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

Address/Location: **SE/C WINCHESTER BLVD & DAVID AV*WINCHESTER BLVD*DAVID AV (1462 S WINCHESTER BL)**

Permit/Project No.: **H80-063** Issuance Date: **11/26/80**

Prepped By: **FMAGGI** Closed By: **SADVANI** RSN: **907705**

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 ☐ (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

APPENDIX A

BIOLOGICAL ASSESSMENTS

H.T. HARVEY & ASSOCIATES
ECOLOGICAL CONSULTANTS

26 July 2000

David Powers
David J. Powers & Associates
1885 The Alameda, Suite 204
San Jose, CA 95126
TEL: (408) 248-3500
FAX: 408.248.9641

RE: San Jose Mercury News/Creekside Burrowing Owl Survey.

Dear David:

Per your request, the following provides our assessment of impacts to Burrowing Owls (*Athene cunicularia*) associated with planned development of the Creekside property (formerly San Jose Mercury News residual parcels), located east of Highway 880 and south of Brokaw Road in San Jose.

The site is (and has been) mostly comprised of sparse, ruderal vegetation and areas of bare ground. Because the site was consistent with potential Burrowing Owl nesting habitat, a series of protocol-level surveys was completed in 1998, 1999, and 2000[1] to determine whether Burrowing Owls occupied the site at that time. No Burrowing Owls, nor secondary evidence of their occupancy of the site (*e.g.*, feathers, castings [egested pellets containing indigestible portions of the owls' diet], or prey remains) were observed during any of these surveys. The 1998 surveys were conducted outside the nesting season (1 February – 31 August), so they would not have detected nesting owls had they been present. The 1999 and 2000 surveys were conducted within the peak of the nesting season (15 April – 15 July), so these surveys would have detected nesting owls had they been present. Thus, in the two past nesting seasons, no owls or secondary evidence of their presence have been observed.

The site has not to our knowledge been used by nesting Burrowing Owls in the past three years, but we lack a complete history of surveys conducted at the proper time to definitively conclude that owls were not present in 1998. According to CDFG criteria for significance determination as we understand it, the development of a site does not constitute a significant project-specific impact to Burrowing Owls if no owls occupied the site within the prior three years. Based on our survey information, the proposed development of the Creekside site would not impact a site known to be occupied by nesting Burrowing Owls.

[1]These surveys were conducted by David Plumpton on the mornings of 9, 17, 18, and 19 November, 1998. Denise Hardesty surveyed the site on 6, 11, 12, and 20 May, 1999. Naomi Nichol and Teresa Torab surveyed the site on 10, 26, and 30 May, 2000, and on 1 and 3 June, 2000.

3150 Almaden Expressway, Suite 145 • San Jose, CA 95118 • (408) 448-9450 • Fax: (408) 448-9454

Although the property has apparently been unoccupied by Burrowing Owls in at least the last two years, the Creekside site may still be important for Burrowing Owls locally. The site is near areas known to have been used by nesting pairs within recent (1-3) years, and it is near current nesting Burrowing Owl pairs, and therefore could provide foraging habitat that supports these nesting pairs. The site is in a condition consistent with potential nesting habitat, and therefore may attract nesting owls. Finally, the site is of a size that may be important locally despite the lack of documented use by owls. Therefore, although development of the site may not constitute a significant impact on a project-specific basis, it may nonetheless represent a significant *cumulative* impact. A direct effect of nearby development is that habitats become increasingly fragmented, subdivided, and insularized within human-altered environments, and they become increasingly unsuited to occupancy by most wildlife. However, Burrowing Owls and some other wildlife can and do occupy remnant habitat "islands" such as this 17-acre site, and the majority of owls persisting in the area nest in San Jose and Santa Clara, near the Creekside property. Such a property, if found further removed from known concentrations of Burrowing Owls would be considered less important. The fact that the Creekside parcel is mostly isolated by a human-altered landscape yet still accessible to the local population of owls underscores, not detracts from, its biological significance among the few remaining habitats of its type locally. Additionally, the declining Burrowing Owl population in the South San Francisco Bay area further demonstrates the increasing rarity of this habitat, and the relative importance of those remaining.

The loss of potential nesting and foraging habitat for Burrowing Owls in northern Santa Clara County is a significant cumulative impact that jeopardizes the continued existence of Burrowing Owls in the South San Francisco Bay area and Santa Clara Valley. Within northern Santa Clara County, however, few sites remain that could be used to mitigate impacts on Burrowing Owls locally. Mitigation for impacts can be by off-site compensation (*i.e.*, acquiring equivalent habitat areas away from the project's impact area). While this measure may be criticized because it does not reduce effects to Burrowing Owls locally, it does prevent similar habitat degradation elsewhere in the owls' range, and can be accomplished on lands where human action has not already degraded habitat quality or inflated land value. Further, planned development in northern Santa Clara County has largely eliminated viable local mitigation site alternatives. Therefore, mitigation by habitat acquisition and preservation away from the Santa Clara Valley will provide benefit to the species, and may represent the best option ecologically, although it does not lessen impacts to Burrowing Owls in the Santa Clara Valley.

