trees has declined over the years, except for tree C31 whose health has been maintained. According to the update tree assessment completed in 2005, the health and vigor of these trees declined from trees with *high* and *very high vigor* to *low* to *high vigor*.

City of San José Heritage Trees

Under the City of San José Municipal Code, Section 13.28.330 and Section 13.32.090, specific trees are found, because of factors including, but not limited to, their history, girth, height, species or unique quality, to have a special significance to the community and are designated "Heritage Trees." There are no designated heritage trees present on the project site.

Special-Status Plant and Wildlife Species

Federal and state endangered species legislation gives several plant and animal species known to occur in the vicinity of the project site special-status. In addition, state resource agencies and professional organizations, whose lists are recognized by agencies when reviewing environmental documents, have identified some sensitive species occurring in the vicinity of the project site. Such species are referred to collectively as "species of special

status" and include plants and animals listed, proposed for listing, or candidates for listing as "threatened" or "endangered" under the Federal Endangered Species Act (FESA) or the California Endangered Species Act (CESA); animals listed as "fully protected" under the California Fish and Game Code, animals designated as "Species of Special Concern" by the CDFG; and plants listed as rare or endangered in the California Native Plant Society's (CNPS) Inventory of Rare and Endangered Vascular Plants of California (1994).

Special-Status Plant Species

A search of relevant databases was completed to identify special-status plant species which may occur in the project vicinity. A total of 42 special-status plant species were identified in the databases with the potential to occur on the project vicinity. All 42 species were dismissed as potentially occurring on the site due to the absence of suitable habitat conditions or microhabitats (such as serpentine or alkaline substrates), and/or have been regarded as extirpated from Santa Clara County, or extinct.

Reconnaissance level surveys were conducted on May 5, 2000 and October 2003 on the project site by the consulting biologist. The biologists concluded that no species-specific surveys will be necessary to account for potentially occurring plants because no suitable habitat was found for any of the special status species.

Special-Status Animal Species

A search of relevant databases was completed to identify special-status animal species which may occur in the project vicinity. The apparent lack of water on the site, either permanent or seasonal, precludes many special-status species from consideration. Species that are not expected to breed or forage on the site frequently, or for long durations during the breeding season, or which occur only briefly during migration include the sharp-shinned hawk, Cooper's hawk, golden eagle, merlin, American peregrine falcon, prairie falcon, Vaux's swift, California yellow warbler, California horned lark, California mastiff bat, and Townsend's big-eared bat. Willow flycatchers likely occur during migration; however, these are unlikely to be the endangered subspecies.

The only species of special concern that may nest on the site are the white-tailed kite, northern harrier, burrowing owl, loggerhead shrike, and the pallid bat. In addition, there is potential nesting habitat for raptors in all large trees that occur on the site. These special-status animal species are described in more detail below:

Northern Harrier. Northern harriers are found in open grasslands, agricultural fields, and marshes throughout much of North America. There is potential for harriers to both forage and nest in this area, particularly in the open field area.

White-tailed Kite. The white-tailed kite is found in brushy grasslands and agricultural areas with low ground cover, as well as grassy foothills, marsh, riparian, woodland, and savanna. They require tall oaks, willows, or other broad-leaved deciduous trees for nesting. There is potential for kites to forage in the agricultural field and orchard, and nest in the large trees on the site.

Burrowing Owl. Burrowing owls are terrestrial birds typically found in open, dry annual or perennial grasslands, deserts, and scrublands. They prefer habitats with low-growing vegetation, and/or slightly elevated areas of bare ground so as to detect predators. They nest in burrows which are excavated by burrowing mammals, most notably the California ground squirrel. Burrowing owls have been found throughout the area surrounding the project site. No owls were observed on the site; however, several ground squirrels and burrows were located along the road bank for Highway 85, as well as along the dirt road between Manassas Road and the Equinix buildings. Thus, burrowing owls could occupy the site at any time and approximately 35 acres of the project site is considered suitable burrowing owl habitat.[24]

Loggerhead Shrike. Loggerhead shrikes are associated with grasslands and ruderal habitats. Loggerhead shrikes nest in the understory herbaceous vegetation, under dense trees and tall shrubs. There are records of breeding shrikes in areas around the site, and they may breed in the larger trees and shrubs on the study area.

Pallid Bat. Pallid bats generally roost in rocky outcroppings, in buildings, under bridges, and in hollow trees, and range from a few to over a hundred individuals in a roost. Pallid bats forage on terrestrial arthropods, and frequent dry open grasslands near water. This species may forage in open fields and roost in the large oak trees and old buildings on the agricultural lands found on the site.

Nesting Raptors. Raptors (e.g., eagles, hawks, and owls) and their nests are protected under both federal and state laws and regulations. The federal Migratory Bird Treaty Act (16 U.S.C. 703, Supp. I, 1989) prohibits killing, possessing, or trading in migratory birds except in accordance with regulations prescribed by the Secretary of the Interior. This act encompasses whole birds, parts of birds, and bird nests and eggs. Birds of prey are protected in California under Fish and Game Code (CDFG) Section 3503.5. Section 3503.5 states that it is "unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as other wise provided by this code or any regulation adopted pursuant thereto."

Several raptors are known to occur in the project vicinity and may breed on the project site or in the vicinity.

Reconnaissance-level Survey

A reconnaissance-level survey for wildlife species for the southern portion of the project site was completed in October 2003, which would have been after the nesting season for most species. The purpose of the survey was to evaluate the site's potential to support tree-nesting raptors, white-tailed kites, great-horned owls, and burrowing owls. No burrowing owls or tree-nesting raptors were observed on the project site, however, certain areas of the project site are consistent with potential nesting habitat for these species.

An additional reconnaissance survey was completed in June 2005. Several unoccupied nests were observed in the canopies of the fruit trees, which may have been previously occupied by white-tailed kites. One active red-tailed hawk nest was observed in a tall coast redwood tree

[24] Terrill, Scott. "Re: Aerials of iStar." Email to David J. Powers & Associates, Inc. from H.T. Harvey and Associates. 30 November 2005.

located on the southeast corner of the property during the survey. Fledgings were heard calling from the nest and the adult pair was observed hovering and coupling above the nest.

2. Biological Resources Impacts

Thresholds of Significance

For the purpose of this EIR, a biological resources impact is considered significant if the project 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, or regulations;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations;
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- 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;
- Conflict with any local ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

The project site is currently entitled to develop up to approximately 1.5 square feet of industrial office/R&D uses. The project proposes a GPA and PD zoning to allow for the development of industrial and commercial uses on-site. It is assumed in this report that most of the site would be paved by future development under either the existing or proposed land use designation and zoning.

The field surveys did not find any candidate, sensitive or special status species on the proposed site. The project site does not include riparian habitat, or wetlands, nor is the site adjacent to any wetlands, waterway or other sensitive habitat. Therefore, implementation of the proposed project would not have any impact, direct or indirect, on wetlands. The site is not addressed in any adopted conservation plan.

Ordinance Trees

The ordinance-size trees on the site consist of mature orchard trees (cherry and almond), redwoods, and California black walnuts. As mentioned previously, there are seven native, ordinance-size trees on the site. The health of the native trees has declined over the years. The majority of the ordinance-size trees, however, are in excellent health.

Because there is no definitive site plan (other than a "conceptual" site plan) at this time, it is not known and therefore is not possible to specify which trees will be preserved. Therefore,

this EIR assumes that future development on the site could result in the removal of any or all of the 2,330 trees from the property, including up to 55 ordinance-size trees. A tree removal permit will be required from the City for the removal of ordinance-size trees.

Development under the existing entitlements would result in similar impacts to trees as the proposed project.

- **Future development under the proposed land uses on the project site could result in the removal of up to 2,275 non-ordinance-size trees and up to 55 ordinance-size trees. (Significant Impact)**

Special-Status Animal Species

As mentioned previously, the sharp-shinned hawk, Cooper's hawk, golden eagle, merlin, American peregrine falcon, prairie falcon, Vaux's swift, California yellow warbler, California horned lark, California mastiff bat, and Townsend's big-eared bat are not expected to breed or forage on the site frequently or only occur briefly during migration. The proposed project would have no impact on the breeding success of any of these species. Due to the abundance of similar and higher-quality habitats regionally, the foraging habitat for most of these species would not be significantly impacted. Furthermore, due to the low numbers of individuals of these species expected to use the project site, development of the project is not expected to have significant impact on these species that do not breed on the project site.

Northern Harrier

There is potential for northern harriers to forage and nest in the project area, especially the open fields on the project site. The development of the proposed project would impact foraging and nesting habitat for the northern harrier.

Development under the existing entitlements would result in similar impacts to northern harriers as the proposed project.

- **Development of the proposed project could impact nesting Northern Harriers. (Significant Impact)**

White-tailed Kite

There is potential for kites to forage in the open field and orchard on the project site and nest in the large trees on the site. For this reason, development of the proposed project and removal of trees on-site may impact kites.

Development under the existing entitlements would result in similar impacts to White-tailed kites as the proposed project.

- **Development of the proposed project could impact nesting white-tailed kites. (Significant Impact)**

Burrowing Owls

Although burrowing owls were not observed on the site and have not been known to occur on the site, they have been found throughout the project area. Given the flat nature of the site, there is a potential for owls to locate onto the site at any time. Development of the proposed project could result in impacts to individual burrowing owls if owls moved onto the site prior to project construction. If owls are using active nests when construction activity commences, grading of the site could result in destruction of nests and individual owls.

Development under the existing entitlements would result in similar impacts to burrowing owls as the proposed project.

- **Development of the proposed project could impact burrowing owls. (Significant Impact)**

Burrowing owls have been found throughout the area surrounding the project site. No owls were observed on the site; however, several ground squirrels and burrows were located along the road bank for Highway 85, as well as along the dirt road between Manassas Road and the Equinix buildings. Thus, burrowing owls could occupy the site at any time and approximately 35 acres of the project site is considered suitable burrowing owl habitat. Therefore, development of the proposed project would result in a loss of suitable burrowing owl habitat.

Development under the existing entitlements would result in similar impacts to burrowing owls as the proposed project.

- **Development of the proposed project could impact burrowing owl habitat. (Significant Impact)**

Loggerhead Shrike

Loggerhead shrikes nest in the understory herbaceous vegetation, under dense trees and tall shrubs. There are records of breeding shrikes in project vicinity, and they may breed in the larger trees and shrubs on the site. While development in areas where loggerhead shrikes forage is unlikely to have a significant impact on their populations, development in areas with tall trees and shrubs could cause the destruction of nests during the breeding season (February through August).

Development under the existing entitlements would result in similar impacts to burrowing owls as the proposed project.

- **Development of the proposed project could impact nesting loggerhead shrikes. (Significant Impact)**

Pallid Bat

Pallid bats may forage on the project site and roost in the large oak trees and old buildings on the project site. While foraging habitat is available elsewhere, any demolition of potential roosts, such as large trees or old buildings, would constitute a significant impact.

Development under the existing entitlements would result in similar impacts to pallid bat roosts as the proposed project.

- **Development of the proposed project could impact pallid bat roosts. (Significant Impact)**

Nesting Raptors

Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered a "taking" by the CDFG. Any loss of fertile raptor eggs or nesting raptors, or any activities resulting in raptor nest abandonment, would constitute a significant impact. Construction activities such as tree removal and site grading that disturb a nesting raptor on-site or immediately adjacent to the construction zone would constitute a significant impact.

Several raptors are known to occur in the project vicinity and may breed either on the site or close enough that nest may be potentially disturbed or destroyed by project-related construction disturbance.

- **Development of the proposed project could impact nesting raptors on the site or in the immediate site vicinity. (Significant Impact)**

3. Mitigation and Avoidance Measures

General Plan Policies

Ordinance Trees

- *Urban Forest Policy 2* states development projects should include the preservation of ordinance-sized, and other significant trees. Any adverse affect on the health and longevity of native oaks, ordinance-sized or other significant trees should be avoided through appropriate design measures and construction practices. When tree preservation is not feasible, the project should include appropriate tree replacement. In support of these policies the City should:

  Continue to implement the Heritage Tree program and the Tree Removal Ordinance. Consider the adoption of Tree Protection Standards and Tree Removal Mitigation Guidelines.

- *Urban Forest Policy 3* states the City should encourage the maintenance of mature trees on public and private property as an integral part of the urban forest. Prior to allowing the removal of any mature tree, all responsible measures which can effectively preserve the tree should be pursued.

- *Urban Forest Policy 5* states that the City should encourage the selection of trees appropriate for a particular urban site. Tree placement should consider energy saving values, nearby power lines, and root characteristics.

- *Urban Forest Policy 6* states that trees used for new plantings in urban areas should be selected primarily from species with low water requirements.

- *Urban Forest Policy 7* states that, where appropriate, trees that benefit urban wildlife species by providing food or cover should be incorporated in urban plantings.

- *Urban Forest Policy 8* states that where urban development occurs adjacent to natural plant communities (e.g., oak woodland, riparian forest), landscape planting should incorporate tree species native to the area to the greatest extent feasible.

Specific Development Mitigation Measures Proposed By the Project

The project proposes the following mitigation measures to reduce impacts to biological resources to a less than significant level:

Tree Preservation and Removal

As described above in the *Impacts* section, a detailed site development plan, which that would identify the exact locations of the new buildings, streets and other site changes, has not yet been developed. Therefore, in order to be conservative, this EIR assumes that up to 55 ordinance size trees and up to 2,275 non-ordinance size trees could be removed as part of the project. Tree replacement will be required for the removal of an existing tree. Development on the project site will be subject to mitigation measures and existing General Plan policies and project-specific mitigation measures, including the following:

- Prior to approval of a Planned Development (PD) Permit for any phase of development on the project site, a comprehensive tree survey, which identifies the number of orchard and non-orchard trees on the site, prepared by a certified arborist or licensed landscape architect for the parcel(s) being developed shall be required. The site design and PD Permit approval shall incorporate preservation of existing trees to the maximum extent practicable, to the satisfaction of the Director of Planning, Building, and Code Enforcement (PBCE). In locations where preservation of existing trees is not feasible due to site constraints, relocation and replanting of significant existing trees (especially native species) shall be incorporated into the project, where feasible and appropriate, to the satisfaction of the Director of PBCE.

  Trees to be removed as part of the project shall be replaced at the following ratios:

  - Ordinance-size trees to be removed shall be replaced at a minimum ratio of 4:1 (4 replaced for each 1 removed) with trees in 24-inch box size, or larger, containers.
  - Ordinance-size trees of native species to be removed shall be replaced on the site, at a ratio of 6:1 (six replaced for each one removed) with trees in 24-inch box size, or larger, containers.
  - Trees between 12-18 inches in diameter to be removed as part of the project shall be replaced at a ratio of 2:1 with trees in 24-inch box size, or larger, containers.
  - Trees less than 12 inches in diameter to be removed as part of the project would be replaced at a ratio of 1:1 with trees in 15-gallon containers.

  No mitigation is required for the removal of non-ordinance-size orchard trees, which are considered an agricultural resource not subject to City regulation and not a biologic resource.

- The species and exact number of trees to be planted on the site shall be determined in consultation with the City Arborist and to the satisfaction of the Director of the Department of Planning, Building and Code Enforcement. In the event the developed portion of the project site does not have sufficient area to accommodate the required tree mitigation, one or both of the following measures will be implemented at the PD Permit stage:

  - An alternative site(s) will be identified for additional tree planting. Alternative sites may include local parks or schools, or installation of trees on adjacent properties for screening purposes, to the satisfaction of the Director of PBCE.
  - A donation equal to the replacement/installation cost per replacement tree will be made to *Our City Forest* or a similar organization for in-lieu off-site tree planting in the community. These funds will be used for tree planting and maintenance of planted trees for approximately three years. The replacement plan and the per-tree donation amount shall be determined in coordination with the selected organization, to the satisfaction of the Director of Planning, Building, and Code Enforcement. A donation receipt for off-site tree planting will be provided to the Director of Planning, Building, and Code Enforcement prior to removal of the trees.

- The following tree protection measures shall also be included in the project in order to protect trees to be retained during construction:

Pre-construction Treatments

  - The applicant shall retain a consultant arborist. The construction superintendent shall meet with the consulting arborist before beginning work to discuss work procedures and tree protection.
  - Fence all trees to be retained to completely enclose the tree protection zone prior to demolition, grubbing, or grading. Fences shall be as approved by the consulting arborist and are to remain until all grading and construction is completed.
  - Prune trees to be preserved to clean the crown and to provide clearance. All pruning shall be completed or supervised by a Certified Arborist and adhere to the Best Management Practices for Pruning of the International Society of Arboriculture.

Recommendations for Tree Protection During Construction

  - No grading, construction, demolition or other work shall occur within the tree protection zone. Any modifications must be approved and monitored by the consulting arborist.
  - Any root pruning required for construction purposes shall receive the prior approval of, and be supervised by, the consulting arborist.
  - Supplemental irrigation shall be applied as determined by the consulting arborist.
  - If injury should occur to any tree during construction, it shall be evaluated as soon as possible by the consulting arborist so that appropriate treatments can be applied.
  - No excess soil, chemicals, debris, equipment, or other materials shall be dumped or stored within the tree protection zone.

- Any additional tree pruning needed for clearance during construction must be performed or supervised by an arborist.
- As trees withdraw water from the soil, expansive soils may shrink within the root area. Therefore, foundations, footings and pavements on expansive soils near the trees shall be designed to withstand differential displacement.

A final report on tree protection measures, and the health of the protected trees, shall be submitted to the City's Environmental Principal Planner, and be prepared to the satisfaction of the Director of PBCE, after grading and construction activities have been completed.

Special-Status Animal Species

Nesting Birds/Raptors

Implementation of one of the following two measures shall be required and would reduce impacts to nesting raptors:

- *Avoidance.* Construction shall be scheduled to avoid the nesting season to the extent feasible. In the South San Francisco Bay area, most raptors breed from January through August. If construction can be scheduled to occur between September and December, the nesting season would be avoided, and no impacts to nesting birds/raptors would be expected.

-OR-

- *Preconstruction/Pre-disturbance Surveys.* If it is not feasible to schedule construction between September and December, preconstruction surveys for nesting raptors shall be conducted by a qualified ornithologist to ensure that no active nests will be disturbed or destroyed during project implementation. Preconstruction surveys for nesting birds/raptors should be conducted no more than 14 days prior to the initiation of construction activities during the early part of the breeding season (January through April) and no more than 30 days prior to the initiation of these activities during the late part of the breeding season (May through August).

  During this survey, the ornithologist would inspect the ground in open fields, as well as all trees in and immediately adjacent to the impact areas for nesting birds and raptor. If an active nest is found close enough to the construction area to be disturbed by these activities, the ornithologist, in consultation with CDFG, would determine the extent of a construction-free buffer zone (typically 250 feet) to be established around the nest.

- *Inhibit Nesting.* If vegetation is to be removed by the project and all necessary approvals have been obtained, potential nesting substrate (e.g., bushes, trees, grass, burrows) that will be removed by the project shall be removed before the start of the nesting season (January), if feasible, to help preclude nesting. Removal of vegetation or structures to be removed by the project shall be completed outside of the nesting season, which extends from January through August.

- A final report on nesting birds and raptors, including any protection measures, shall be submitted to the Environmental Principal Planner, and be completed to the satisfaction of the Director of PBCE prior to start of grading.

Burrowing Owl

Implementation of the following measures shall be required and would reduce impacts to individual burrowing owls:

- Preconstruction surveys shall be conducted, per California Department of Fish and Game (CDFG) guidelines, no more than 30 days prior to the start of site grading. If no burrowing owls are found, then no further mitigation is warranted. If owls are located on or immediately adjacent to the site, a qualified burrowing owl biologist in consultation with CDFG would establish a construction-free buffer zone around the active burrow. No activities, including grading or other construction work, shall proceed until the buffer zone is established, or a CDFG approved relocation of the birds has been performed [such relocations can occur only during the non-reproductive season (September through January)]. Regardless of the time of year when burrowing owls are observed on the site, implementation of one of the following two mitigation measures is required, to the satisfaction of the Director of Planning, Building, and Code Enforcement:

  - If preconstruction surveys confirm that burrowing owls occupy the site, then avoidance of impacts to the habitat utilized by these owls would be considered the preferred mitigation method. In order to effectively avoid habitat utilized by burrowing owls, a buffer distance of 75 meters shall be required during the nesting season (February 1 though August 31). During the non-nesting season, this distance could be reduced to 50 meters. Avoidance would allow the use of areas currently occupied by burrowing owls to continue uninterrupted.