Sincerely,

David Plumpton, Ph.D.
Senior Ecologist

Project No. 1532-04

H. T. HARVEY & ASSOCIATES
ECOLOGICAL CONSULTANTS

6 June 2000

Nora Monette
David J. Powers & Associates
1885 The Alameda, Suite 204
San Jose, CA 95126
TEL: (408) 248-3500
FAX: 408.248.9641

RE: San Jose Mercury News Burrowing Owl Survey.

Dear Ms. Monette:

On May 10, 2000 I conducted a reconnaissance-level survey for Burrowing Owls (*Athene cunicularia*) at the San Jose Mercury News project site, east of Highway 880 and south of Brokaw Road in San Jose, California. The purpose of this survey was to identify any Burrowing Owls, or potential for their use of the site that may be impeded by proposed development, or that may pose constraints to some future uses of the site.

No Burrowing Owls, or secondary evidence of their presence (*e.g.*, feathers, castings, prey remains) were observed during this survey. The site's vegetation consisted of introduced grasses and weeds, on level ground, and the site was consistent with potential Burrowing Owl habitat. Therefore, additional surveys conducted according to the protocol established by the California Department of Fish and Game were required to determine with acceptable certainty whether Burrowing Owls occupy the site.

These protocol surveys were conducted on May 30, June 1 and June 3, 2000, within the peak of the Burrowing Owl's nesting season. There were no Burrowing Owls observed during the course of these surveys, and no secondary evidence of their presence. Thus, the site appears to be unoccupied by owls at this time. Please be advised that, because Burrowing Owl habitats are ephemeral, results of these surveys will remain valid for no more than 30 days. Please phone if you require additional information, or if I may be of further help.

Sincerely,

Teresa Torab

Wildlife Ecologist
Project # 1532-04

3150 Almaden Expressway, Suite 145 • San Jose, CA 95118 • (408) 448-9450 • Fax: (408) 448-9454

H.T. HARVEY & ASSOCIATES
ECOLOGICAL CONSULTANTS

RECEIVED
MAY 3 0 2000
DAVID J. POWERS & ASSOC., INC.

May 25, 2000

Nora Monette
David Powers & Associates, Inc.
1885 The Alameda, Suite 204
San Jose, CA 95126

Subject: Creekside Terrace Site (San Jose Mercury News / 880 and Brokaw) - Evaluation of Site Plan (February 14, 2000)

Dear Nora:

The San Jose Mercury News Residual Parcels Miscellaneous Biological Services report (H.T. Harvey & Associates, 20 November 1998) evaluated the riparian habitat along Coyote Creek adjacent to the project site, determined the limits of the riparian corridor, and recommended an appropriate setback for any development on the property. The riparian habitat was found to be of high quality, and therefore, a 100-foot setback from the Coyote Creek riparian corridor was recommended between Ridder Park Drive and Brokaw Road. Any development within the 100-foot setback would require mitigation for indirect impacts to the Coyote Creek riparian corridor.

An evaluation of the proposed Creekside Terrace project plans (MBT Architecture, 14 February 2000) in relation to the riparian corridor revealed 0.13 acres of indirect impacts occurring within the 100-foot riparian setback. These include 0.12 acres of impact from the path and 0.01 acres of impact from encroachment of the parking lot into the 100-foot setback. No direct impacts to the riparian corridor occur under the current project plan.

All encroachment impacts should be mitigated at a 1:1 ratio by planting native riparian trees, shrubs, and ground cover following an approved planting plan. Therefore, 0.13 acres of native riparian vegetation such as California sycamore (*Platanus racemosa*), valley oak (*Quercus lobata*), Mexican elderberry (*Sambucus mexicana*), California bay (*Umbellularia californica*), California rose (*Rosa californica*), California blackberry (*Rubus ursinus*), and coyote brush (*Baccharis pilularis*) need to be planted. The plantings could be placed within the area of landscape improvements immediately adjacent to the Coyote Creek riparian corridor. In addition, the planting plan should include adequate maintenance and monitoring of the riparian plantings to ensure success of the mitigation