  - If preconstruction surveys determine that burrowing owls occupy the site, and the Director of PBCE finds that avoiding development of occupied areas is not feasible, then the owls may be evicted outside of the breeding season, with the authorization of the California Department of Fish and Game (CDFG). The CDFG typically only allows eviction of Owls outside of the breeding season [only during the non-breeding season (September 1-January 31)] by a qualified ornithologist, and generally requires habitat compensation on off-site mitigation lands.

    CDFG guidelines recommend that off-site mitigation lands shall be set-aside at a ratio of 6.5 acres/pair or individual owl (if only an individual is observed). A single, large contiguous mitigation site is preferable to several smaller, separated sites. The mitigation site would preferably support owl nesting and be contiguous with or at least proximal to other lands supporting burrowing owls. Sites in the same region with a long history of burrowing owl use, or that have at least been in a suitable condition for occupancy are preferred. Grazing is compatible with burrowing owl occupancy.

- A final report of Burrowing Owls, including any protection measures, shall be submitted to the Environmental Principal Planner, and completed to the satisfaction of the Director of Planning, Building and Code Enforcement prior to start of grading.

Pallid Bat

Implementation of the following mitigation measures would reduce impacts to Pallid Bats to a less than significant level:

- Construction activities involving potential roost sites shall be conducted after the maternity roost season. The maternity roost season begins as early as March 1 and the young are volant (fly off on their own) by July 31.

- Pre-demolition and pre-construction surveys for roosting bats shall be conducted by a qualified bat biologist after the maternity season and before the wet season (i.e., between August 15 and October 15) and 14 days prior to any removal of buildings or removal of trees greater than 12 inches in diameter. No activities that would result in disturbance to active roosts shall proceed prior to the completed surveys. If no active roosts are found, then no further action shall be warranted. If a maternity roost is present, a qualified bat biologist shall determine the extent of construction-free zones around active nurseries located during surveys. CDFG shall also be notified of any active nurseries within the construction zone.

  Initial surveys can be conducted any time prior to the pre-demolition surveys to establish if a particular location has supported, or supports, roosting bats. A survey for indications of nursery roosts would be conducted prior to March 1. If indications of a maternity roost are present, the structure can not be removed or modified before a maternity roost becomes reestablished.

- If indications of a maternity roost are present, bats can be excluded from the building or tree after July 31 and before March 1 to prevent the formation of maternity colonies. Such non-breeding bats can be safely evicted, under the direction of a qualified bat biologist, by sealing crevices and providing them one-way exclusion doors. Such a device would be employed in all expansion joints during dark hours as a temporary device to prevent the formation of a maternity colony. In order not to exclude all potential maternity roost habitat at once, only one half of the expansion joints would be sealed at any one given time during the maternity colony-nesting season. This action would allow bats to leave during dark hours, thus increasing their chance of finding new roosts with a minimum of potential predation during daylight.

- A final report of pallid bats, including any protection measures, shall be submitted to the Director of Planning, Building and Code Enforcement prior to start of grading.

4. Conclusion

With the incorporation of the tree replacement mitigation measures described above, the proposed project would not result in a significant impact to trees. **(Less Than Significant Impact with Mitigation Incorporated)**

The proposed project, with incorporation of the mitigation measures described above, would not result in significant impacts to special-status species. **(Less Than Significant Impact with Mitigation Incorporated)**

As mentioned previously, the project site contains potential burrowing owl habitat. The development of the proposed project would result in the loss of that potential habitat. **(Significant Unavoidable Impact)**

G. CULTURAL RESOURCES

The following discussion is based upon a cultural resources evaluation completed by *Archaeological Resource Management* in May 2002 (File No. AC130-29). The cultural evaluation included an archival study of the cultural resources within the project area and in the vicinity, a survey of the property, and a written report of the findings with appropriate recommendations. Since the report discusses the location of specific archaeological sites, it is considered administratively confidential and is not included in this EIR.

In addition, a historical evaluation report was completed in January 2002 for the existing fruit dehydrator located on the site. The complete historical report is included as Appendix H of this EIR.

1. Setting

Prehistoric Resources

The site is located in an area of San José that is known for having numerous buried archaeological deposits. The region along Coyote Creek has revealed prehistoric material found buried beneath alluvial soils, and the proposed site is located approximately 3,000 feet north of Coyote Creek.

There are no recorded archeological sites or reported cultural resources located within or adjacent to the project area. However, there is one formally recorded archaeological site, CA-SCL-240, located within approximately 0.5 miles southwest of the project site.

Historic Background and Resources

Historical Assessment of the Project Site

The project site was owned by Horace Little in 1876. Little, whose occupation is listed as farmer, came to California from the state of New York in 1853. Mr. Ole Christopher purchased a small portion of the lands within the project area from heirs to the Horace Little estate, in January of 1896. Over the next 35 years, Mr. Christopher purchased additional lands in the area, eventually acquiring over 400 acres of land.

Ole Christopher was born in 1860 on Sjaelland Island, Denmark. Ole grew up in Denmark, worked as a farm laborer during his teenage years, and in 1881, immigrated to the United States. Over the next few years, Ole worked on farms and ranches in Illinois, Iowa, and Minnesota. By 1887, Christopher had arrived in Santa Clara County. Here, Christopher formed a partnership with Mr. John Brown, cutting and selling wood around the Almaden Valley. They later purchased a Petaluma Hay Press, and went into business bailing hay.

In 1891, Christopher married Mary Jessie Hansen. The Christophers leased property in Evergreen, which was used to raise barley and oats. As Christopher began to make money, he purchased 15 acres of land along Little Avenue in 1896. Christopher continued to work the land both in Evergreen and at Little Avenue for several years. In the late 1890's, Christopher constructed a small house on the Little Avenue property and moved his family and several of the workers he employed there.

When the 1906 earthquake caused massive fires in San Francisco, most of the hay in that city burned. Christopher's land in Evergreen has relatively large quantities of hay, and he transported it by train to San Francisco, making a substantial amount of money in the process. Afterwards, he had enough money to purchase additional land, and he bought several other properties on either side of Little Avenue over the next few years. It is these lands that currently contain the project site.

Christopher began planting orchard trees, primarily prunes, drying the fruit on-site and selling them to canning companies. Sun drying was a popular and relatively simple way of producing dried fruit. Small evaporators used for drying apples were on of the earliest devices employed to accelerate the fruit preservation process in California. Portable evaporators became popular among prune producers in Santa Clara Valley in the 1880s, and seem to represent an intermediate stage of dried fruit technology. Capitalizing on the technology of the day, in 1927 Christopher had constructed on his property, the third progressive dehydrator building in the Santa Clara Valley. This type of dehydrator was known as progressive due to a new innovation in its design: the air was blown horizontally across the drying fruit, which made the process faster and more efficient. No information could be found indicating where the two earlier progressive dehydrators in the Santa Clara Valley were originally located.

The Christophers had seven children. Members of the Christopher family held positions in numerous agricultural and social organizations including the Grange, the Danneskjold Danish Society, the Odd Fellows, the Masons, Rotary International, and the Farm Bureau. Ole Christopher was a trustee for Oak Grove Grammar School, and Mary was a founding member and the first president of the Oak Grove Parent-Teacher's Association. One of their children, Albert, was instrumental in the creation of the Santa Clara County Fair in 1941, and continued to hold a position on its board for the next 30 years.

At least two of their grandchildren, Arthur and Don, continued to work in the agricultural industry. Arthur and Don Christopher are the owners of the A & D Christopher Ranch in Gilroy, one of the United States' largest producers and packers of garlic and garlic products.

Historic Resources

The Christopher family built at least four homes on Little Avenue. Ole Christopher's first home on the property was built circa the late 1890s, he built a second larger house on the property in 1911, and subsequent houses were constructed for other family members in the 1930s and 1940s. These homes have since been demolished, although the old dehydrator facility still stands.

In 1966 the orchards were entrusted to Ray and Leland Lester, who continued to cultivate and maintain them. The Lester brothers have worked the lands in this area of San José since 1966. In 1974 the portion of the Christopher property, within the project site, was purchased by International Business Machines (IBM). Members of the Christopher family, as well as other residents, retained the right to live on the property as long as they lived. In 2000, the project site was purchased from IBM by iStar Financial (iStar). Irrigation of the orchard trees was halted by IBM prior to sale to iStar. No fruit is currently being harvested.

Over the decades since the Christopher family started their ranch on Little Avenue, many changes have taken place in the orchard industry in Santa Clara County. In the early days,

every portion of the planting, harvesting, and drying was done by hand an on horseback. The completion of the progressive dehydrator in 1928 made drying fruit faster. The use of tractors and other motorized farming equipment gradually replaced the use of horses. In the 1960's, a tree shaking device was purchased which automated the process of picking the fruit from the trees themselves. However, an overall change in the technological focus of the Bay Area has caused an even more drastic change to the orchard industry. As computers and high technology became the most significant part of the local economy, agriculture moved into the background. Most of the farms, orchards, and canneries, which used to be prominent in the Santa Clara Valley, have closed or been redeveloped. The dehydrator building, thus, illustrates an important phase in the economic development of the Santa Clara Valley, and an industry which has been almost completely replaced by newer forms of development.

A historical evaluation was completed in January 2002 for the structures located on the project site, formerly the Christopher Ranch. The existing structures on site include a fruit dehydrator (1928), warehouse with a cement floor (circa 1944), one warehouse with a wooden floor (circa 1920s-30s), an early twentieth-century cottage, a shed outbuilding, and rails for loading/processing fruit (refer to Figure 6). The fruit dehydrator and other structures were built by Mr. Ole Christopher. The dehydrator was the third progressive dehydrator installed in the Santa Clara Valley and the last one to remain. None of the structures on the site are currently listed on the California Register of Historic Resources, the National Register of Historic Places (NRHP), or the City of San José Historic Resources Inventory.

Historic Evaluation

The existing buildings, storage buildings, a small residential structure, a small workshop, and the fruit dehydrator, were evaluated according to the standards of the City of San José Historic Resources Inventory, the California Register of Historic Resources Criteria, and the National Register Criteria, which are described in more detail below:

City of San José Historic Resources Inventory

The City of San José's Historic Preservation Ordinance defines structures of historic value based on any of the following factors:

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;

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 surroundings in which past generations lived or worked; or

f. 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.

The dehydrator building is not currently listed in the City of San José's Historic Resource Inventory. The dehydrator building received a point score of 79.28 on the City of San José's Historic Resource Evaluation (refer to Appendix G for the tally sheets). This score identifies the dehydrator as a Candidate City Landmark (see to Table 23).

Table 23
City of San José Historic Resource Inventory Hierarchy of Significance

Evaluation Tally Sheet Total	Category of Significance
67-134	Candidate City Landmark
33-66	Structure of Merit
33-66	Contributing Structure
0-32	Non-Contributing Structure
0-32	Non-Significant Structure

California Register of Historic Resources Criteria

Properties that are eligible for listing in the CRHR must meet one of the following criteria:

1. Association with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States;

2. Association with the lives of persons important to local, California, or national history;

3. Embodying the distinctive characteristics of a type, period, region, or method of construction, or representing the work of a master, or possessing high artistic values; or

4. Has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

A property may be automatically listed in the CRHR if it is formally determined eligible for the National Register of Historic Places (NRHP). Properties that are formally determined eligible for the NRHP are those that are designated as such through one of the federal preservation programs administered by the California Office of Historic Preservation (i.e., the National Register, Tax Certification, and Section 106 of the Historic Preservation Act review of federal undertakings).

Due to its connections with the fruit industry and developments in the technology of the fruit industry, its status as, apparently, the last remaining progressive dehydrator in Santa Clara County, and its association with a family of local importance (refer to Appendix H), the fruit dehydrator on the project site may be considered a significant cultural resource and may be eligible for inclusion in the CRHR under criteria 1, 2, and 4 above.

National Register Criteria

The National Register of Historic Places was established to recognize resources associated with the accomplishments of all peoples who have contributed to the country's history and heritage. Guidelines were designed for federal and state agencies in nominating cultural

resources to the National Register. These guidelines are based upon integrity and significance of the resource. Integrity applies to specific items such as location, design, setting, materials, workmanship, feeling, and association. Quality of significance in American history, architecture, archaeology, engineering, and culture is present in resources association, and meet at least one of the following criteria:

1. That are associated with events that have made a significant contribution to broad patterns of our history;

2. That are associated with the lives of persons significant in our past;

3. That embody distinctive characteristics of type, period, or method of construction, or that represent the work of master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction;

4. That have yielded, or likely to yield, information important in prehistory or history.

The progressive dehydrator is not currently listed in the National Register of Historic Places. However, due to the status of the dehydrator as apparently the sole remaining example of its type in Santa Clara County, as well as its association with the Christophers, a family of local historic importance, the structure appears to qualify as potentially eligible for inclusion in the National Register of Historic Places.

2. Cultural Resources Impacts

Thresholds of Significance

For the purpose of this EIR, a cultural resources impact is considered significant if the project would:

- Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5. A resource as defined in Section 15064.5 is:
- A resource listed in, or determined to be eligible by the State Historical Resources Commission for listing in CRHR;
- A resource included in a local register of historical resources or identified as significant by the California Office of Historic Preservation in a historical resource survey meeting the requirements of Section 5024.1 (g) of the Public Resources Code (PRC), unless the preponderance of evidence demonstrates that it is not historically or culturally significant;
- A resource identified as significant in a historical resource survey, unless the preponderance of evidence demonstrates that it is not historically or culturally significant;
- 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, provided the determination is supported by substantial evidence in light of the whole record (generally, a resource shall be considered to be historically significant if the resource meets the criteria for listing on the CRHR); and/or

- A resource that is determined by a lead agency to be historically or culturally significant even though it does not meet the other four criteria listed above.
  - cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5;
  - 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.

Prehistoric Resources

The project site is located in an archaeologically sensitive area. There is one recorded archaeological site (CA-SCL-240) approximately one half (0.5) mile south of the site, however, no recorded archaeological sites were identified within the project site. Given the sensitivity of the area, there is a potential for archaeological resources to be discovered during construction activities. Should any archaeological resource be found during grading operations, their disturbance would be a significant impact.

Development under the existing entitlements would have similar impacts to prehistoric resources as the proposed project.

- **The project site is located within an archaeologically sensitive area and there is a potential to uncover previously unrecorded prehistoric or historic cultural resources during ground disturbing construction activities. (Significant Impact)**

Historic Resources

The existing buildings, storage buildings, a small residential structure, a small workshop, and the fruit dehydrator, were evaluated. None of the existing structures on the site are currently listed on the City of San José's Historic Resource Inventory, the California Register of Historic Resources (CRHR), or the National Register of Historic Places (NRHP). The dehydrator building received a point score of 79.28 on the City's Historic Resource Evaluation. This score identifies the building as a candidate City Landmark. Due to the antiquity and the significance of the dehydrator building, it is also potentially[25] eligible for inclusion in the CRHR and the NRHP.

The fruit dehydrator building is eligible as a candidate City Landmark and is potentially eligible for inclusion in the CRHR and the NRHP. The proposed project includes:

- Retention of the fruit dehydrator structure in its present location, and its integration into the design of any future development on the project site, to the satisfaction of the Director of Planning, Building, and Code Enforcement.

- If retention of the dehydrator structure in its present location is not feasible, the fruit dehydrator shall be relocated to an appropriate and publicly accessible location on the property. The relocation must be faithful to all components of the structure,

[25] The word "potential" is used in this EIR to describe the existing fruit dehydrator building because the State Historical Resources Commission has not either: 1) listed this resource on the California Register of Historical Resources; nor 2) officially designated this resource as "eligible" for listing in the California Register of Historical Resources (refer to discussion above under *Historic Evaluation*).

including the sub-surface furnace assembly in conformance with Secretary of Interior Standards and to the satisfaction of the director of Planning, Building, and Code Enforcement, in consultation with an architectural historian.

- *Submission of Photo-Documentation:* Submission of three (3) copies of photo-documentation (including the original prints and negatives) of the balance of the fruit dehydrator and associated buildings of the Christopher Ranch, whether Historic American Building Survey (HABS) level or standard 35mm black and white photographic recordation, to the Historic Preservation Officer for approval and distribution to History San José [Attention: Jim Reed, History San José, 1650 Senter Road, San José, CA 95112-2599, (408) 287-2290], the California Room at the Martin Luther King Junior Library [Attention: Bob Johnson, Dr. MLK Jr. Library, California Room, 150 E, San Fernando Street, San José, CA 95112, (408) 808-2136], and the Northwest Information Center at Sonoma State University.

  Digital photos may be provided as a supplement to the above photo-documentation, but not in place of it. Digital photography shall be recorded on a CD and shall be submitted with the above documentation. The above shall be accompanied by a transmittal stating that the documentation is submitted in fulfillment of mitigation for the loss of the historic resource which shall be named and the address stated.

  The documentation shall be conducted by a qualified consultant meeting the professional qualification standards of the Secretary of Interior's Standards and Guidelines for Archaeology and Historic Preservation.

- *Relocation:* Prior to issuance of Public Works clearance, the associated structures shall be advertised for relocation. A dollar amount equal to the estimate cost of demolition as certified by a licensed contractor shall be offered to the recipient of the building. The project applicant shall provide evidence to the Historic Preservation Officer that an advertisement has been placed in a newspaper of general circulation, posted on a website, and posted at the site for a period of no less than 30 days.

- *Salvage:* Prior to issuance of Public Works Clearance, the associated (non-dehydrator) structures shall be retained and made available for salvage. The project shall coordinate a salvage tour with History San José, Preservation Action Council of San José, Victorian Preservation, and the Historic Landmarks Commission by placing the salvage tour on a Historic Landmarks Commission agenda. Representatives shall tour the site in order to identify elements that warrant salvage for public information or for reuse in other locations. It will be the applicant's responsibility to provide access to the site, including lighting, prior to the removal of any elements from the site, and to facilitate removal and transfer for the identified elements to the above entities. Any elements not identified through this effort for salvage shall be made available to salvage companies facilitating the reuse of historic building materials.

- *Interpretive Display:* With the assistance of a qualified consultant, an interpretive display of historic photography, objects, and materials shall be developed, incorporated into the project site, and made available to the public for viewing.

The interpretive display shall be conducted by a qualified consultant meeting the professional qualification standards of the Secretary of Interior's Standards and Guidelines for Archaeology and Historic Preservation.

As outlined above, the proposed project includes the preservation of the fruit dehydrator building; therefore, the proposed project would not result in significant impacts to historic structures.

The existing entitlements did not specify the retention of the fruit dehydrator building. Therefore, development under the existing entitlements may result in destruction and removal of the fruit dehydrator building, which would constitute a significant impact. In comparison, development under the existing entitlements may result in significant impacts to historic structures, whereas development under the proposed project would not.

- **The fruit dehydrator building is eligible as a candidate City Landmark and is potentially eligible for inclusion in the CRHR and the NRHP. The project proposes to preserve the fruit dehydrator building, therefore, the proposed project would not result in significant impacts to historic structures. (Less Than Significant Impact)**

3. **Mitigation and Avoidance Measures**

General Plan Policies

- *Historic, Archaeological and Cultural Resources Policy 1* states that because historically or archaeologically significant sites, structures and districts are irreplaceable resources, their preservation should be a key consideration in the development review process.

- *Historic, Archaeological and Cultural Resources Policy 8* states that 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* states that 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.

Specific Development Mitigation Measures Proposed By the Project

The project proposes the following mitigation measures to reduce impacts to prehistoric resources to a less than significant level:

- A qualified archaeologist will be present on site to monitor subsurface construction excavation activities into native soils during future development on the site.

- Construction personnel involved in the site clearing and subsequent grading and trenching shall be warned that there is a potential for the discovery of archaeological materials. Indicators of archaeological site deposits include, but are not limited to, the following: darker than surrounding soils, evidence of fire (ash, fire altered rock and earth, carbon flecks), concentrations of stone, bone and shellfish, artifacts of these materials and burials, either animal or human.