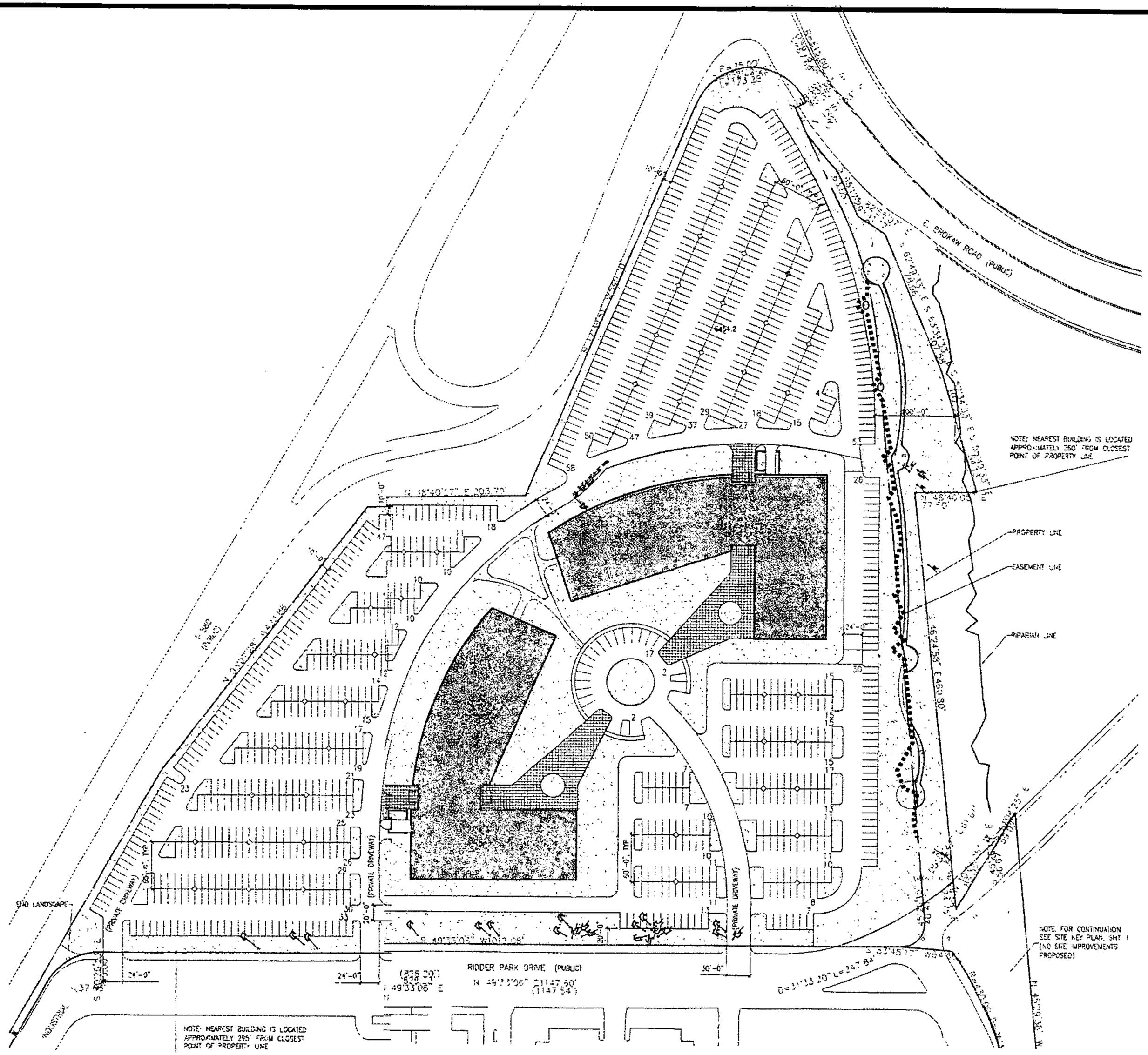
3150 Almaden Expressway, Suite 145 • San Jose, CA 95118 • (408) 448-9450 • Fax: (408) 448-9454

If you have any questions or need further information please call me.

Sincerely,

Eric C. Webb, Ph.D.
Project Manager

cc: file 1532-03



LAND USE PLAN

Location Map

GRAPHIC KEY

- BUILDING
- LANDSCAPE IMPROVEMENTS
- HARDSCAPE
- PAVING

N

0 25 50 100

Legend

- 100-foot Riparian Setback
- Indirect Impacts within 100-foot Riparian Setback

H.T. HARVEY & ASSOCIATES
ECOLOGICAL CONSULTANTS

San Jose Mercury News / 880 and Brokaw: Riparian Survey

File No. 1532-03	Date 5/5/00	Figure 1

H.T. HARVEY & ASSOCIATES
ECOLOGICAL CONSULTANTS

20 May 1999

Nora Monette
David J. Powers & Associates
1885 The Alameda, Suite 204
San Jose, CA 95126
TEL: 408. 248-3500
FAX: 408.248.9641

RE: Mercury News residual parcels Burrowing Owl surveys.