- In the event any unanticipated prehistoric or significant historic era cultural materials are exposed during construction, all grading and/or excavation operations within 50 feet of the find shall be halted, the Director of Planning, Building and Code Enforcement shall be notified, and a qualified professional archaeologist shall examine the find and make appropriate recommendations regarding the significance of the find and the appropriate mitigation. The recommendation shall be implemented and could include collection, recordation, and analysis of any significant cultural materials.

- In the event that human remains and/or cultural materials are found, all project-related construction shall cease within a 50-foot radius of the find in order to proceed with the testing and mitigation measures required. Pursuant to Section 7050.5 of the Health and Safety Code and Section 5097.94 of the Public Resources Code of the State of California:

    a. In the event of the discovery of human remains during construction, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains. The Santa Clara County Coroner shall be notified and shall make a determination as to whether the remains are Native American. If the Coroner determines that the remains are not subject to his authority, he shall notify the Native American Heritage Commission who shall attempt to identify descendants of the deceased Native American. If no satisfactory agreement can be reached as to the disposition of the remains pursuant to this State law, then the land owner shall re-inter the human remains and items associated with Native American burials on the property in a location not subject to further subsurface disturbance.

    b. A final report shall be submitted to the Director of Planning, Building and Code Enforcement. This report shall contain a description of the mitigation program that was implemented and its results, including a description of the monitoring and testing program, a list of the resources found, a summary of the resources analysis methodology and conclusion, and a description of the disposition/curation of the resources. The report shall verify completion of the mitigation program to the satisfaction of the Director of Planning, Building and Code Enforcement.

4. Conclusion

Implementation of the above mitigation measures would reduce impacts to archaeological resources to a less than significant level. **(Less Than Significant Impact with Mitigation Incorporated)**

The proposed project includes the preservation of the fruit dehydrator and measures to avoid impacts to the other associated buildings located on-site. Therefore, the project would not result in significant impacts to historical resources. **(Less Than Significant Impact)**

H. GEOLOGY AND SOILS

The following discussion of the geologic features, soils, and seismic conditions of the project site is based on the Cooper-Clark *Geotechnical Investigation for the City of San José Sphere of Influence* (1974), the USGS *Generalized Geologic Map* (1975), the County of Santa Clara, Department of Public Works soil map sheet 09N/05E (1964), and an environmental and geotechnical report prepared by *Geomatrix* in 2000.

The environmental and geotechnical report analyzes how the environmental and geologic conditions of the site could potentially affect future development and occupancy of the site. This report is included in Appendix I of this EIR.

1. Setting

Geological Features

The City of San José is located in the eastern portion of Santa Clara Valley. Santa Clara Valley is surrounded by the Santa Cruz Mountains to the west and the Diablo Mountain Range to the east. The slopes of the Santa Cruz Mountains range from 40 to 60 percent with complex ridges that reach an elevation of 2,000 to 3,400 feet. The slopes of the Diablo Mountains consist of parallel ridges that range from 20 to 60 percent in the higher elevations and have a slope range of 20 to 40 percent near the valley floor. The elevation varies from 1,000 to 2,000 feet, in the lower foothills, to 4,300 feet at the highest peak. The geology consists of Franciscan-Knoxville, marine sedimentary rocks, and Pliocene strata. The valley floor consists mostly of Quaternary clay, sand, and gravel with isolated areas of Tertiary volcanic rock.

The project site is located on the Valley floor which was formed in the Holocene period approximately 11,000 years ago by the sediment runoff of the many rivers and streams that entered the Valley from both mountain ranges, creating alluvial fans and flood plains. The Valley floor is mostly flat and the elevation ranges from 150 to 400 feet above sea level. The site elevation is approximately 195 feet above mean sea level. The alluvial fans are diversely defined as moderately to poorly sorted silt and clay rich in organic material containing fresh-water and aboriginal artifacts; a potential resource that provides deposits good for agriculture; and a potential hazard for shrink-swell problems and periodic flooding.

Drainage from the valley floor runs mostly north into the San Francisco Bay. The drainage is well developed, yet there are areas where poorly drained soils occur.

On-Site Geologic Conditions

The project site is located approximately 1.4 miles north of the Santa Teresa Hills. The site is approximately 0.6 miles west of Coyote Creek and approximately 0.9 miles northeast of Canoas Creek, both of which flow northward towards San Francisco Bay.

Soils

The site area includes two types of Holocene fluvial deposits: basin deposits and levee deposits. The Basin Deposits are comprised of dark-colored clay and fine silty clay, rich in organic material. Levee Deposits are comprised of sandy and clayey silt ranging from sandy to silty clay. The surface soils on the site consist of Campbell silty clay, which is underlain by Quaternary alluvium. The alluvium in this area consist of unconsolidated to weakly consolidated silt, sand, and gravel, and could be up to 50 meters in thickness.

The soils at the site could exhibit a moderate potential for expansion. Expansive soils shrink and swell as a result of moisture changes. These changes can cause heaving and cracking of slabs-on-grade, pavements, and structures founded on shallow foundations. Because the site topography is flat, there is no erosion or landslide hazard.

Ground water on the property has been recorded at depths between 25 and 30 feet below ground surface. Fluctuations in ground water levels may occur seasonally and over a period of years because of variation in precipitation, temperature, irrigation and other factors. Future landscaping irrigation may cause an overall rise in ground water levels.

Seismicity

San José is within Santa Clara County, which is part of the seismically active San Francisco Bay Area. It is classified as Zone 4, the most seismically active zone in the United States. Three major fault lines in the area are: the Hayward Fault, the San Andreas Fault, and the Calaveras Fault. The Hayward Fault (active segment) is approximately 18.1 miles north of the site, the San Andreas Fault, approximately 11.3 miles southwest of the site, and the Calaveras Fault, approximately 6.3 miles east of the site. Because of the proximity of the site to these faults, any ground shaking, ground failure, or liquefaction due to an earthquake could cause damage to structures.

Liquefaction

Liquefaction is the result of seismic activity and is characterized as the transformation of loosely water-saturated soils from a solid state to a liquid state after ground shaking. There are many variables that contribute to liquefaction including the age of the soil, soil type, soil cohesion, soil density, and ground water level. The sediments left by the Diablo Mountain Range and the Santa Cruz Mountains formed broad alluvial fans during the past 10,000 years resulting in a relatively young valley, which makes it more susceptible to liquefaction.

The project site is located on the boundary of areas subject to possible liquefaction. No significant liquefaction phenomena, however, were observed/recorded in the site vicinity during the 1989 Loma Prieta earthquake. Because the soils on the site are mostly medium-dense to dense and the site water table is relatively deep (34 feet), the potential for liquefaction at the site is low to moderate.

The project site has a high potential for ground failure vertically and a moderately high potential for ground failure laterally.

2. Geology and Soils Impacts

Thresholds of Significance

For the purpose of this EIR, a geologic or seismic impact is considered significant if the project would:

- Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:
  - rupture of a known 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, and/or
  - landslides.
- Result in substantial soil erosion or the 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 on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse;
- Be located on expansive soil, as defined in Table 19-1-B of the Uniform Building Code (1994), creating substantial risks to life or property; or
- Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water.

Impacts of General Plan Amendment and Specific Development Project

Soils

Due to the flat topography of the site, future development on the project site is not expected to be exposed to slope instability, erosion, or landslide-related hazards. The project site, however, includes moderately expansive soils, which may expand and contract as a result of seasonal or man-made soil moisture conditions. Expansive soil conditions could potentially damage the future buildings and improvements on the site which would represent a significant impact unless substantial damage is avoided by incorporating appropriate engineering into grading and foundations design.

Grading and project construction would result in exposed earth on large portions of the site. Because of the flat nature of the site, however, project construction is not anticipated to result in significant erosion and/or siltation on the site. Refer to Section *II.I. Hydrology and Water Quality* for a discussion of the project's impacts on runoff and water quality, as well as the measures included in the project to mitigate drainage and water quality impacts.

Standard Requirements

The project would be required to be constructed in accordance with the standard engineering practices in the Uniform Building Code. In addition, the City of San José Department of Public Works requires a grading permit to be obtained prior to the issuance of a Public Works Clearance. These standard practices would ensure that future buildings on the site are

designed properly to account for the expansive soils on the site. The presence of expansive soils on the site, therefore, would not represent a significant impact to future development on the site.

Development under the existing entitlements would be exposed to the same geologic hazards as the proposed project.

- **Future development is not expected to be exposed to or cause erosion or landslide hazards, due to the flat topography of the site. Due to the expansion potential of the soils on the site, the project could expose people and structures to significant geological hazards. Implementation of standard engineering practices in the Uniform Building Code and best management practices (BMPs), however, would prevent soils conditions on the site from significantly impacting future development. (Less Than Significant Impact)**

Seismicity and Seismic Hazards

As previously discussed, the project site is located in a seismically active region, and, therefore, strong ground shaking would be expected during the lifetime of the proposed project. While no active faults are known to cross the project site, ground shaking on the site could damage future buildings and other structures, and threaten the welfare of future patrons. The liquefaction potential on the site is low to moderate, and the ground failure potential ranges from moderate to low. A project-specific geotechnical report will be prepared for any future development project. The report will include recommendations to reduce potential seismic impacts through standard design techniques. Incorporation of these measures into project design will reduce seismic hazards and impacts to a less than significant level.

Standard Requirements

The proposed project would be designed and constructed in conformance with the Uniform Building Code guidelines for Seismic Zone 4 to avoid or minimize potential damage from seismic shaking and seismic-related hazards, including liquefaction, on the site.

Development under the existing entitlements would be subject to the same seismic hazards as the proposed project.

- **While the project site is subject to strong seismic ground shaking, like the rest of the Bay Area, potential impacts associated with future exposure to future development will be reduced or avoided by conformance with the standards specified in the Uniform Building Code for Seismic Zone 4 and with the recommendations of the geotechnical study required for the specific development project. (Less Than Significant Impact)**

3. Mitigation and Avoidance Measures

General Plan Policies

Soils

- *Soils and Geologic Conditions Policy 1* states 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 6* states that development in areas subject to soils and geologic hazards should incorporate adequate mitigation measures.

- *Soils and Geologic Conditions Policy 8* states that 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.

Seismicity and Seismic Hazards

- *Earthquake Policy 1* states that the City should require that all new buildings be designed and constructed to resist stresses produced by earthquakes.

- *Earthquake Policy 3* states that the City should only approve new development in areas of identified seismic hazard if such hazard can be appropriately mitigated.

- *Earthquake Policy 5* states that 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 facility in a specific location.

Specific Development Mitigation Measures Proposed By the Project

As part of the City's evaluation of project design at the subsequent Planned Development Permit stage, the following mitigation measures would be incorporated in the project:

- A design-level geotechnical investigation for the project shall be completed to address the potential geologic hazards previously identified on the site. The investigation shall identify the specific design features that will be required for the project, including site preparation, compaction, trench excavations, foundation and subgrade design, drainage, and pavement design. Field explorations shall concentrate on obtaining engineering parameters of the site soils for determining site specific bearing capacity, settlement, and liquefaction potential. The geotechnical investigation shall be reviewed and approved by the City Public Works Department prior to issuance of a building permit for the project.

- Shallow foundations shall be appropriate for typical one- to two-story structures and some light three-story structures may also be supported on shallow foundations, depending on the loading and location of the building. For structures three stories or

higher, foundation design shall be determined by a design-level geotechnical investigation. A mat foundation or deep foundation such as drilled piers or driven piles may be needed.

- Future roadways and parking areas shall require relatively thick pavement sections or other subgrade improvement measures such as lime treatment and/or imported fill.

4. Conclusion

With implementation of the existing General Plan policies and the standard engineering practices and requirements described above, implementation of the proposed GPA and PD zoning would not result in significant geological impacts. **(Less Than Significant Impact)**

I. HYDROLOGY AND WATER QUALITY

1. Setting

Hydrology and Drainage

The project site is located within the Guadalupe River watershed, which drains an area of 170 square miles in the central and southern portions of San José and adjoining cities and unincorporated areas to the southwest. There are no waterways present on the site. The nearest waterways include Coyote Creek, Canoas Creek, Arroyo Calero Creek, Alamitos Creek, and the Guadalupe River. The depth of groundwater at the project site is between 25 to 30 feet below ground surface (bgs).

Runoff from the project site and the adjacent Equinix property is conveyed to a 24-inch storm drain line located in Great Oaks Boulevard, which has a capacity of approximately 12 cubic feet per second (cfs). The line extends north and connects to a 48-inch storm drain line that collects drainage from east of Monterey Road and flows westerly and southerly in an easement in Brooklyn and Endicott Boulevards, two private streets on the adjacent Hitachi campus. This 48-inch storm drain main joins two other mains, a 42-inch and 54-inch, where Endicott Boulevard terminates at SR 85, approximately 1,500 feet northeast of Via del Oro. These two mains flow to the south, under the freeway in Miyuki Drive to Santa Teresa Boulevard, and ultimately discharging to Canoas Creek. Canoas Creek flows into the Guadalupe River, which eventually flows to the San Francisco Bay. The existing storm drain system has a total capacity of approximately 110 cfs, which is equivalent to a 2-3 year return period storm event.

A small portion of the project site, approximately 19,675 square feet, is developed with several buildings. The remainder of the site consists of roadways, orchard trees, and vacant and undeveloped land. Approximately eight percent of the site is impervious, consisting of buildings and roadways, and approximately 92 percent of the site is pervious (orchards or bare soil). Under existing site conditions, during peak runoff from a 10-year storm event, the project site generated approximately 20 cfs of runoff. During peak runoff from a 100-year storm event, under existing site conditions, approximately 30 cfs of runoff is generated (refer to Appendix J).

Flooding

The project site is not located within a 100-year floodplain.[26] According to the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map,[27] the site is located within Zone D, which is defined as an area of undetermined, but possible, flood hazards. The site is not subject to seiche[28] or tsunami.[29] The nearest areas prone to flooding during a 100-

[26] Association of Bay Area Governments. ABAG Geographic Information Systems, Hazard Maps, FEMA Flood Zones. 2003. ABAG. FEMA. 22 June 2005. http://www.abag.ca.gov/bayarea/eqmaps/eqfloods/floods.html.
[27] Federal Emergency Management Agency. Flood Insurance Rate Map. Community-Panel Number 060349 0044D. 2 August 1982.
[28] A seiche is an oscillation of the surface of a lake or landlocked sea varying in period from a few minutes to several hours. Seiches are often generated by small oscillations from earthquakes.
[29] Association of Bay Area Governments. ABAG Geographic Information Systems, Hazard Maps, Tsunami Evacuation Planning Map for San Francisco & San Mateo Counties. ABAG. California Office of Emergency Services. 22 June 2005. http://www.abag.ca.gov/bayarea/eqmaps/tsunami/tsunami.html.

year storm event are located along the banks of Coyote Creek, approximately one-half mile to the northeast and within the Coyote Creek watershed.

The project site is subject to inundation in the event of failure of Anderson Dam, located approximately 12 miles upstream (to the southeast) on Coyote Creek.[30] The dam, however, has been designed and constructed to withstand a maximum credible earthquake of magnitude 8.3 on the San Andreas Fault and 6.9 on the Calaveras Fault. In addition, the dam is inspected twice annually in the presence of regulatory staff from the California Division of Safety of Dams and/or the Federal Energy Regulatory Commission. Therefore, while inundation resulting from dam failure could result in damage to structures and a hazard to people, the probability of such a failure is extremely remote, and therefore, is not considered a significant hazard.[31]

Water Quality

The water quality of streams, creeks, ponds, and other surface water bodies can be greatly affected by pollution carried in contaminated surface runoff. Pollutants from unidentified sources, known as "non-point" source pollutants, are washed from streets, construction sites, parking lots, and other exposed surfaces into storm drains. Storm water runoff from roads is collected by storm drains and discharged into Coyote Creek. The runoff often contains contaminants such as oil and grease, plant and animal debris (e.g., leaves, dust, animal feces, etc.), pesticides, litter, and heavy metals. In sufficient concentration, these pollutants have been found to adversely affect the aquatic habitats to which they drain.

Regulatory Requirements

The federal Clean Water Act requires local municipalities to implement measures to control pollution from their storm sewer systems to the maximum extent practicable. Under auspices of the Clean Water Act, as well as other federal and state legislation since 1990, the San Francisco Regional Water Quality Control Board (RWQCB) has issued and reissued an area-wide National Pollution discharge Elimination System (NPDES MS4) Permit to the 15 co-permittees of the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP) for the discharge of storm water from urban areas in Santa Clara County. The 15 SCVURPPP co-permittees are the City of San José, twelve other municipalities within the Santa Clara Basin watershed area, the County of Santa Clara, and the Santa Clara Valley Water District.

Under the provisions of the SCVURPPP Permit, each of the co-permittees, including the City of San José, is required to ensure the reduction of pollution discharges from new and redevelopment projects to the maximum extent practicable, through the incorporation of treatment and other appropriate source control and site design measures. SCVURPPP Permit Provision C.3 (New and Redevelopment Performance Standards) further established minimum design criteria and maintenance requirements for such measures in certain types of development projects, including new development and significant redevelopment projects

[30] Association of Bay Area Governments. Dam Failure Inundation Hazard Map for SE San José. 20 October 2003. ABAG. State Office of Emergency Services. 22 June 2005. http://www.abag.ca.gov/cgi-bin/pickdamx.pl.

[31] City of San José. Final EIR Lowe's Home Improvement Warehouse Planned Development Rezoning (PDC02-086). December 2003. Page 6.

that result in the addition or replacement of 5,000 square feet or more of impervious surface on an already developed site. Under Provision C.3.f, the co-permittees are also required to develop a Hydromodification Plan (HMP) to describe how new development and redevelopment projects that create one acre or more of impervious surface are to manage increases in the magnitude, volume, and duration of runoff resulting from their project. The purpose of implementing the HMP is to ensure that post project runoff does not exceed estimated pre-project rates, durations, and volumes from the project site (Provision C.3.f.i). The City recently drafted their HMP and it was approved by the City Council on October 18, 2005.

In addition to the SCVURPPP NPDES Permit provisions, all construction projects in the City of San José are regulated by the NPDES General Permit for Storm Water Discharges Associated with Construction Activity (General Permit), which requires the preparation of a Storm Water Pollution Prevention Plan (SWPPP) and the filing of a Notice of Intent (NOI) with the State Water Resources Control Board (SWRCB) for all projects that disturb an area of one acre or greater.

The City of San José has revised their Post-Construction Urban Runoff Management Policy (Policy 6-29, revised May 17, 2005), which establishes an implementation framework, consistent with SCVURPPP NPDES MS4 Permit requirements, for incorporating storm water runoff pollution control measures into new and redevelopment projects to reduce storm water runoff pollution to the maximum extent practicable.

Policy 6-29 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.

2. Hydrology and Water Quality Impacts

Thresholds of Significance

For the purpose of this EIR, a hydrology and water quality impact is considered significant if the project would:

- Violate any water quality standards or waste discharge requirements;
- Substantially degrade or deplete groundwater resources or interfere with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level;
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site;
- Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff;

- Provide substantial additional sources of polluted runoff or otherwise substantially degrade surface or groundwater quality;
- Place within a 100-year flood hazard area structures which would impede or redirect flood flows;
- Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam; or
- Expose people or structures to inundation by seiche, tsunami, or mudflow.

Impacts of General Plan Amendment and Specific Development Project

In accordance with the CEQA Guidelines, this EIR compares the impacts of the proposed project with the physical conditions as they currently exist at the site. As described in *Section I.*, the site is already designated for urban development and the property has entitlements for the development of up to 1.5 million square feet of industrial park uses. Therefore, amending the General Plan would not change the acreage of land planned for urban development.

Hydrology and Drainage

As described above, under existing conditions, approximately eight percent of the site (approximately six acres) is impervious. With implementation of the proposed GPA and PD Zoning project, it is anticipated that the total amount of impervious surface on the site would increase by approximately nine times the existing amount to approximately 76 percent (approximately 56 acres) (refer to Appendix J). Development on the site would increase the amount of impervious surfaces, and therefore, increase the quantity of storm water runoff from the site as compared to existing conditions.

Estimated storm water runoff from the site after development of the proposed project was compared to estimated runoff under existing conditions (refer to Appendix J). Under existing site conditions, during peak runoff from a 10-year storm event, the project site generates approximately 20 cubic feet per second (cfs) of runoff. With the proposed development, peak runoff from a 10-year storm event would increase three times the amount of runoff from the existing site, to approximately 60 cfs (refer to Appendix J). During peak runoff from a 100-year storm event, under existing site conditions, the project site generates approximately 30 cfs of runoff. With the proposed development, peak runoff from a 100-year storm event would increase approximately 2.6 times the amount of runoff from the existing site to 80 cfs (refer to Appendix J).[32]

Runoff from the project site is delivered to Canoas Creek, and ultimately to the Guadalupe River and San Francisco Bay, via a 24-inch storm drain in Great Oaks Boulevard, a 42-inch line in Brooklyn Boulevard, and a 54-inch line in Endicott Boulevard. The Hitachi campus, approximately 150 acres of low density residential areas to the northwest and west of the site, and the Equinix property all drain to the same storm drain system. The existing storm drain system is currently not sized to convey runoff from a 10-year event in its tributary area. As mentioned above, the existing storm drain system has a total capacity for a 2-3 year return

[32] The amount of surface runoff is determined by many factors, including soil type, existing runoff conditions, time of concentration, in addition to the amount of impervious surfaces. Therefore, the percentage increase in surface runoff is not the same as the percentage increase in impervious surfaces.

period storm event. The proposed increase in impervious surface area resulting from the project would increase peak flow rates, and therefore, exacerbate impacts on the existing storm drain system between the site and Canoas Creek.

Development under existing entitlements would result in similar drainage impacts as the proposed project.

- **The project would increase storm water runoff from the site above existing conditions, and would exacerbate impacts to existing downstream drainage conditions in the project area. (Significant Impact)**

Flooding

The likelihood that the project could increase flooding in Canoas Creek and the Guadalupe River was evaluated by modifying the rainfall-runoff model used by FEMA in preparing the Flood Insurance Rate Map for San José. The proposed project would result in an increase of approximately 50 acres of impervious surfaces.

The discharge flows for the 10-year and 100-year storm events at several downstream locations in Canoas Creek and Guadalupe River, under existing and post project conditions, are shown in Table 24, below.

Table 24
Canoas Creek and Guadalupe River Flooding Conditions

Location	10-Year Discharge (cfs)			100-Year Discharge (cfs)		
	FEMA	Existing	Post Project	FEMA	Existing	Post Project
Canoas Creek at Cottle Road	480	480	480	510	509	510
Canoas Creek at Santa Teresa Blvd.	780	779	780	830	826	827
Canoas Creek at Blossom Hill Road	1,320	1,319	1,319	1,400	1,399	1,400
Canoas Creek at Capitol Expressway	1,850	1,850	1,850	1,960	1,963	1,964
Canoas Creek at Guadalupe River*	1,900	1,902	1,994	1,970	2,351	2,351
Guadalupe River below Canoas Creek*	5,500	9,191	9,193	12,800	16,509	16,510

*Note: * Denotes Capacity Restrictions*

As shown in Table 24, the channel capacity restrictions within the Guadalupe River watershed exist with or without the proposed project. Based on calculations of runoff, post-project flows are essentially identical (within 1-2 cfs) to published flows under existing conditions. Therefore, the proposed project would not significantly increase flood flows.

Development under the existing entitlements would result in similar flooding impacts as the proposed project.

- **The proposed project would not significantly impact flood flows within the Guadalupe River watershed. (Less Than Significant Impact)**

Based on FEMA flood insurance rate maps for the City of San José, the site is not within a 100-year flood plain. Therefore, the proposed project would not expose people to significant risk involving flooding.

As mentioned previously, the project site is subject to inundation in the event of failure of Anderson Dam. While inundation resulting from dam failure could result in damage to project structures and a hazard to future residents, the probability of such a failure is extremely remote (refer to discussion under *Setting* above), and therefore, is not considered a significant hazard.

Development under the existing entitlements would be subject to the same flooding and inundation hazards as the proposed project.

- **As discussed above, the proposed project would not expose people to significant risk of flooding or inundation. (Less Than Significant Impact)**

Water Quality

Construction Phase Impacts

Construction of the proposed amount of development, as well as grading and excavation activities, may result in temporary impacts to surface water quality. Project grading and construction activities would affect the water quality of storm water surface runoff. Construction of the project buildings and paving of streets, pathways, and parking lots would also result in a disturbance to the underlying soils, thereby increasing the potential for sedimentation and erosion. When disturbance to underlying soils occurs, the surface runoff that flows across the site may contain sediments that are ultimately discharged into the storm drainage system.

Development under the existing entitlements would result in similar construction-related water quality impacts as the proposed project.

- **Construction of the proposed project could cause a significant temporary increase in the amount of contaminants in storm water runoff during construction. (Significant Impact)**

Post-Construction Water Quality Impacts

Overall, the amount of impervious surfaces on the site, such as buildings and open paved areas, would increase by approximately 50 acres. The amount of pollution carried by runoff from buildings and pavement would, therefore, also increase accordingly. The project would increase traffic and human activity on and around the site, generating more pollutants and increasing dust, litter, and other contaminants that would be washed into the storm drain system. The project would therefore generate increases in water quality contaminants which

could be carried downstream in storm water runoff from paved surfaces of the site. Storm water from urban uses contains metals, pesticides, herbicides, and other contaminants such as oil, grease, lead, and animal waste. Runoff from future development on the site may contain oil and grease from parked vehicles, as well as sediment and chemicals (i.e., fertilizers, pesticides, etc.) from the landscaped areas.

Development under the existing entitlements would result in similar post-construction water quality impacts as the proposed project.

- **The project's storm water runoff both during and after construction would contain urban pollutants, such as oil, grease, plastic, and metals that could impact water quality in local drainage systems receiving storm water runoff. The pollutants would occur in higher amounts than currently exist, due to increased development and activity on the site. (Significant Impact)**

3. Mitigation and Avoidance Measures

General Plan Policies

Drainage and Flooding

Future development associated with the proposed GPA would be subject to the City's Flood Hazard Ordinance and existing General Plan policies, including the following:

- *Service and Facilities, Level of Service, Goal 2* states storm drainage must minimize flooding on public streets and storm drainage must minimize property damage from storm water.

- *Services and Facilities, Storm Drainage and Flood Control, Policy 12* states new projects should be designed to minimize potential damage due to storm waters and flooding to the site and other properties.

- *Storm Drainage and Flood Control, Level of Service, Policy 13* encourages new development to be designed to minimize water runoff.

- *Hazards, Flooding, Policy 7* states the City should require new urban development to provide adequate flood control retention facilities.

Water Quality

- *Natural Resources, Water Resources, Policy 8* encourages the City to establish nonpoint source pollution control measures and programs to adequately control the discharge of urban runoff and other pollutants into the city's storm sewers.

- *Natural Resources, Water Resources, Policy 9* encourages the City to take a proactive role in the implementation of the SCVURPPP, as well as implementation of the City's local nonpoint source control and storm water management program.

- *Natural Resources, Water Resources, Policy 10* states that the City should encourage a more efficient use of water by promoting water conservation and the use of water-saving devices.

- *Urban Forest Policy 2* states that development projects should include the preservation of ordinance-sized, and other significant trees. Any adverse effect on the health and longevity of native oaks, ordinance-sized or other significant trees should be avoided through appropriate design measures and construction practices. When tree preservation is not feasible, the project should include appropriate tree replacement.

Specific Development Mitigation Measures Proposed By the Project

The proposed project will be required to utilize structural and nonstructural control measures and management practices to minimize the addition of runoff volume and pollution to the storm water system, and to comply with City Council Policy 6-29, the City's hydromodification management program policies, and the hydromodification management program approved by the Regional Water Quality Control Board (RWQCB).

A conceptual stormwater control plan with hydraulic sizing calculations should be submitted at the Planned Development Zoning stage and an engineer certified Stormwater Control Plan with maintenance schedule must be completed prior to issuance of the Planned Development Permit.

All future development will include post-construction Best Management Practices (BMPs) and HMP requirements based on the detailed site plans. These measures are likely to include on-site infiltration of runoff, first flush diversion, flow attenuation by use of open vegetated swales and natural depressions, storm water retention or detention structures, oil/water separators, porous pavement, tree preservation and plantings, or, a combination of these practices. Justification for the combination of BMPs used on the site will be required from the project proponent/applicant at the time the Planned Development Permit is proposed for any specific on-site development. The proposed BMPs will be required to comply with the NPDES C.3 permit provisions and City Policy 6-29.

The project proposes the following mitigation measures to reduce hydrology, drainage, and water quality impacts to a less than significant level. Implementation of the mitigation measures would result in no net increase in surface runoff from the project site. For this reason, the proposed project would not worsen erosion in Canoas Creek.

Hydrology and Drainage

- BMPs to reduce the volume of runoff from the site, such as detention/retention units or infiltration structures, shall be designed to treat storm water runoff equal to:

    1. the maximized storm water quality capture volume for the area, based on the City of San José precipitation gage with adjustments made directly proportionate to Mean Annual Precipitation, determined using the formula and volume capture coefficients set forth in *Urban Runoff Quality Management, WEF Manual of Practice No. 23/ ASCE Manual of Practice No. 87*, (1998), pages 175-178 (e.g., approximately the 85th percentile 24-hour storm runoff event); or

2. the volume of annual runoff required to achieve 80 percent or more capture, determined in accordance with the methodology set forth in Appendix D of the *California Storm water Best Management Practices Handbook*, (1993), using local rainfall data.

- BMPs designed to increase flow capacity, such as swales, sand filters, or wetlands, shall be sized to treat:

  1. 10% of the 50-year peak flow rate [approximately eight cfs]; or

  2. the flow of runoff produced by a rain event equal to at least two times the 85th percentile hourly rainfall intensity for the applicable area, based on historical records of hourly rainfall depths; or

  3. the flow of runoff resulting from a rain event equal to at least 0.2 inches per hour intensity [approximately 10 cfs].

The selected BMPs must:

4. Address significant erosion potential and sediment control (C.3.a.iv).

5. Reduce post-development pollutant loads from a site to the maximum extent practicable (C.3.b.i).

6. Ensure that post-project runoff pollutant levels do not exceed pre-project pollutant levels for projects that discharge directly to listed impaired water bodies under Clean Water Act Section 303(d)(C.3.b.ii).

- Based on the technical procedures and parameters that are described in Appendix J, the approximate size of the on-site percolation/retention basin needed to meet the HMP criteria were calculated for the maximum development proposed by the project. According to preliminary calculations for a hydraulic design, assuming 76 percent impervious surface on the site, the project would be required to detain a water volume size of approximately 19.8 acre-feet. This would require setting aside approximately 4.2 acres (five feet deep), or approximately 24 percent, of the total open space on the site for detention/retention.

  Land can be set aside to construct the required basin on-site or the basin can be constructed underground, underneath a parking lot. The exact location and configuration of the required detention basin shall be determined to the satisfaction of the Director of Planning, Building, and Code Enforcement and prior to the issuance of a Planned Development Permit.

- The *Post-Construction Mitigation Measures for Water Quality* described below regarding construction of a detention/retention area or underground storage capable of containing 19.8 acre-feet of water would be sufficient to mitigate the project's increase in runoff.

Water Quality

- Prior to construction of any phase of the project, the City of San José will require that the applicant(s) submit a Storm Water Pollution Prevention Plan (SWPPP) and a Notice of Intent (NOI) to the State of California Water Resource Quality Control Board to control the discharge of storm water pollutants including sediments associated with construction activities. Along with these documents, the applicant may also be required to prepare an Erosion Control Plan. The Erosion Control Plan may include Best Management Practices (BMPs) as specified in the California Storm Water Best Management Practice Handbook for reducing impacts on the City's storm drainage system from construction activities. The SWPPP shall include control measures during the construction period for:

  - Soil stabilization practices
  - Sediment control practices
  - Sediment tracking control practices
  - Wind erosion control practices and
  - Non-storm water management and waste management and disposal control practices.

- Prior to issuance of a grading permit, the applicant will be required to submit copies of the NOI and Erosion Control Plan (if required) to the City Project Engineer, Department of Public Works. The applicant will also be required to maintain a copy of the most current SWPPP on-site and provide a copy to any City representative or inspector on demand.

- Each phase of development will comply with the City of San José Grading Ordinance, including erosion- and dust-control during site preparation, and with the City of San José Zoning Ordinance requirement for keeping adjacent streets free of dirt and mud during construction.

- The project shall comply with Provision C.3 of NPDES Permit Number CAS0299718, which provides enhanced performance standards for the management of storm water for new development. (Refer to *Section I.G. Consistency with Adopted Plans and Policies,* of this EIR, for description of these requirements.)

- Prior to issuance of a Planned Development Permit, each phase of development shall include provision for post-construction structural controls in the project design in compliance with the NPDES C.3 permit provisions, City Council Policy 6-29 and other City policies and ordinances, and shall include Best Management Practices (BMP) for reducing contamination in storm water runoff as permanent features of the project. The specific BMPs to be used in each phase of development will be determined based on design and site-specific considerations and will be determined prior to issuance of Planned Development Permits. Post-construction BMPs and design features could include, but are not limited to, the following:

  - Infiltration basins – shallow impoundments designed to collect and infiltrate storm water into subsurface soils.
  - Infiltration trenches – long, narrow trenches filled with permeable materials designed to collect and infiltrate storm water into subsurface soils.

- Permeable Pavements – permeable hardscape that allows storm water to pass through and infiltrate subsurface soils.
- Vegetated Filter Strips – linear strips of vegetated surface designed to treat surface sheet flow from adjacent surfaces.
- Vegetated Swales – shallow, open channels with vegetated sides and bottom designed to collect, slow, and treat storm water as it is conveyed to downstream discharge point.
- Flow-through Planter Boxes – structures designed to intercept rainfall and slowly drain it through filter media and out of planter.
- Hydromodification Separators – flow through structures with a settling or separation unit that removes sediments and other pollutants.
- Media Filtration Devices – two chamber system including a pretreatment settling basin and a filter bed.
- Green Roofs – vegetated roof systems that retain and filter storm water prior to drainage off building rooftops.
- Wet Vaults – subsurface storage system designed to fill with storm water during larger storm events and slowly release it into the conveyance system over a number of hours.
- New trees planted within 30 feet of impervious surfaces and existing trees kept on a site if the trees' canopies are within 20 feet of impervious surfaces, 100 square feet of Credit may be give for each new deciduous tree, and 200 square feet of Credit may be given for each new evergreen tree. The Credit for existing trees is the square-footage equal to one-half of the existing tree canopy. Nor more than 25 percent of a site's impervious surface can be treated through the use of trees.

  The trees selected shall be suitable species for the site conditions and the design intent. Trees should be relatively self-sustaining and long-lived. Protection during construction shall be in the form of minimizing disruption of the root system. Trees required by the City of San José for tree removal mitigation, to fulfill City of San José street tree requirements, or to meet storm water treatment facility planting requirements will not count toward Post-Construction Treatment Control Measure Credit.

  Trees approved for Post-Construction TCM Credit shall be maintained and protected on the site after construction and for the life of the development (until any approved redevelopment occurs in the future). During the life of the development, trees approved for Post-Construction TCM Credit shall not be removed without approval from the City. Trees that are removed or die shall be replaced within six (6) months with species approved by the City of San José.

- To protect groundwater from pollutant loading of urban runoff, BMPs which are primarily infiltration devices (such as infiltration trenches and infiltration basins) must meet, at a minimum, the following conditions:

  - Pollution prevention and source control BMPs must also be implemented to protect groundwater;
  - Use of infiltration BMPs cannot cause or contribute to degradation of groundwater;
  - Infiltration BMPs must be adequately maintained;

- Vertical distance from the base of any infiltration device to the seasonal high groundwater mark must be at least 10 feet. In areas of highly porous soils and/or high groundwater table, BMPs should be subject to a higher level of analysis (considering potential for pollutants such as on-site chemical use, level of pretreatment, similar factors);
- Unless storm water is first treated by non-infiltration means, infiltration devices shall not be recommended for areas of industrial or light industrial activity; areas subject to high vehicular traffic (25,000 or greater average daily traffic trips on main roadway or 15,000 or more average daily traffic trips on any intersecting roadway); automotive repair shops; car washes; fleet storage areas (bus, truck, etc); nurseries; and other land uses and activities considered by the City as high threats to water quality; and
- Infiltration devices must be located a minimum of 100 feet horizontally from any water supply wells.

- To maintain effectiveness, all storm water treatment facilities shall include long-term maintenance programs.

- The applicant, their arborist and landscape architects, shall work with the City and the SCVURPPP to select pest resistant plants to minimize pesticide use, as appropriate, and the plant selection will be reflected in the landscape plans included with the PD Permit Plan set for each phase of the project.

4. Conclusion

With the implementation of the mitigation measures above, the proposed GPA and specific development project would not result in significant drainage, flooding, or water quality impacts. **(Less Than Significant Impact with Mitigation Incorporated)**

J. HAZARDS AND HAZARDOUS MATERIALS

The following discussion is based on an environmental and geological report prepared by *Geomatrix* in June 2000, which contains a Phase I environmental site assessment and a Phase II soil and groundwater analysis. The environmental site assessment was completed by *Harding Lawson Associates* in June 1999.[33] The reports were conducted to identify and assess potential sources of hazardous materials at the site and to assess their potential to impact the project. The environmental and geotechnical report also included a regulatory database search for any known or suspected hazardous materials or waste problems on the site or in the vicinity of the site. The complete environmental and geotechnical and the environmental site assessment are included as Appendices I and K of this EIR.

1. Setting

Hazardous materials are commonly used by large institutions, and commercial and industrial businesses. Hazardous materials include a broad range of common substances such as motor oil and fuel, pesticides, detergents, paint, and solvents. A substance may be considered hazardous if, due to its chemical and/or physical properties, it poses a substantial hazard when it is improperly treated, stored, transported, disposed of, or released into the atmosphere in the event of an accident.

The 74-acre project site consists of orchards, agricultural buildings, and vacant land. The western portion of the site is primarily covered with orchards (prune, cherry, apricot, and walnut) and the eastern portion consists of hard compacted dirt. The northwestern corner of the site consists of unoccupied buildings. This portion of the site previously consisted of a contractor's yard, an irrigation pipe storage area, agricultural buildings, and a nursery. According to historical photographs, the site was used for agricultural purposes beginning in 1939. Because the site was used for agriculture for over six decades, there is a potential for hazardous materials, such as pesticides and/or chemicals associated with the repair and maintenance of agricultural equipment as well as maintenance of the property, to be present in the soil.

The San José Fire Department has 10 different zones that are considered wildland urban interface zones due to the proximity to wildland vegetation and the threat for fires during the wildland season (typically May through November) to structures. In addition, the California Department of Forestry identifies areas in the state that are considered "High Fire Severity Zones." The project site is not located in a wildland interface zone or High Fire Severity Zone.[34]

The project site is not located within the Santa Clara County Airport Land Use Commission (ALUC) jurisdiction, nor is it on one of the City's designated evacuation routes.

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[33] Though the reports are over five years old, a recent analysis completed in 2003 for the adjacent Hitachi property did not identify any new hazards or substantial change in activities on-site involving use of hazardous materials. Therefore, an updated analysis was not conducted for the project.

[34] Diaz, Juan. "Re: Wildfire susceptibility." E-mail to David J. Powers & Associates, Inc. from the San José Fire Department. 12 September 2005.

Subsurface Features

There is currently a septic system for on of the unoccupied buildings. The septic systems associated with the historic agricultural homesteads are reportedly still in place, however, the specific locations are unknown.

There are no reported active or abandoned underground or above ground storage tanks at the site. Two former underground storage tanks (USTs) and one aboveground storage tank (AST) used to store petroleum products were removed from near the agricultural buildings in 1988. Chemical testing of soil samples taken during removal of these features indicated no significant environmental impacts (refer to Appendix I). Removal was done in accordance with the Regional Water Quality Control Board (RWQCB) and the San José Fire Department guidelines.

There are three irrigation wells present in the immediate vicinity of the project site, although only one is within the boundaries of the project site. The other two are located immediately adjacent to the site near the northeastern corner. In addition to the irrigation wells, there are 13 groundwater monitoring/observation wells in the immediate vicinity of the project site. Seven groundwater wells are within the project site and the other six are along the northern boundary adjacent to the railroad right-of-way.

Potential On-Site Contamination Sources

Database Records Search

A database search was undertaken for the project site in 2000 for the purpose of identifying all sites within one mile where there are known or suspected sources of contamination, as well as sites that handle or store hazardous materials. Federal, state, local, historical, and brownfield databases were searched. The databases searched and the results are presented in Appendix B of this Initial Study. The identification of nearby contaminated or hazardous materials sites is important so that potential land use compatibility and public safety impacts can be avoided and/or mitigated. The project site is not itself listed on any of the hazardous materials databases included in the search.[35]

Site Observations

The following hazards or potentially hazardous materials were observed on-site:

- One five-gallon bucket that contained an oil type of substance (possibly a lubricant) on the east side of the project site next to what appears to be a turbine for an irrigation well. The container, which was located on a concrete pad, was in good condition with a lid and did not appear to be leaking.

- One aboveground storage tank (AST), located on the east side of the site. The tank, labeled "diesel," did not appear to be leaking, although there was evidence of use from the hose attached to the bottom of the front side. The ground underneath the tank was not stained and there was no petroleum odor.

[35] Environmental Data Resources (EDR). The EDR-Radius Map with GeoCheck. 24 April 2000.

Asbestos and Lead-Based Paint

Surveys for lead and asbestos containing building materials were not conducted. Due to the age of the buildings on the site, however, asbestos and lead-based paint may be present. Asbestos containing materials (ACMs) are of concern because exposure to ACMs has been linked to cancer. The flooring tile present in the labor house may contain asbestos.

Lead-based paint is of concern, both as a source of direct exposure through ingestion of paint chips and as a contributor to lead interior dust and exterior soil. Lead was widely used as a major ingredient in most oil-based paints prior to 1950. In 1978, the Consumer Product Safety Commission banned the use of lead as an additive in paint. Paint coatings associated with the structures may contain lead. Lead present in paint coatings generally does not present a significant risk unless ingested (i.e., in the form of paint flakes).

Polychlorinated Biphenyls

Polychlorinated biphenyls (PCBs) are suspected carcinogens, and are commonly used in electrical transformers, capacitors, and other electrical equipment, including fluorescent light ballasts as a coolant and a dielectric. There are two pole-mounted transformers on the east side of the property. Both transformers are in good condition and neither show evidence of leakage.

Soil and Groundwater Sampling

Soil and groundwater samples were collected from the project site. Samples were taken to analyze site-specific data regarding the presence of chemicals of potential concern (COPC), associated with current and/or historical site use, in soil and groundwater. The concentrations of chemicals in soil and groundwater were compared to established screening criteria [industrial preliminary remediation goals (PRGs), representative background concentrations, hazardous waste criteria, and water quality objectives] to assess whether COPC are present at concentrations that would potentially affect future construction activities and/or site use. Soil samples were collected from six locations and groundwater samples from one location on the site.

Soil Samples

Soil samples were collected from depths based on the potential for chemical impacts (e.g., pesticides and herbicides in shallow soil) and/or depths that would most likely be accessed by future construction and/or maintenance workers as part of site development and use. The soil samples were analyzed for pesticides, herbicides, and metals.

Chemical concentrations in the soil samples were compared to EPA Region 9 Preliminary Remediation Goal (PRG) for industrial land use and metal concentrations were compared to representative background concentrations of metals in soils collected by the Lawrence Berkeley National Laboratory (LBNL, 1995). Additionally, concentrations of metals in soil were compared to total threshold limit concentrations (TTLC) and soluble threshold limit concentrations (STLC), as defined in Title 22 of the California Code of Regulations, to evaluate the potential for soil being disposed of off-site to be classified as a California hazardous waste.

No VOCs, herbicides, polynuclear aromatic hydrocarbons (PNAs), nitrate, or ammonium were detected above identified thresholds in any of the soil samples analyzed. The pesticides detected were dieldrin, endrin, DDT and DDE. All concentrations were less than the respective industrial PRG for each compound and therefore are unlikely to pose a significant risk to human health.

Concentrations of metals in the soil samples were not present at concentrations greater than industrial PRGs, except for arsenic. Concentrations of arsenic were greater than the industrial PRG of 2.7 mg/kg, however, with the exception of surface samples collected within the agricultural buildings area, all concentrations were less than representative background concentration of 19.1 mg/kg (LBNL, 1995). With the exception of one sample, total concentrations of metals in all soil samples were less than hazardous waste screening criteria used in the State of California.

Human Health Screening Evaluation

Potential exposure to elevated concentrations of arsenic in soil in the agricultural building area by future industrial/commercial workers was quantitatively evaluated using maximum concentrations detected at the site and exposure assumptions. Exposure assumptions are described in Appendix K of this EIR. Toxicity criteria, which are based on toxicity assessments conducted by the USEPA, were used to quantify the relationship between increased likelihood and/or severity of adverse effects. The primary exposure pathway contributing to overall risk is due to incidental ingestion of soil.

Groundwater Samples

Groundwater samples were analyzed for chemicals associated with agricultural use, such as pesticides, herbicides, metals, nitrate, and ammonium, and industrial operations associated with adjacent sites.

Concentrations of chemicals detected in groundwater were compared to California-EPA Maximum Contaminate Levels (MCLs) to evaluate if they are present at concentrations of potential environmental concern. If the California-EPA MCL was not available for a certain compound, concentrations were compared to other water quality criteria, such as secondary MCLs or tap water PRGs.

The groundwater samples did not contain VOCs, semi-volatile organic compounds (SVOCs), pesticides, herbicides, or ammonium. Detectable concentrations of arsenic, barium, molybdenum, nickel, selenium, and zinc were found; however, concentrations of these metals were all below water quality criteria.

Concentrations of nitrate ranged from 34 to 100 milligrams per liter (mg/l). The California-maximum concentration level for nitrate in drinking water is 45 mg/l. The comparison to drinking water standards is highly conservative, given that shallow groundwater beneath the site would likely not be used as a drinking water source prior to pre-treatment.

Potential Off-Site Sources of Contamination

The database search indicated eight facilities within one-mile of the site as hazardous materials users. The potential for off-site contamination to impact the site was evaluated based on information in the database records regarding the type of release, current case status, and distance and direction from the site. Of the sites identified, conditions at four of the eight off-site listings could potentially affect environmental conditions at the project site. These four off-site listings are shown on Figure 20 and discussed below.

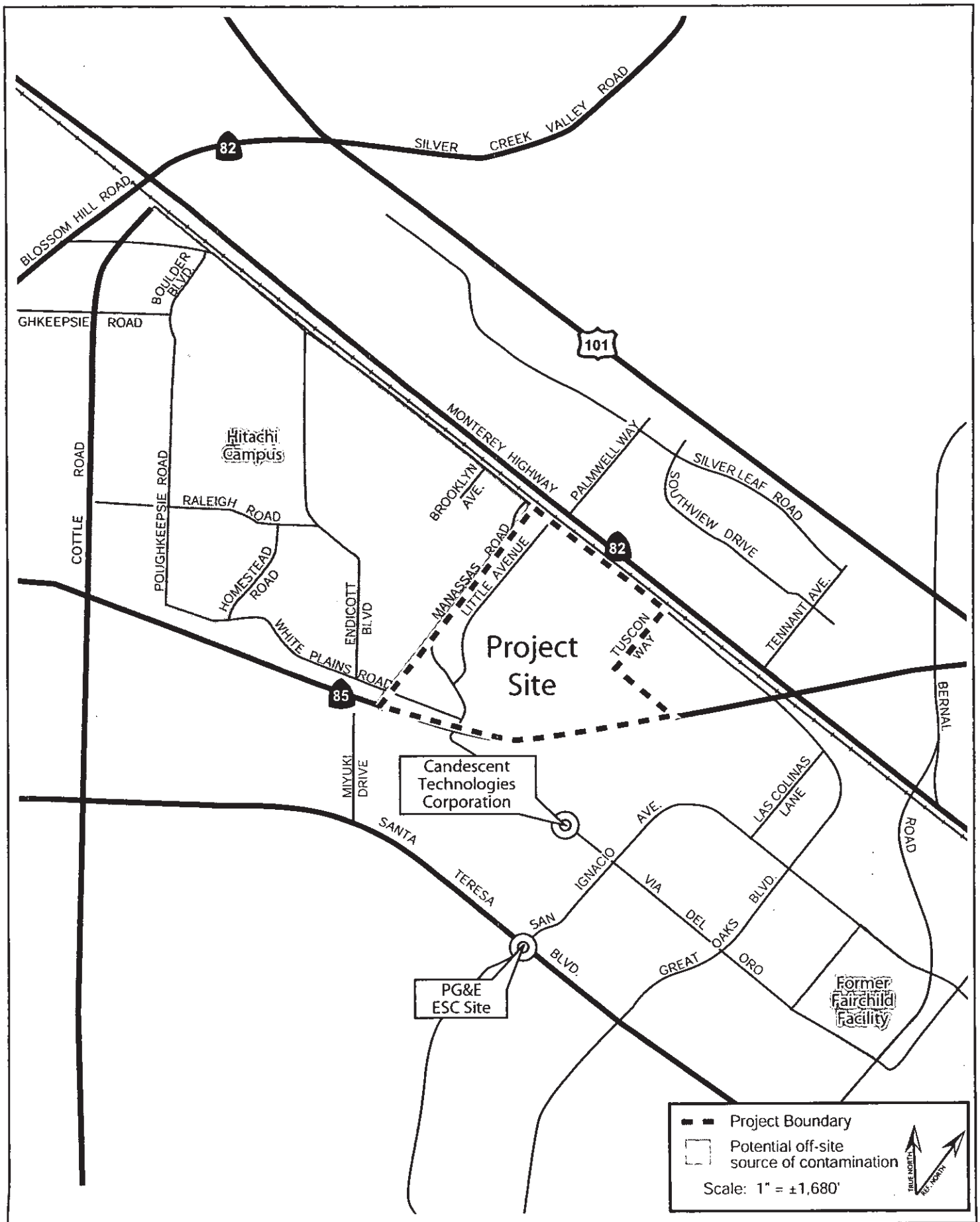
Hitachi Campus

The adjacent Hitachi campus is located to the west of the project site. Data processing machines and components have been manufactured on the campus since 1956. Soil and groundwater beneath the campus have been impacted with volatile organic compounds (VOCs) associated with industrial waste solvents and the campus is listed on the CORTESE database. The CORTESE database is a hazardous waste and substances sites list. The sites on this list are designated by the State Water Resources Control Board, the Integrated Waste Board, and the Department of Toxic Substances Control. When practical, soils impacted with VOCs were removed and disposed of at a hazardous waste facility. VOCs in groundwater emanating from the Hitachi campus are generally present within the boundaries of the campus or off-site to the northwest. The facility has undergone environmental investigation and remediation activities associated with the release of solvents to groundwater since 1978. Actions directed at the remediation and containment of impacted soil and groundwater include on-site soil vapor extraction (1989-1996), on-site groundwater extraction and treatment (ongoing), off-site groundwater extraction and treatment (1983-1994), and monitoring of on-site and off-site wells (ongoing). Groundwater samples collected from the project site's groundwater monitoring wells do not exhibit concentrations of VOCs greater than regulatory criteria since monitoring activities were initiated in 1983.

Fairchild Semiconductor Corporation

The former Fairchild Semiconductor Corporation facility is located approximately 0.5 miles east of the project site. The Fairchild facility operated as a semiconductor manufacturing plant from 1977 to 1983. In the late 1990s, the facility was demolished and redeveloped into a commercial facility. Soil and groundwater beneath the site have been impacted with industrial waste solvents released from an underground storage tank (UST) containing waste solvents. The UST was removed in 1981 along with the impacted soils. Actions directed at the remediation and containment of VOC impacted soil and groundwater include on-site groundwater extraction and treatment (1982-1998), off-site groundwater extraction and treatment (1982-1991), investigation and sealing of potential conduits and water supply wells (1982-1987), on-site soil vapor extraction (1989-1990), and construction of a slurry wall containment system (1985-1986).

Groundwater extraction was initiated on the Fairchild site in 1982 and continued until 1998. A low permeability containment wall was constructed around the site perimeter to limit the off-site migration of VOCs. A human health risk assessment conducted in the area of the former Fairchild facility indicated that solvents in groundwater or soil would not pose a significant health risk, given the current use of the site and restrictions on site activities.



POTENTIAL OFF-SITE SOURCES OF CONTAMINATION FIGURE 20

Pacific Gas and Electric Edenvale Service Center

The Pacific Gas and Electric (PG&E) Service Center is located 0.75 miles southeast of the project site. In 1988, three waste oil USTs were removed from the site. Petroleum impacted soil was excavated and tested, and groundwater monitoring wells were installed. Low concentrations of VOCs were detected. Closure of the site was requested in 1991 and closure was granted in 1992.

Candescent Technologies Corporation

Candescent Technologies Corporation is located 0.5 miles to the southeast of the project site. Chemical and waste handling facilities, including an above ground chemical storage area, vaulted chemical pipe lines, a solvent dip tank, a UST waste solvent tank, and an acid neutralization system, were observed on the site. In 1989, a 500-gallon UST containing acetone was removed, reportedly due to a leak. Based on the site's activities, soil samples were collected. No hydrocarbons were detected; however, all soil samples contained low concentrations of VOCs.

Existing High-Pressure Natural Gas Lines

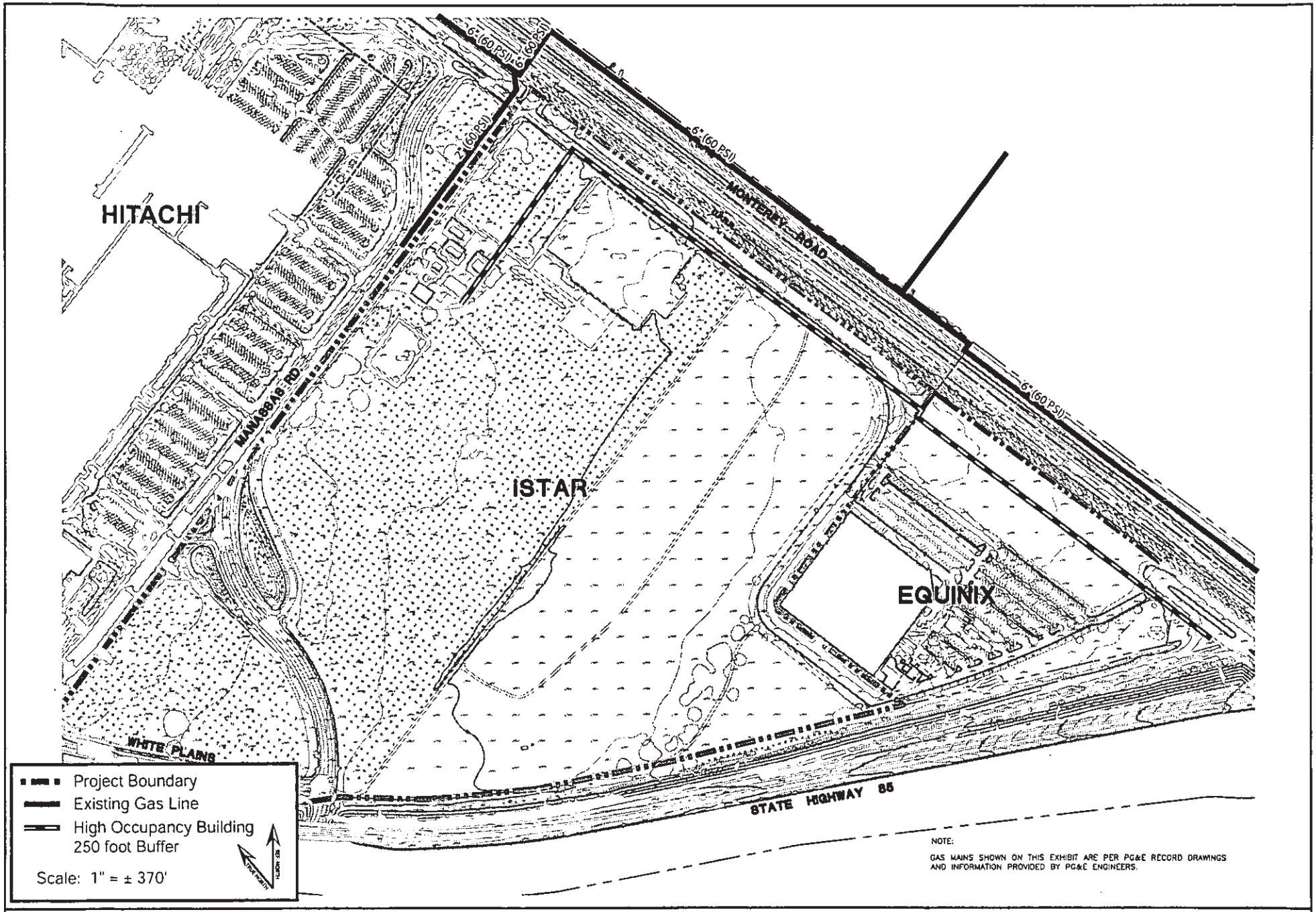
There is a high-pressure gas transmission line located along Monterey Highway to the north of the project site (refer to Figure 21). This gas transmission line is a six-inch main that operates at a pressure of 60 pounds per square inch (psi) near the project site. This line extends north and becomes a 10-inch main that operates at 400 psi.

2. Hazards and Hazardous Materials Impacts

Thresholds of Significance

For the purpose of this EIR, a hazardous materials impact is considered significant if the project would:

- Create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials;
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances or waste within one-quarter mile of an existing or proposed school;
- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment;
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area;
- For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area;
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or



HIGH-PRESSURE GAS LINE LOCATION

FIGURE 21

- Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

General Plan Amendment and Specific Development Project Impacts

Hazard Impacts from Use, Storage, and Delivery of Hazardous Materials on the Site

The project site currently has entitlements to develop up to approximately 1.5 million square feet of industrial office/R&D uses. The project proposes a GPA and zoning to allow for the development of a mix of industrial and commercial uses on the project site. The development of the proposed project could result in the sensitive commercial land uses in proximity to industrial users who use and/or store hazardous materials. Future development on the site could include the storage and use of large quantities of acutely hazardous materials,[36] whose accidental release into the environment could cause off-site impacts.

The development allowed by the proposed PD Rezoning would permit sensitive commercial uses, such as such as day care centers, schools, medical clinics, and community centers, which could house children, elderly, infirm, and/or developmentally disabled and physically fragile persons. Under the proposed GPA and PD Zoning, these facilities could be located next to industrial uses.

If hazardous materials are released from a storage or use area from future industrial uses on the site near sensitive receptors, the health effects of the release could be significant. Children represent a sensitive population with regard to the risk for adverse health effects from exposure to chemicals. This is due to a number of factors, including their high respiratory rate and lower body weight. In addition to being at greater risk from lesser quantities of chemicals, young children are also more vulnerable because of their lack of independent mobility and inability to respond to emergencies. As a result, children are more susceptible to significant health impacts from releases of chemicals, and require more assistance in getting out of the path of such releases.

Of particular concern are hazardous materials such as gases that can move offsite more quickly and therefore, could have greater potential for significant consequences. Chemicals that may be accidentally released to the air and have the greatest potential to cause health impacts in the event of an accidental release are frequently referred to as "acutely hazardous materials."[37]

The City of San José regulates toxic gases and other hazardous materials including the use and storage of toxic gases. Nevertheless, accidental releases of toxic gases can and do occasionally occur in San José, particularly in the event of fires or other upset conditions.

[36] Although current law does not refer to "acutely hazardous materials," the term is still widely used because it defines a set of substances that can have adverse impacts over distance when accidentally released. Acutely hazardous materials possess toxic, reactive, flammable or explosive properties.
[37] Ibid.

Even if a hazardous material is accidentally released, it does not necessarily have the potential for causing off-site consequences. Many such substances are only kept in small quantities that make an accidental release unlikely to result in a substantial concentration that would release very far from the source. In the case of certain acutely hazardous materials, however, which are used in Silicon Valley manufacturing processes and are stored in substantial quantities, there is a possibility that an accidental release could result in significant risk to off-site receptors. These substances include arsine, phosphine, ammonia, and others.[38]

The risk from hazardous materials depends on the amount of substance released, the type of chemical, the wind and temperature conditions, the terrain, and a number of other factors. Without limiting the locations of these hazardous materials and wastes within the site, child care facilities could be built immediately adjacent to industrial businesses which may use hazardous materials.

There does not appear, under current regulations, to be any way that governmental agencies could limit or preclude such a situation from occurring unless the City chooses to restrict the use of acutely hazardous materials under the proposed PD zoning. Under such circumstances, the construction and operation of a child care facility, or other sensitive commercial uses, on the project site could result in the exposure of sensitive receptors to hazardous materials impacts in the event of an accidental release or upset. The use, delivery and storage of hazardous materials on the site would be governed by existing local, state and federal laws.

The site's existing entitlements allow for the development of exclusively industrial uses and would not allow for sensitive uses which are allowed in commercial areas. For this reason, development under the existing entitlements would not expose any sensitive receptors on-site to hazardous materials impacts from accidental release or upset.

- **The construction and operation of a child care or other sensitive commercial uses on the project site could result in the exposure of sensitive receptors to hazardous materials impacts in the event of an accidental release or upset. (Significant Impact)**

Subsurface Features

Septic systems are not currently subject to environmental regulations in the State of California, and these systems should be removed as part of general development activities. Septic systems can be a source of nitrates to the subsurface, however, it is unlikely that these systems contribute a significant amount of nitrates to the subsurface given that they are no longer in use or in the case of the remaining system, used by a limited number of persons.

Because the two former USTs and AST were removed according with the RWQCB and San José Fire Department guidelines, and that no significant chemical contamination was found in the soil samples around the USTs and AST, it is unlikely that any significant environmental concerns associated with the USTs/AST are present or that any further work

[38] Ammonia is also a common household chemical. In large quantities, which may be utilized in industrial processes, it can have a significant potential for off-site consequences.

would be required. Documentation of the removal activities, however, was not transmitted to regulatory agencies.

Development under existing entitlements would be subject to the same impacts from the existing septic systems and former USTs and AST as the proposed project.

- **As discussed above, it is unlikely that the existing septic systems or former USTs and AST would result in significant hazardous material impacts. (Less Than Significant Impact)**

Potential On-Site Sources of Contamination

Asbestos and Lead-Based Paint

ACMs and lead-based paint may be present in the existing buildings on-site. The National Emissions Standards for Hazardous Air Pollutants (NESHAP) guidelines require that all potentially friable asbestos containing materials be removed prior to building demolition or renovation that may disturb asbestos containing materials (ACMs).

Demolition of buildings that contain lead-based paint may create lead-based dust at concentrations that would expose workers and nearby receptors to potential health risks. State regulations require that air monitoring be performed during and following renovation or demolition activities at sites containing lead-based paint. If the lead-based paint is peeling, flaking, or blistered, it would need to be removed prior to demolition. It is assumed that such paint would become separated from the building components during demolition activities; it must be managed and disposed of as a separate waste stream. If the lead-based paint is still bonded to the building materials, its removal is not required prior to demolition. Currently, the EPA and the U.S. Department of Housing and Urban Development are proposing additional lead-based paint regulations.

Development under the existing entitlements would be subject to the same impacts from asbestos and lead-based paint as the proposed project.

The project proposes to conform with the following regulatory programs and to implement the following standard measures to reduce potential impacts due to the presence of ACMs and/or lead-based paint to a less than significant level:

Standard Requirements

A formal survey for ACMs and lead-based paint shall be conducted prior to demolition of site structures.

Requirements outlined by Cal/OSHA Lead in Construction Standard, Title 8, CCR 1532.1 shall be followed during demolition activities, including employee training, employee air monitoring and dust control. Any debris or soil containing lead-based paint or coating shall be disposed of at landfills that meet acceptance criteria for the waste being disposed.

All potentially friable ACMs shall be removed in accordance with NESHAP guidelines prior to building demolition or renovation that may disturb the materials. All demolition activities shall be undertaken in accordance with OSHA standards contained in Title 8 of the CCR,

Section 1529, to protect workers from exposure to asbestos. Specific measures could include air monitoring during demolition and the use of vacuum extraction for asbestos-containing materials.
A registered asbestos abatement contractor shall be retained to remove and dispose of ACMs identified in the asbestos survey performed for the site.

Materials containing more than one percent (1%) asbestos are also subject to BAAQMD regulations. Removal of materials containing more than one (1) percent asbestos shall be completed in accordance with BAAQMD requirements.

- **Demolition of the buildings on-site could expose construction workers or nearby receptors to harmful levels of ACMs or lead. The project proposes to conform with the above standard requirements in order to reduce impacts related to ACMs and lead-based paint to a less than significant level. (Less Than Significant Impact)**

Soil Samples and Human Health Screening Evaluation

As mentioned previously, the pesticides detected in soil samples were all at concentrations below the respective industrial PRG for each compound. The metal concentrations in the soil samples were not present at concentrations greater than industrial PRGs, representative background concentrations, or hazardous waste screening criteria used in the State of California, with the exception of arsenic.

Arsenic levels in soil samples taken within the agricultural building area are above acceptable background concentrations. Based on the results of the screening health risk evaluation however, it is anticipated that concentrations of arsenic would not result in an unacceptable health risk to future construction/maintenance workers working below the ground surface, or future industrial/commercial workers occupying the property.

Development under existing entitlements would be subject to the same impacts from the presence of arsenic as the proposed project.

- **The human health risk evaluation concluded that the elevated levels of arsenic found in soil samples within the agricultural building area do not pose a health risk to future construction, maintenance, or industrial/commercial workers. (Less Than Significant Impact)**

Groundwater Samples

Concentrations of arsenic, barium, molybdenum, nickel, selenium and zinc were detected in groundwater samples at the site. Concentrations of these metals, however, were all below water quality criteria. Concentrations of nitrates in the groundwater samples were above the maximum California-maximum concentration level for drinking water. Since the groundwater beneath the site is shallow and would not likely be used for drinking water prior to pretreatment, remediation is not required. For these reasons, the metal and nitrate concentrations in the groundwater would not result in significant impacts to future development on the site.

Development under the existing entitlements would be subject to the same impacts from the presence of nitrite in the groundwater as the proposed project.

- **Concentrations of metals, except for nitrates, in the groundwater are below water quality criteria. Since the groundwater on-site is not proposed to be used for drinking water, it is unlikely that concentrations of nitrate would pose a significant impact. (Less Than Significant Impact)**

Potential Off-Site Sources of Contamination

Hitachi Campus

Actions toward remediation and containment of VOCs impacted soil and groundwater have taken place on this property since the 1980's. Groundwater remediation and monitoring are ongoing. Because the groundwater generally flows west, and the project site is east of the Hitachi campus, and given the fact that groundwater samples have not exhibited concentrations of VOCs greater than regulatory criteria since monitoring activities were initiated, it is unlikely that significant concentrations of contaminants (i.e., greater than regulatory criteria) will migrate beneath the project site.

Development under the existing entitlements would be subject to the same impacts from the presence of VOCs as the proposed project.

- **Due to the remedial actions taken at the Hitachi Campus, the direction of the groundwater flow, and the location of the project site in relation to the Hitachi Campus, it is unlikely that VOC contaminated groundwater would impact the project site. (Less Than Significant Impact)**

Fairchild Semiconductor Corporation

Actions toward remediation and containment of VOC impacted soil and groundwater has taken place. The direction of groundwater flow at the Fairchild site was documented to be towards the southwest. The project site is located to the northwest of the Fairchild facility. Given the directional flow of the groundwater and the remediation/containment measures taken at this site, it is unlikely that VOCs emanating from the former Fairchild site, if any, would significantly degrade groundwater quality at the project site.

Development under the existing entitlements would be subject to the same impacts from VOCs as the proposed project.

- **Due to the remedial actions taken at the former Fairchild Semiconductor Corporation site, the direction of the groundwater flow, and the location of the project site in relation to the Fairchild site, it is unlikely that VOC contaminated groundwater would impact the project site. (Less Than Significant Impact)**

Pacific Gas and Electric Edenvale Service Center

The groundwater generally flows in a westerly direction and the project site is located to the northwest of the PG&E center, therefore, the groundwater from the PG&E site would not flow directly under the project site. Based on the case closure status, the distance, and the

service center's cross gradient orientation to the project site, it is unlikely that impacted groundwater from this property will migrate onto the project site.

Development under the existing entitlements would be subject to the same impacts from the PG&E Service Center as the proposed project.

- **Due to the case closure of this site, the direction of the groundwater flow, and the location of the project site in relation to the PG&E Service Center, it is unlikely that petroleum impacted groundwater would impact the project site. (Less Than Significant Impact)**

Impacts from Presence of High-Pressure Gas Lines

The project does not propose to move any of the existing high-pressure gas lines present in Monterey Road. The City of San José, however, has guidelines, entitled "Development Guidelines for Land in Proximity to High-Pressure Natural Gas Pipelines" (1986), that relate to development in proximity to high-pressure natural gas pipelines. These guidelines were developed after analysis and evaluation by the Department of Planning (now Planning, Building and Code Enforcement) and the Fire Department of the hazards and risks of locating new development near such gas pipelines. The guidelines state that only buildings that have a "low-density occupancy load" should be allowed within 250 feet of the edge of the pipeline right-of-way. Buildings assumed to have a low-density occupancy load are defined as single and multiple family dwellings, offices, industrial buildings, hotels/motels, parking garages and retail stores which are not a part of a shopping mall. No building of more than two stories should be allowed within 250 feet of the edge of the right-of-way. Figure 21 shows the locations of the high-pressure gas lines and the areas of the site and the proposed development that fall within 250 feet of the gas line right-of-way.

Construction of buildings that do not meet the definition of low-density occupancy load, or those proposed to be greater than two stories in height may be allowed within the 250 foot setback by working with the City Fire Department and PBCE to identify and mitigate the possible risks of the development. This would involve the inclusion of design measures, such as reinforced walls and blast-proof glass, in the structures' design.

Because the project proposes buildings of two or more stories within the 250 foot setback, the project could result in safety hazards associated with the high-pressure gas lines.

Development under the existing entitlements would be subject to the same impact from the existing high-pressure gas line in Monterey Road as the proposed project.

- **Because the project proposes buildings of two or more stories within the 250 foot setback, the project could result in safety hazards associated with the presence of high-pressure gas lines near the site. (Significant Impact)**

3. Mitigation and Avoidance Measures

General Plan Policies

- *Urban Design Policy 1* states that the City should continue to apply strong architectural and site design controls on all types of development for the protection and development of neighborhood character and for the proper transition between areas with different types of land uses.

- *Urban Design Policy 8* states that design solutions should be considered in the development review process which addresses security, aesthetics and public safety. Public safety issues include, but are not limited to, minimum clearances around buildings, fire protection measures such as peak load water requirements, construction techniques, and minimum road widths and other standards set forth in relevant City Codes. All development projects should comply with the safety standards established in these referenced codes, and other properties.

- *Urban Design Policy 21* states that to promote safety and to minimize noise impacts in residential and working environments, development which is proposed adjacent to railroad lines should be designed to provide the maximum separation between the rail line and dwelling units, yards or common open space areas, offices and other job locations, facilities for the storage of toxic or explosive materials and the like. To the extent possible, areas of development closest to an adjacent railroad line should be devoted to parking lots, public streets, peripheral landscaping, the storage of nonhazardous materials and so forth. In industrial facilities, where the primary function is the production, processing or storage of hazardous materials, development should follow the setback guidelines and other protective measures called for in the City's Industrial Design Guidelines when such facilities are to be located adjacent to or near a main railroad line.

- *Urban Design Policy 27* states that child care facilities should be considered in the design of transit oriented projects and mixed use projects that are suitably located for such facilities.

- *Hazard Policy 1* states that 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.

- *Hazard Policy 2* states that 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", in the General Plan and should be considered in the development review process.

- *Hazard Policy 4* states that the City should continue updating, as necessary, the San José Building Code and Fire Prevention Code to address geologic, fire and other hazards.

- *Hazard Policy 6* states that disaster preparedness planning should be undertaken in cooperation with other public agencies and appropriate public interest organizations.

- *Fire Hazard Policy 2* states that all new development should be constructed, at a minimum, to the fire safety standards contained in the San José Building Code.

- *Fire Hazard Policy 3* states that new development adjacent to heavily grassed and semi-arid hillsides should be designed and located to minimize fire hazards to life and property, including the use of such measures as fire preventative site design, landscaping and building materials, and the use of fire suppression techniques, such as sprinklering.

- *Fire Hazard Policy 4* states that alternative water resources for fire fighting purposes should be identified for use during a disaster.

- *Fire Hazard Policy 5* states that anticipated fire response times and fire flows should be taken into consideration as a part of the Development Review process.

- *Fire Hazard Policy 6* states that 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 Hazard Policy 7* states that the City should regulate the storage of flammable and explosive materials and strongly encourage the proper transportation of such materials.

- *Hazardous Materials Policy 1* states that 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 3* states that 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 Waste Management Policy 1* states that all proposals to site a hazardous waste management facility shall assure compatibility with neighboring land uses and be consistent with the siting criteria established in the County Hazardous Waste Management Plan (CHWMP) and this Plan. Where the two conflict, this Plan shall govern.

- *Hazardous Waste Management Policy 2* states that areas designated for industrial uses may be appropriate for hazardous waste transfer/processing stations if, during the development review process, it is determined that such a use would be compatible with existing and planned land uses in the vicinity of the site and would meet the siting criteria established in the CHWMP and this Plan.

- *Hazardous Waste Management Policy 3* states that all proposals for new and expanded hazardous waste management facilities must provide adequate mitigation for identified environmental impacts.

- *Hazardous Waste Management Policy 4* states that a risk assessment shall be conducted as part of the environmental review process at the time a site-specific proposal for a hazardous waste facility is submitted to the City. This assessment should identify health, safety and environmental factors that may be unique to the site as well as to the types of waste to be managed. It should include an analysis of the potential for accidental and cumulative health and environmental impacts resulting from the proposed facility.

- *Hazardous Waste Management Policy 5* states that all proposals for hazardous waste facilities shall be consistent with the plans and policies of air and water quality regulatory agencies (i.e., Air Quality Management District, and the Regional Water Quality Control Board and this City).

- *Hazardous Waste Management Policy 6* states that transportation of hazardous waste from the point of origin to the appropriate hazardous waste management facility shall be by the most direct legal route, utilizing state or interstate highways whenever feasible, and shall minimize distances along residential and other non-industrial frontages to the fullest extent possible.

- *Hazardous Waste Management Policy 7* states that as part of the permitting process, transportation routes to and from hazardous waste facilities shall be designated by the City in order to minimize negative impacts on surrounding land uses.

- *Hazardous Waste Management Policy 8* states that hazardous waste management facilities shall, where feasible, be located at sites which minimize the risks associated with the transportation of hazardous waste. Given their need for larger land areas and need to avoid incompatibility with surrounding urban land uses, residuals repositories (waste disposal facilities) may be located farther from waste generation sources than other types of hazardous waste facilities.

- *Hazardous Waste Management Policy 9* states that proper storage and disposal of hazardous wastes shall be required to prevent leaks, explosions, fires, or the escape of harmful gases, and to prevent hazardous substances and wastes.

Specific Development Mitigation Measures Proposed By the Project

Hazard Impacts from Use, Storage, and Delivery of Hazardous Materials on the Site

In order to reduce potential hazardous material impacts to sensitive uses, the project would implement either measures 1 and 2 or measures 3 and 4 below.

1. Any sensitive commercial uses, such as day care centers, schools, medical clinics, and community centers, shall be required to be located at least 1,000 feet from any hazardous materials use or storage facility, or any site that could be used for such a facility, such as the following:

- Hazardous materials meeting the California Occupational Health and Safety Administration's (Cal/OSHA) definition of a material that presents a potential for catastrophic event;
- Chemicals that have a National Fire Protection Agency (NFPA) or a Hazardous Materials Identification System (HMIS) rating or two or greater for flammability, health, reactivity, and fire; and
- Underground storage tanks (USTs) or aboveground storage tanks (ASTs) that store hazardous materials.

If the safety and health objectives of the 1,000-foot separation requirement can be achieved to the satisfaction of the Director of Planning, Building, and Code Enforcement through an alternative combination of site design, building orientation, construction techniques, or other similar methods, then a lesser separation may be approved through issuance of a Planned Development Permit.

-AND-

2. Sensitive commercial uses shall be required to prepare and implement an emergency response plan for responding to circumstances that include the accidental release of hazardous materials. This plan could include designation of responsible persons, regular drills, and the identification of a "shelter in place" response that includes keeping all persons indoors, shutting windows, and shutting down air circulation systems.

-OR-

3. To ensure that hazardous materials impacts are minimized, the following types of hazardous materials shall be restricted from use on-site:

   - Toxic and highly toxic compressed gases;
   - Class 4 liquid and solid oxidizers
   - Unclassified detonatable and Class I organic peroxides;
   - Unstable reactive materials; and
   - Flammable oxidizing gases.

-AND-

4. Industrial uses on the site shall record a deed restriction that precludes the storage and/or use of acutely hazardous materials[39] on the project site in amounts that could lead to significant off-site consequences (substantial human health and safety risks from exposure/inhalation/explosion) in the event of an accidental release or upset, for as long as any day care centers or other centers vulnerable populations are operational.

The project proposes to implement the recommendations in the environmental and geotechnical investigation, including the following mitigation measures, to avoid or reduce hazardous materials impacts to a less than significant level:

[39] Although current law does not refer to "acutely hazardous materials," the term is still widely used because it defines a set of substances that can have adverse impacts over distance when accidentally released. Acutely hazardous materials possess toxic, reactive, flammable or explosive properties.

Subsurface Features

- Prior to site development, former regulatory closure shall be obtained for the removal of the two former USTs and AST.

- If encountered during site development, septic systems shall be removed.

Impacts from Arsenic

- The potential risks associated with incidental ingestion of the contaminated soil shall be avoided or reduced by site management practices and engineering controls that limit/eliminate future short term and long-term contact with soil containing elevated concentrations of arsenic to the satisfaction of the Department of Toxics Substance Control (DTSC). These practices may include soil removal, engineering controls (e.g., dust control during construction and/or the placement of asphalt/concrete cover as part of development).

  Site specific management practices shall be documented in a Site Management Plan, which would be based on actual development specifications. Regulatory agencies (e.g., DTSC) may require that this restriction be included as part of the Site Management Plan.

Impacts from Presence of High-Pressure Gas Lines

- Proposed structures more than two stories in height to be located within 250 feet of nearby high-pressure gas lines shall include and incorporate appropriate design features (i.e., reinforced walls, blast-proof glass, etc.) to reduce safety impacts. Such features may include:

  - Locating doors and windows such that they do not directly face the pipeline;
  - Selecting thermally tempered glazing for doors and windows;
  - Increasing the thickness of such glazing;
  - Strengthening the framing around doors and windows;
  - Increasing the structural integrity of the wall and roof systems by using a larger framing wood system; and
  - Using reinforced concrete or masonry construction materials.

  The specific design features to be included in the structures shall be selected prior to issuance of PD Permit(s) through consultation with an engineer retained by the project proponent with experience in identifying and analyzing a building's response to an explosive threat due to an accidental explosion occurring with gas discharge from high-pressure gas main. The measures to be incorporated into the structures shall be approved by the Director of PBCE and the Fire Chief.

- Any proposed grading and excavation activities in the vicinity of the gas lines shall conform to PG&E's requirements.

4. Conclusion

The proposed project, with the implementation of the recommendations made in the environmental and geotechnical investigation and the above mitigation measures, would not result in significant hazardous materials impacts. **(Less Than Significant Impact with Mitigation Incorporated)**

K. UTILITIES AND SERVICE SYSTEMS

1. Setting

Water Service

Water service to the project area is supplied by the Great Oaks Water Company. Great Oaks Water Company, a retailer supplied by the Santa Clara Valley Water District, has provided public utility service to portions of the Blossom Valley-Santa Teresa-Edenvale-Coyote Valley area of the City of San José since the early 1960s. Great Oaks Water Company serves over 20,000 customers. Great Oaks has access to two water sources for distribution: groundwater and treated surface water. These supplies are both managed by the Santa Clara Valley Water District (SCVWD), including management of groundwater through groundwater recharge using imported and local surface water supplies. All of the water used in Great Oaks' system is supplied from groundwater wells. Great Oaks does not use SCVWD treated water through surface connections, however, two connections are available if the need should arise.[40]

Great Oaks currently obtains approximately 13,000 acre-feet per year (AFY) from 16 wells within the Santa Teresa sub-basin, with an average depth of 300 feet. The Santa Teresa sub-basin is managed by the SCVWD and is replenished by local surface water and imported surface water supplies through percolation and recharge operations conducted by the SCVWD (*Great Oaks Water Company 2005 Urban Water Management Plan,* April 2005).[41] Great Oaks Water Company used a total of 10,685 acre feet of water in 1995, 13,048 in 2000, and 12,924 in 2004 (*Great Oaks Water Company 2005 Urban Water Management Plan,* April 2005).

Currently, there are no existing water lines serving the site; however, there is 12-inch water line in Great Oaks Boulevard and Tuscon Way.[42] There is a 12-inch water line north of adjacent Equinix Colocation facility that comes under Monterey Highway and connects to the 12-inch water line in Great Oaks Boulevard. There is also a 12-inch water line in Via del Oro, on the west side of SR 85, however, this line does not go under the SR 85 in Via del Oro.

Currently, there is no activity on the site. Therefore, there is no water being used on-site.

Wastewater Treatment/Sanitary Sewer

Water Pollution Control Plan (WPCP)

Wastewater treatment service in the project area is provided by the City of San José through the San José/Santa Clara Water Pollution Control Plant (WPCP). The WPCP is located in Alviso and serves over 1,500,000 people in San José, Santa Clara, Milpitas, Campbell, Cupertino, Los Gatos, Saratoga, and Monte Sereno.

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[40] Roeder, John. Great Oaks Water Company. Written communications. 2005.
[41] This document is available for review at Great Oaks Water Company's office.
[42] Schaaf & Wheeler. Plan for the Water Service Installation Great Oaks Blvd. Map. 24 May 2002.
George S. Nolte and Associates. Plan for the Water Service Installation IBM 099. Map. 1 May 1985.

The City's level of service goal for sewage treatment is to remain within the capacity of the WPCP. The existing capacity of the WPCP is 167 million gallons per day (mgd) during dry weather flow.[43] There is no anticipated increase in capacity planned for the next 10 to 15 years. In 2004, WPCP currently processes an estimated 97 mgd of influent (dry weather peak).[44] The average dry weather influent flow (or peak week flow) is determined as a highest average flow during any five-weekday period between the months of May through October.

In 2004, the WPCP's average dry weather effluent of 97 mgd was below the 120 mgd (dry weather) total flow trigger imposed by the State Water Resources Board and the Regional Water Quality Control Board (RWQCB).[45] The flow trigger was implemented due to concerns over the effects of additional freshwater discharges from the WPCP. In response to these issues, the City of San José has prepared the South Bay Action Plan, to prevent degradation of the salt water marshland habitat and study the discharge of metals from the WPCP in excess of RWQCB standards. The South Bay Action Plan describes in some detail the conservation, reuse, and diversion activities designed to reduce the effluent flow from the WPCP to below 120 mgd.

In addition, a Clean Bay Strategy has been developed by the City of San José and the agencies tributary to the WPCP, to address water conservation and the pollutant loading to the Bay. The Clean Bay Strategy has identified numerous programs and projects in the areas of increased education and awareness, pollutant source detection, and greater regulatory requirements to reduce pollutant levels. The imposition of additional regulatory requirements as a result of the flow trigger has not yet occurred due to the City's good faith efforts in implementation of the Clean Bay Strategy. The RWQCB, however, may require additional control measures to be implemented at any time it deems necessary.

Existing Sanitary Sewer Lines

The San José 2020 General Plan calls for a level of service (LOS) D for sanitary sewer lines, which represents a free flow of wastewater sufficient to prevent "back up" problems. New development is required by existing policies to avoid or minimize impacts upon any existing or anticipated LOS E sewer lines by constructing or contributing to the construction of new lines or by waiting for completion of planned sewer lines improvements.

The sanitary sewer lines in the area are owned and maintained by the City of San José. Sewer lines are inspected and maintained by the Department of Transportation, and are rehabilitated or replaced by the Department of Public Works. There is a 12-inch sewer line in Great Oaks Boulevard and a 10-inch sewer line in Via del Oro. There is also a 21-inch sewer line in an easement across the Hitachi property, flowing south under SR 85.

Currently, there is no activity on the site. Therefore, the project site generates no sewage.

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[43] City of San José. San José/Santa Clara Water Pollution Control Plant. City of San José Environmental Services. 13 April 2005. http://www.ci.san-jose.ca.us/esd/wpcp.htm.
[44] Blair, Geoff. Memo from the City of San José Environmental Services Department. 4 November 2005.
[45] City of San José. Clean Bay Strategy Reports. 9 April 2005. City of San José Environmental Services. 12 September 2005. http://www.sanjoseca.gov/esd/water-pollution-prevention/cbs.htm.

Planned Improvements to Public Sanitary Sewer Lines in the Area

In late 2004 and early 2005, the City constructed a public improvement project to rehabilitate approximately 7,100 linear feet of existing 30-inch sewer lines in Bangor Avenue, Beswick Drive, Cottle Road, and Santa Teresa Boulevard, adjacent to the project site. This Monterey-Riverside Sanitary Sewer Phase IV project will rehabilitate the existing sanitary sewer trunk line with a cured-in-place liner to prolong the life of the sewer pipe.[46]

Storm Drainage Systems

The San José 2020 General Plan level of service policy for storm drainage in the City is to minimize flooding on public streets and to minimize property damage from storm water. The City of San José owns and maintains municipal storm drainage facilities throughout the City. Storm drain lines are inspected and maintained by the Department of Transportation and are installed, rehabilitated, or replaced by the Department of Public Works.

The site is relatively level, sloping generally from east to west. Currently, eight percent of the project site is impervious, principally consisting of buildings and roadways. The remaining 92 percent of the site is pervious, consisting of orchards and bare ground. Under existing site conditions, during peak runoff from a 10-year storm event, the project site generates approximately 20 cfs of runoff. During peak runoff from a 100-year storm event, the project site generates approximately 30 cfs of runoff (refer to Appendix J).

Storm drainage lines in the area are also provided and maintained by the City of San José. Runoff from the project site and the adjacent Equinix property is conveyed to a 24-inch storm drain line located in Great Oaks Boulevard, which has a capacity of approximately 12 cubic feet per second (cfs). The line extends north and connects to a 48-inch storm drain line that collects drainage from east of Monterey Road and flows westerly and southerly in an easement in Brooklyn and Endicott Boulevards, two private streets on the adjacent Hitachi campus. This 48-inch storm drain main joins two other mains, a 42-inch and 54-inch, where Endicott Boulevard terminates at SR 85, approximately 1,500 feet northeast of Via del Oro. These two mains flow to the south, under the freeway in Miyuki Drive to Santa Teresa Boulevard, and ultimately discharging to Canoas Creek. Canoas Creek flows into the Guadalupe River, which eventually flows to the San Francisco Bay. The existing storm drain system has a total capacity of approximately 110 cfs, which is equivalent to a 2-3 year return period storm event.

Solid Waste

Assembly Bill 939 established the California Integrated Waste Management Board and required all California counties to prepare integrated waste management plans. AB939 also required all municipalities to divert 25 percent of their solid waste from landfill disposal by January 1, 1995. Fifty percent of the waste stream was to be diverted by the year 2000. The City of San José currently generates approximately 1,695,000 tons of solid waste annually, and diverts about 59 percent of its waste streams through a variety of waste diversion programs including curbside recycling and yard waste collection. In order for the City to maintain the 59% diversion rates, at least 333,291 pounds of waste need to be recycled.

[46] City of San José. 17 January 2005. www.sanjoseca.gov/pub_wks/cip/PrjDetail.asp?prj_id=17498count.13.

Solid waste and recycling collection services for businesses in San José are provided by various franchised waste and recycling haulers. The City of San José offers businesses a free market system for garbage and recycling and businesses can chose a hauler and/or recycler that best suits the needs of their business. Non-residential waste may be disposed at any of four privately owned landfills in San José, or at other landfills outside the County. According to the Source Reduction and Recycling Element prepared for the City of San José, and the County-wide Integrated Waste Management Plan, there is sufficient landfill capacity for Santa Clara County for approximately 23 more years.

Currently, there is a minimal amount of activity on the site. Therefore, the project site generates a minimal amount of waste.

Electricity and Natural Gas Services

Natural gas and electric service is provided to the site area by Pacific Gas and Electric. There are two electrical substations located on the adjacent Hitachi campus that provide electricity for the campus: one is a 115-kilovolt (kV) substation, which contains a 50-megawatt electrical generator, and the other is a 115-kV substation. There are various overhead lines and underground electrical utility facilities in the project area.

Several high-pressure gas transmission lines are located in the project area. There is a six-inch gas main located in Monterey Highway, north of the project site, which operates at 175 pounds per square inch (psi). This main extends north and becomes a 10-inch main that operates at 400 psi.

Currently, there is a minimal amount of activity on the site. Therefore, the project site uses a minimal amount of electricity and natural gas.

2. Utilities and Service Impacts

Thresholds of Significance

For the purpose of this EIR, a utility service impact is considered significant if the project would:

- Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board;
- Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- Not have sufficient water supplies available to serve the project from existing entitlements and resources, and would require new or expanded entitlements;
- Result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments;

- Be served by a landfill without sufficient permitted capacity to accommodate the project's solid waste disposal needs; or
- Be inconsistent with federal, state, or local statutes and regulations related to solid waste.

Impacts of General Plan Amendment and Specific Development Project

Water Service and Supply Impacts

Development associated with the proposed project would increase demand for water as compared to existing conditions. It is estimated that the proposed project would increase the water use (above existing conditions) at the site by approximately 296,530 gallons per day.[47]

As described previously throughout this EIR, the project site currently has entitlements to construct up to 1.5 million square feet of industrial uses. Great Oaks Water Company recently updated their Urban Water Management Plan (UWMP) in May 2005. UWMPs provide information on supply, demand, and service ability of water suppliers. Great Oaks Water Company's UWMP projects water supply, water demand, and service ability out to the year 2030. The Great Oaks Water Company UWMP includes adequate water supply and water service to the project site to accommodate the existing entitlements.[48] In comparison to the existing entitlements, the proposed project would result in a net decrease of water use by approximately 124,710 gallons per day.

In accordance with state law (SB 610) and CEQA, all proposed projects generating specific amounts of increased water usage are required to provide a water supply analysis addressing long-term water supply availability for the proposed project. According to the Great Oaks Water Company UWMP 2030, there is sufficient water supply to serve the project site under the existing entitlements. The Great Oaks Water Company UWMP is on-file and available for review at the City of San José Department of Planning, Building, and Code Enforcement, located at 200 East Santa Clara Street, or at the Great Oaks Water Company offices, located at 15 Great Oaks Blvd, Suite 100, during normal business hours. Since the proposed project would result in a decrease in water use compared to development under existing entitlements, a water supply assessment is not warranted.

Great Oaks Water Company would provide water service to the proposed development on the site through the installation of new water lines and mains. These new mains and water facilities will be owned and maintained by Great Oaks Water Company, and water supply for the new development would be provided by this extension of Great Oaks Water Company's water network.

[47] Water usage on-site was based on sewer generation rates of 0.089 gallons per square foot per day for commercial uses and 0.212 gallons per square foot per day for research and development uses. Typically, sewage generation is 85 percent of total water use. Source: City of San José. Sewage Treatment Plant Connection Fees, Coefficients and Rates. March 2001.

[48] Roeder, John. Great Oaks Water Company. Personal Communications. April-May 2004.

Recycled Water

The use of recycled water as a source of irrigation water is not anticipated at this time because there is no source of recycled water in the immediate area of the project site. The nearest reclaimed water facility is at the intersection of Monterey Highway and Bernal Road.[49] In addition, there is an agreement between the City of San José and Santa Clara Valley Water District restricting the use of reclaimed water for irrigation in areas where there is an unconfined groundwater aquifer. The project site is located over an unconfined aquifer. Even though reclaimed water is not available to the site, it is envisioned that the project will construct all irrigation facilities in accordance with the requirements of the South Bay Water Recycling program, including the installation of purple pipes, to facilitate connection to and use of recycled water should it become available in the future.

Fire Supply

The typical required fire flow for a new development project of this type is 4,500 gallons per minute (gpm) at a static pressure of 20 psi. According to the Great Oaks Water Company, improvements to their water network, resulting from the extension and interconnection of water mains as described above, will provide a fire supply at the rate of up to 6,500 gpm at 20 psi, which would exceed the City's requirement.[50]

The project proposes the following measures to further reduce water usage:

- To the extent applicable and required by the current Plumbing and Building Code, the project shall include water efficient features, such as high efficiency and dual flush toilets, waterless urinals, electronic faucets, and hot water demand system and dual plumbing for gray and recycled water.

- The project irrigation system shall be designed and constructed to receive recycled water when this water becomes available to the site area. The design and construction of the irrigation system on the site must conform to the South Bay Water Recycling program rules and regulations and must be submitted to and approved by South Bay Water Recycling.

- The project shall incorporate drought-resistant landscaping to the satisfaction of the Director of Planning, Building, and Code Enforcement.

Development under the existing entitlements would result in similar water needs as the proposed project.

- **The UWMP of the Great Oaks Water Company and its wholesale supplier, the Santa Clara Valley Water District, indicate that there are sufficient water supplies available to serve development of the project site under existing entitlements. The proposed project is anticipated to generate less water demand than development under existing entitlements. For these reasons, the project**

[49] City of San José. South Bay Water Recycling Map. http://www.ci.san-jose.ca.us/sbwr/SBMap.htm and conversations with staff from the City of San José Municipal Water Department. 2004.
[50] City of San José. Hitachi Campus GPA and PD Zoning Project DEIR. March 2005.

would not have a significant impact on water service or supply. (Less Than Significant Impact)

Storm Drainage Impacts

As discussed in *Section II.I. Hydrology and Water Quality*, the proposed project would result in an increase in impervious surface area and increase peak flow rates. The proposed project, therefore, would exacerbate impacts on the existing storm drain system between the site and Canoas Creek.

Development under existing conditions would result in similar impacts to the storm drain system as the proposed project.

- **Future development would increase the amount of impervious surfaces on the site and, therefore, increase the amount of storm water runoff from the site. Runoff from the project site is estimated to increase three times compared to existing conditions. (Significant Impact)**

Wastewater Treatment/Sanitary Sewer Impacts

The development allowed by the proposed land use designation on the project site would increase the demand for sanitary sewer services in comparison to existing levels. Currently, there are no sewer lines on the project site. Sewer lines would need to be installed to serve future development on the project site. It is estimated that the proposed project would result in the increase of sewage by approximately 252,000 gallons of sewage a day. This would be an approximate 0.002 percent increase in the current amount of sewage treated at the WPCP. For this reason, it is not anticipated that the project would result in significant sewage impacts.

The project proposes the following measures to further reduce sanitary sewer impacts:

- Site-specific design, including sizing of the new and relocated sanitary sewer lines shall be completed at the Planned Development Permit stage, as development is proposed on specific parcels. The design will be in accordance with current City of San José standards for capacity, materials, and installation.

- The design of public mains shall be submitted to the City Public Works Department, Transportation and Development Division, for review and approval as a part of the preparation of construction documents.

- Design of private facilities shall be in accordance with the appropriate sections of the Uniform Plumbing Code and submitted to the City Building Department for review and issuance of the necessary permits.

Development under existing conditions would generate similar amounts of sewage as the proposed project.

- **Development of the proposed project would increase the amount of sewage generated from the site by 252,000 gallons per day, which is minimal increase in**

the total amount of sewage treated at the WPCP. Therefore, the project is not anticipated to have a significant impact. (Less Than Significant Impact)

Solid Waste Impacts

As mentioned previously, collection services for businesses in San José are provided by various City authorized franchised waste and recycling haulers. Future office/R&D and commercial uses would be able to choose a hauler and/or recycler to best suit their needs.

Implementation of the proposed project would result in an increase in solid waste. Based on the most conservative (the highest) waste generation rates for office/R&D use, the industrial portion of the project could generate up to 420,000 pounds per week, and the retail and commercial uses could generate up to 144,900 pounds of waste per week.[51] In total, the proposed project could generate up to an additional 564,900 pounds of waste per week.

According to the County of Santa Clara Integrated Waste Management Plan, Summary Plan and Siting Element, the County is served by six fully permitted solid waste disposal sites. At the time this Summary Plan and Siting Element was prepared, the County estimated that between 29 and 47 years of disposal capacity remains within the County.[52] It is likely that most of the solid waste from the site would be disposed of at the Newby Island Sanitary Landfill. Capacity estimates at Newby Island indicate that that facility currently has capacity for an additional 14,978,546 cubic yards of waste.[53] Based on the available disposal capacity in the County, the project would not result in significant solid waste impacts.

Development under the existing entitlements would generate similar amounts of solid waste as the proposed project.

- **Development associated with the proposed project would result in increases in solid waste and recyclables collected under City contracts, as compared to the existing condition. These increases would not exceed either the capacity of the collection systems or the secured landfill capacity. (Less Than Significant Impact)**

Electricity, Natural Gas, and Telephone Impacts

Facilities for providing electrical, 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. Construction of the proposed development would result in an increase in the demand for electric and natural gas service on the site, as compared with existing conditions. Given the urban location of the site, and the fact that electric and natural gas service is currently provided to the site area, the provision and expansion of service for the

[51] Waste generation is based on 0.084 pounds/square foot/day for professional office and 0.046 pounds/square foot/day for commercial/retail (California Integrated Waste Management Board. Estimated Solid Waste Generation Rates for Commercial Establishments. 5 January 2004. State of California. 5 February 2004. http://www.ciwmb.ca.gov/wastechar/WasteGenRates/WGCommer.htm.).

[52] County of Santa Clara Integrated Waste Management Plan. Summary Plan and Siting Element November 1995. p. II-7.

[53] California Integrated Waste Management Board. Homepage. March 9, 2005. http://www.ciwmb.ca.gov/Profiles/Facility/Landfill.html.

project would not present a significant impact. All of the utility providers monitor growth patterns and plans of the urban jurisdictions in Santa Clara County, including the City of San José. Given the developed nature of the area, the site location within the urban envelope, and the presence of existing electricity, natural gas, and telephone service near the site, it is not anticipated that any of the utility companies would have difficulty expanding infrastructure to serve development allowed by the City and County General Plans.

Development under the existing conditions would result in similar demand for electrical, natural gas, and telephone services as the proposed project.

- **Development of the proposed project would result in an increase in demand for electrical, natural gas, and telephone services, but would not result in a need for significant new infrastructure on or near the site. (Less Than Significant Impact)**

3. **Mitigation and Avoidance Measures**

General Plan Policies

- *Services and Facilities Level of Service Goal 2* provides for achieving the following levels of service for City services:
  - For sanitary sewers, level of service "D";
  - For sewage treatment, to remain within the capacity of the Water Pollution Control Plant; and
  - For storm drainage, to minimize flooding on public streets and to minimize property damage from storm water.

- *Level of Service Policy 2* states that the existing community should not be burdened by service demands of new development. Capital and facility needs generated by new development should be financed by new development.

Water Service and Supply

- *Water Resources Policy 2* states that water resources should be utilized in a manner which does not deplete the supply of surface or groundwater, and efforts to conserve and reclaim water supplies, both local and imported, should be encouraged.

- *Water Resources Policy 10* states that the City should encourage more efficient use of water by promoting water conservation and the use of water-saving devices.

- *Water Resources Policy 11* states that the City should promote the use of reclaimed water when feasible, particularly for industrial users, for irrigation, and in groundwater recharge areas.

Storm Drainage

- *Level of Service, Storm Drainage and Flood Control Policy 12* states that new projects should be designed to minimize potential damage due to storm waters and flooding to the site and other properties.

- *Storm Water Goal 2* states storm drainage must minimize flooding on public streets and storm drainage must minimize property damage from storm water.

- *Water Resources Policies Policy 8* states the City should establish policies, programs and guidelines to adequately control the discharge of urban runoff and other pollutants into the City's storm drains.

- *Water Resources Policy 12* states that 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.

Sanitary Sewer

- *Level of Service Policy 2* states that it is the City's policy to maintain the level of service for sanitary sewers at LOS D.

- *Sewage Treatment Policy 7* states sewage treatment must remain within the capacity of the Water Pollution Control Plan.

- *Sewage Treatment Policy 8* states the operation of the Water Pollution Control Plant should comply with the water quality standards for the South San Francisco Bay established by the RWQCB and implemented through NPDES permits.

- *Sewage Treatment Policy 9* states the City should continue to encourage water conservation programs which result in reduced demand for sewage treatment capacity.

Solid Waste

- *Solid Waste Goal 2* is to extend the life span of existing landfills by promoting source reduction, recycling, composting, and transformation of solid wastes.

- *Solid Waste Goal 3* is to locate and operate solid waste sites in a manner which protects environmental resources.

- *Solid Waste Goal 6* is to promote the equitable distribution of Santa Clara County's solid waste disposal capacity among all jurisdictions within the City.

- *Solid Waste Policy 1* is to monitor the continued availability of long-term disposal capacity to ensure adequate solid waste disposal capacity.

Electricity and Natural Gas

- *Urban Design Policy 7* states that the City should require the undergrounding of distribution utility lines serving new development sites as well as proposed redevelopment sites. Overhead lines providing electrical power to light rail transit vehicles and high tension electrical transmission lines are exempt from this policy.

Other Program Mitigation Measures

Integrated Waste Management Program

The generation of solid waste resulting from future development would be minimized through implementation of the City's Integrated Waste Management Program that provides programs and services to help businesses prevent and/or reduce their waste, including the following:

- The processing and marketing of recyclables at materials recovery facilities and community relations/education programs;

- **California Materials Exchange (CalMAX)**, a service designed to help businesses find markets for their own non-hazardous materials that they normally discard;

- **Solid Waste Characterization**, a program that helps businesses analyze their waste streams and determine where they can reduce their waste; and

- **Business Resource Efficiency and Waste Reduction Programs**, a service that provides resources and information to businesses on how they can reduce their waste.

Specific Development Mitigation Measures Proposed By the Project

The project proposes the measures identified in *Section II.I. Hydrology and Water Quality* to reduce storm drain impacts to a less than significant level.

4. Conclusion

Implementation of the above General Plan goals and policies and the specific mitigation measures described in *Section II.I. Hydrology and Water Quality* will ensure that any impacts to utilities and services incurred from implementation of the proposed General Plan amendment and Planned Development Zoning project will be less than significant. **(Less Than Significant Impact with Mitigation Incorporated)**

L. ENERGY[54]

This section was prepared pursuant to CEQA Guidelines Section 15126(c) and Appendix F (Energy Conservation of the Guidelines), which require that EIRs include a discussion of the potential energy impacts of proposed projects with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy.

1. Introduction

Energy consumption is analyzed in an EIR because of the environmental impacts associated with its production and usage. Such impacts include the depletion of nonrenewable resources (e.g., oil, natural gas, coal, etc.) and emissions of pollutants during both the production and consumption phases.

Energy usage is typically quantified using the British Thermal Unit (BTU).[55] As points of reference, the approximate amount of energy contained in a gallon of gasoline, a cubic foot of natural gas, and a kilowatt hour (kWhr) of electricity are 123,000 BTUs, 1,000 BTUs, and 3,400 BTUs, respectively.

Energy conservation is embodied in many federal, state, and local statutes and policies. At the federal level, energy standards apply to numerous products (e.g., the EnergyStar program) and transportation (e.g., fuel efficiency standards). At the state level, Title 24 of the California Administrative Code sets forth energy standards for buildings and rebates/tax credits for installation of renewable energy systems, and the Flex Your Power program promotes conservation in multiple ways. At the local level, the City's General Plan includes strategies and policies whose objectives include reduction in energy usage. The project's consistency with the City's Sustainable City Strategy, Green Building Policy and Energy Goal are discussed in *Section I.G. Consistency with Plans and Policies*. A brief description of each is provided below.

Sustainable City Strategy

The Sustainable City Major Strategy is a statement of San José's desire to become an environmentally and economically sustainable city. The Strategy seeks to reduce traffic congestion, pollution, wastefulness, and environmental degradation of our living environment by conserving natural resources and preserving San José's natural living environment.

Green Building Policy

The Green Building Policy fosters long-term social, economic, and environmental sustainability in building and development while making green building the standard practice in San José and celebrating sustainability as a core value to the community. The vision for Green Building in San José is a place where the people have the knowledge and opportunities to build and occupy dwellings that have a maximum impact on the well being of the occupants and a minimal impact on the environment. The Green Building Policy goals

[54] This section is based largely on data and reports produced by the California Energy Commission and the Energy Information Administration of the U.S. Department of Energy. The specific sources and citations are listed at the end of this EIR in the *Section VII. References*.

[55] The British thermal Unit (BTU) is the amount of energy that is required to raise the temperature of one pound of water by one degree Fahrenheit.

center on five main categories: sustainable sites, energy and atmosphere, water efficiency, materials and resources, and indoor environmental quality.

Energy Goal

The City's Energy Goal is to foster development which, by its location and design, reduces the use of non-renewable energy resources in transportation, buildings, and urban services (utilities) and expands the use of renewable energy resources.

2. Existing Setting

Total energy usage in California was 8,519 trillion BTUs in the year 2000, which equates to an average of 252 million BTUs per capita. Of California's total energy usage in 2000, the breakdown by sector was 15 percent residential, 14 percent commercial, 35 percent industrial, and 36 percent transportation. This energy was primarily supplied in the form of coal (2.9 million tons), natural gas (2.3 trillion cubic feet), petroleum (647 million barrels), nuclear electric power (35.2 trillion kWhr), and hydroelectric power (42.8 trillion kWhr).

Given the nature of the proposed project (i.e., a land use decision in San José), the remainder of this discussion will focus on the three most relevant sources of energy: electricity for industrial and commercial uses, natural gas for industrial and commercial uses, and gasoline for vehicle trips associated with industrial and commercial uses.

Electricity

In 2003, California used over 276,000 gigawatt hours of electricity. This electricity was produced from power plants fueled by natural gas (37 percent), coal (21 percent), hydro (16 percent), nuclear (15 percent), and renewables (11 percent). Approximately 78 percent of the electricity was generated within California, with the balance imported from other states, Canada, and Mexico.

Electricity usage in California for differing land uses varies substantially by the type of uses in a building, type of construction materials used in a building, and the efficiency of all electricity-consuming devices within a building. The average annual usage of electricity is roughly 13 kWhr/square foot for all commercial buildings and roughly 18 kWhr/square foot for office buildings.

Electricity supply in California involves a complex grid of power plants and transmission lines located in the Western United States, Canada, and Mexico. The issue is complicated by market forces that have become prominent since 1998, which is when a new regulatory environment commonly referred to as "deregulation" took effect in California. Supply is further complicated by the fact that the peak demand for electricity is significantly higher than the off-peak demand. For example, in August 2004, peak electric demand - due in large part to hot weather - reached a record high of 44,497 megawatts, which is almost double the lowest demand period.

In 2000-2001, electric demand exceeded supply on various occasions, which required utilities to institute systematic rotating outages to maintain the stability of the grid and to prevent widespread blackouts. Since that time, additional generating capacity has come on-line and upgrades to various transmission lines are occurring.

According to the California Energy Commission's 2003 Integrated Energy Policy Report, the current outlook is that California will have an adequate supply of electricity through 2009. However, the report notes that peak demand reserve shortages could return by 2006 and possibly earlier.

Natural Gas

In 2001, California used almost 2.4 trillion cubic feet of natural gas. The natural gas was used to produce electricity (41 percent), in industrial uses (28 percent), in commercial uses (10 percent), and in residential uses (21 percent). Approximately 16 percent of the natural gas was produced within California, with the balance imported from other states and Canada.

Natural gas usage in California for differing land uses varies substantially by the type of uses in a building, type of construction materials used in a building, and the efficiency of all gas-consuming devices within a building. The average annual usage of natural gas is roughly 37 cubic feet/square foot for all commercial buildings and roughly 29 cubic feet/square foot for office buildings.

According to the California Energy Commission's 2003 Integrated Energy Policy Report, the current outlook is that Northern California will have an adequate supply of natural gas through 2007. The report, however, notes meeting peak demand under extreme weather conditions may require gas infrastructure improvements (e.g., additional pipeline capacity) earlier than currently programmed.

Gasoline for Motor Vehicles

Californians presently consume roughly 49.5 million gallons of gasoline and diesel each day. This is a 53 percent increase over the amount that was used 20 years ago. The primary factors contributing to this increase are: 1) population growth, 2) declining per-mile cost of gasoline, 3) land use patterns that have increased the distance between jobs and housing, and 4) a shift in consumer preferences to larger, less fuel efficient motor vehicles.

The average fuel economy for the fleet of light-duty vehicles (autos, pickups, vans, and SUVs) steadily increased from about 12.6 miles-per-gallon (mpg) in the mid-1970s to the current 20.7 mpg. No further improvements in the average fuel economy for the overall fleet, however, are projected through the year 2020. This conclusion is based on the fact that projected increases in the number of fuel efficient cars (e.g., hybrids) will be offset by projected increases in the number of SUVs, pickups, and vans.

Although no new refineries have been constructed in California since 1969, supply has kept pace with demand though a combination of refinery upgrades/modernizations, and out-of-state imports.

According to the California Energy Commission's 2003 Integrated Energy Policy Report, the demand for gasoline and diesel for on-road vehicles is projected to increase by 36 percent over the next 20 years. Imports of foreign crude oil will increase as in-state and Alaskan supplies diminish. Since California refineries are already operating close to their full capacity, daily imports of refined gasoline and diesel are expected to double over the next 20 years. Unless out-of-state facilities expand, the gasoline and diesel markets will become

increasingly volatile, with the likelihood of shortages and more prolonged periods of high prices.

3. Energy Impacts

Thresholds of Significance for Energy Impacts

For the purpose of this EIR, an energy impact is considered significant if the project would:

- Use fuel or energy in a wasteful manner;
- Result in a substantial increase in demand upon energy resources in relation to projected supplies; or
- Result in longer overall distances between jobs and housing.

The proposed project would result in the construction of up to one million square feet of industrial uses and up to 450,000 square feet of commercial uses in southern San José. Energy will be consumed during both the construction and operational phases of these uses. The construction phase will require energy for the manufacture and transportation of building materials, preparation of the site (e.g., grading), and the actual construction of the buildings. The operational phase will consume energy for multiple purposes including, but not limited to, building heating and cooling, lighting, appliances, electronics, office equipment, and commercial machinery. Operational energy will also be consumed during each vehicle trip associated with these proposed uses. Rough estimates of operational energy usage by the proposed project are provided in Table 25 below.

Table 25
Estimated Average Annual Energy Usage

Land Use	Usage/Unit	# of Units	Additional Annual Energy
Commercial			
Electricity	13 kWhr/ft^2/year	Up to 450,000 ft^2	6 million kWhr
Natural Gas	37 ft^3/ft^2/year	Up to 450,000 ft^2	17 million ft^3
Office/R&D			
Electricity	18kWhr/ft^2/year	Up to one million ft^2	18 million kWhr
Natural Gas	29 ft^3/ft^2/year	Up to one million ft^2	29 million ft^3
Transportation			
Gasoline	0.048 gallons/mile	29,352 Daily trips	2 million gallons*

Notes:
du= dwelling unit, ft^2= square feet, ft^3= cubic feet, kWhr=kilowatt hour, Average vehicle trip length= 3 miles
** Additional annual gasoline expenditure was calculated the following way: (29,352 trips/day) (3 miles/trip) (0.048 gallons/mile) (365 days/year) = 1.5 million gallons/year ≈ 2 million gallons/year*

The energy usage shown in Table 10, while a small percentage of the energy consumed in San José as a whole, is nonetheless substantial in view of the above-described projections regarding future supplies. The project, therefore, would result in a substantial increase in demand upon energy resources in relation to projected supplies.

It should also be noted that the project, by constructing industrial uses on the site, would provide jobs in the southern part of San José. This would provide the opportunity for reverse commute and could incrementally help reduce an existing intraregion commute pattern from residential areas in the south county to jobs in the northern part of the county, but less so than the site's current entitlements for approximately 1.5 million square feet of industrial land uses, which would provide 1,156 more jobs than the current proposed project.

In comparison to the existing entitlements, the proposed project would use less electricity, but more natural gas and gasoline than development under existing entitlements (see Table 26).

Table 26
Difference in Estimated Annual Energy Usage
Between the Proposed Project and the Existing Entitlements

Development On-Site	Electricity	Natural Gas	Gasoline
Proposed Project	24 million kWhr	46 million ft^3	2 million gallons
Existing Entitlements	27 million kWhr	44 million ft^3	631,000 gallons
Difference in Energy Usage	3 million kWhr	2 million ft^3	~1.4 million gallons

- **The project would provide industrial and commercial uses near existing housing, which could lead to some reduction in transportation related to energy consumption. The project, however, would result in a substantial increase in energy usage on the site. The increase in energy usage on the site would increase the demand upon energy resources; therefore, the project would result in a significant impact on energy resources. (Significant Impact)**

4. **Mitigation and Avoidance Measures**

General Plan Policies

- *Green Building Policy 3* states that the City of San José shall provide leadership and guidance to encourage the application of green building practices in private sector planning, design, construction, management, renovation, operations, and demolition of buildings by promoting the voluntary application of the San José Green Building Policy goals and the "San José LEED" Green Building Rating System.

- *Energy Policy 1* states that the City should promote development in areas served by public transit and other existing services.

- *Energy Policy 2* states that decisions on land use should consider the proximity of industrial and commercial uses to major residential areas in order to reduce the energy used for commuting.

- *Energy Policy 4* states that the energy-efficiency of proposed new development should be considered when land use and development review decisions are made. The City's design techniques include provisions for solar access, for siting structures to maximize natural heating and cooling, and for landscaping to aid passive cooling protection from prevailing winds and maximum year-round solar access.

- *Energy Policy 5* states that the City should encourage owners and residents of existing developments to implement programs to use energy more efficiently in buildings and in their transportation choices, to reduce dependency on automobiles, and to explore alternative energy sources.

- *Energy Policy 6* states that all street lights in areas outside of the Downtown Core Area should use the low-pressure sodium vapor.

State Law

All new buildings shall be constructed to meet the requirements of Title 24 of the California Administrative Code, as it pertains to energy efficiency.

Specific Development Mitigation Measures Proposed By the Project

The project proposes the following mitigation measures to reduce the project's energy consumption to a less than significant level:

Measures to Reduce Energy Consumption During Demolition

- The project shall have a waste management plan for recycling of construction and demolition materials in place and operating at the beginning of the project.[56] Prior to issuance of building permits, the City will review the plan. The plan shall be completed to the satisfaction of the Director of Planning, Building, and Code Enforcement.

- The project shall recycle or salvage a minimum of 50 percent (by weight) of construction, demolition, and land clearing waste.[57]

Measures to Reduce Energy Consumption by Design

- The project shall incorporate principles of passive solar design to the satisfaction of the Director of Planning, Building, and Code Enforcement. Passive solar design is the technology of heating, cooling, and lighting a building naturally with sunlight rather than with mechanical systems because the building itself is the system. Basic design principles are large south-facing windows with proper overhangs, as well as tile, brick, or other thermal mass material used in flooring or walls to store the sun's

[56] United States Department of Energy, Energy Efficiency and Renewable Energy. Energy and Environmental Guidelines for Construction. 8 July 2004. United States Department of Energy. 9 September 2004. http://www.eere.energy.gov/buildings/info/design/construction.html#construction.
[57] United States Department of Energy, Energy Efficiency and Renewable Energy. Energy and Environmental Guidelines for Construction. 8 July 2004. United States Department of Energy. 9 September 2004. http://www.eere.energy.gov/buildings/info/design/construction.html#construction.

heat during the day and release it back into the building at night or when the temperature drops. Passive solar also takes advantage of energy efficient materials, improved insulation, airtight construction, natural landscaping, and proper building orientation to take advantage of the sun, shade, and wind.[58]

- The project shall install reflective, EnergyStar™, cool roofs to the satisfaction of the Director of Planning, Building, and Code Enforcement. Cool roofs decrease roofing maintenance and replacement costs, improve building comfort, reduce impact on surrounding air temperatures, reduce peak electricity demand, and reduce waste stream of roofing debris.[59]

Measures to Reduce Energy Consumption During Construction

The U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) Rating System is designed for rating new and existing commercial, institutional, and high-rise residential buildings. It evaluates environmental performance from a "whole building" perspective over a building's life cycle, providing a definitive standard for what constitutes a green building. A building is scored in six different green building categories: sustainability, water efficiency, energy and atmosphere, materials and resources, indoor environmental quality, and innovation and design process. Based on the building's score, the building may be awarded a LEED Certified, LEED Silver, LEED Gold, or LEED Platinum status.

- The proposed buildings shall incorporate, where applicable and feasible, elements of the LEED Project Checklist into the design to the satisfaction of the Director of Planning, Building, and Code Enforcement. The following are examples of LEED measures that may be incorporated:

  - The project shall use recycled materials to reduce the use of raw materials and divert material from landfills. Construction material used shall be at least 5-10 percent salvaged or refurbished materials, specifically, a minimum of 25-50 percent of building materials shall contain at least 20 percent post consumer recycled content material, or a minimum of 40 percent post industrial recycled content material.[60]

  - The project shall use local and regional materials in order to reduce natural resources necessary from transporting materials over long distances. Of the building materials used, 20-50 percent shall be manufactured within 500 miles of the building site.[61]

  - The project shall use rapidly renewable materials in order to reduce the depletion of virgin materials and reduce use of petroleum-based materials. Specifically five

[58] United States Department of Energy, Energy Efficiency and Renewable Energy. Technologies. 30 October 2003. United States Department of Energy. 9 September 2004. http://www.eere.energy.gov/buildings/highperformance/technologies.html

[59] California Energy Commission. Project Fact Sheets. 26 November 2003. State of California. 9 November 2004. http://www.energy.ca.gov/peakload/project_fact_sheets.html.

[60] United States Department of Energy, Energy Efficiency and Renewable Energy. Energy and Environmental Guidelines for Construction. 8 July 2004. United States Department of Energy. 9 September 2004. http://www.eere.energy.gov/buildings/info/design/construction.html#construction.

[61] Ibid.

percent of total building materials shall be made from rapidly renewable building materials.[62]

- For components of the project where buildings would be made from wood, such as flooring and framing, the project shall use a minimum of 50 percent wood-based materials certified in accordance with the Forest Stewardship Council Guidelines (http://www.fscoaz.org/index.html).[63]

- The project shall select materials with volatile organic compound limits.[64]

- The idling of construction vehicles shall be avoided to reduce fuel consumption, emissions, and noise.

- Commercial and industrial buildings, to the extent feasible, shall:

  - Install motion detectors or dimmers to control lighting;
  - Install efficient security and parking lot lighting (e.g., high pressure sodium fixtures);
  - Install reflective window film or awnings on all south and west facing windows;
  - Install ceiling and wall insulation; and
  - Install Energy Management System to control HVAC system—its operating hours, set points, scheduling of chillers, etc.[65]

5. Conclusion

Implementation of the above measures will reduce energy impacts of project construction and operation to a less than significant level. **(Less Than Significant Impact with Mitigation Incorporated)**

[62] United States Department of Energy, Energy Efficiency and Renewable Energy. Energy and Environmental Guidelines for Construction. 8 July 2004. United States Department of Energy. 9 September 2004. http://www.eere.energy.gov/buildings/info/design/construction.html#construction.
[63] Ibid.
[64] Ibid.
[65] City of San José Environmental Services. Office Energy Saving Tips. City of San José. 9 September 2004. http://www.ci.san-jose.ca.us/esd/ER-Tips-office.htm.