Dear Nora:

On 6 May 1999, I conducted a survey of the Mercury News property, located south of Brokaw Road east of the off-ramp from I-880 northbound to Brokaw Road, north of Ridder Park Drive, and west of Coyote Creek in San Jose, California. The purpose of this survey was to identify any existing Burrowing Owls (*Athene cunicularia*) or potential for their use of the site that may be impeded by future development of the parcel.

The site is mostly comprised of sparse, ruderal vegetation. Additionally, the site supports California ground squirrels (*Spermophilus beecheyi*) which create potential habitat for Burrowing Owls. No Burrowing Owls were observed during our initial survey, but because the site was consistent with potential habitat, a series of protocol-level surveys was required to determine with acceptable certainty whether Burrowing Owls occupied the site at this time. These protocol surveys were conducted on the mornings of 11, 12, and 20 May, 1999. No Burrowing Owls, nor secondary evidence of their occupancy of the site (*e.g.*, feathers, castings, prey remains) were observed during any of these surveys. Thus, the site appears to be unoccupied by Burrowing Owls at this time. A review of basic Burrowing Owl ecology and a synopsis of laws protecting owls follows:

Ecology/Regulations Overview/Definitions.
The Burrowing Owl is a small, terrestrial owl that occurs in annual and perennial grasslands, deserts, and scrublands with low-growing vegetation. Suitable owl habitat may also include trees and shrubs if the canopy does not cover more than 30% of the ground surface. Burrows, which provide protection, shelter, and nests for Burrowing Owls, represent an essential component of this species' habitat. Burrowing Owls typically use burrows made by fossorial (burrowing) mammals, such as ground squirrels or badgers, but they will also use man-made structures such as culverts, or openings beneath cement, asphalt paving, or debris piles. Burrowing Owls use such sites for breeding, wintering, foraging, and migration stopovers. Occupancy of suitable habitat may be verified by observations of one or more Burrowing Owls on the site, or presence of owl feathers, cast pellets (or prey remains), eggshell fragments, or excrement in or near a burrow entrance.

Burrowing Owls and other raptors are protected under a variety of state and federal laws including the amended Migratory Bird Treaty Act, (16 U.S.C. 703-711). This Act prohibits the "taking of active nests, eggs, young, or adults." "Take" is defined as "to pursue, hunt, shoot, wound, kill, trap,

☐ Alviso Office
906 Elizabeth Street • P.O. Box 1180
Alviso, CA 95002 • 408-263-1814 • Fax: 408-263-3823

☐ Fresno Office
423 West Fallbrook, Suite 206
Fresno, CA 93711 • 559-449-1423 • Fax: 559-449-8248

capture, or collect, or attempt to pursue or collect" a bird. California Department of Fish and Game (CDFG) Code 3503.5 states that it is "unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird." CDFG considers the Burrowing Owl a "Species of Special Concern." Species included on the list of species of special concern are those "whose breeding populations in the state have declined severely, or are otherwise so low that extirpation is a real possibility."

In summary, no Burrowing Owls were observed on site, but the property was found to be consistent with potential nesting habitat. Please note that survey results will remain valid for no more than 30 days.

Please telephone if you would like to discuss this in greater detail. Thank you for the opportunity to provide this service.

Sincerely,

Denise Hardesty
Wildlife Biologist

proj. 1532-02

capture, or collect, or attempt to pursue or collect" a bird. California Department of Fish and Game (CDFG) Code 3503.5 states that it is "unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird." CDFG considers the Burrowing Owl a "Species of Special Concern." Species included on the list of species of special concern are those "whose breeding populations in the state have declined severely, or are otherwise so low that extirpation is a real possibility."

In summary, no Burrowing Owls were observed on site, but the property was found to be consistent with potential nesting habitat. Please note that survey results will remain valid for no more than 30 days.

Please telephone if you would like to discuss this in greater detail. Thank you for the opportunity to provide this service.

Sincerely,

Denise Hardesty
Wildlife Biologist

proj. 1532-02

H.T. HARVEY & ASSOCIATES
ECOLOGICAL CONSULTANTS

SAN JOSE MERCURY NEWS
RESIDUAL PARCELS
MISCELLANEOUS BIOLOGICAL SERVICES

Prepared for
Nora Monette
David Powers & Associates, Inc.
1885 The Alameda, Suite 204
San Jose, CA 95126

Prepared by
H. T. Harvey & Associates

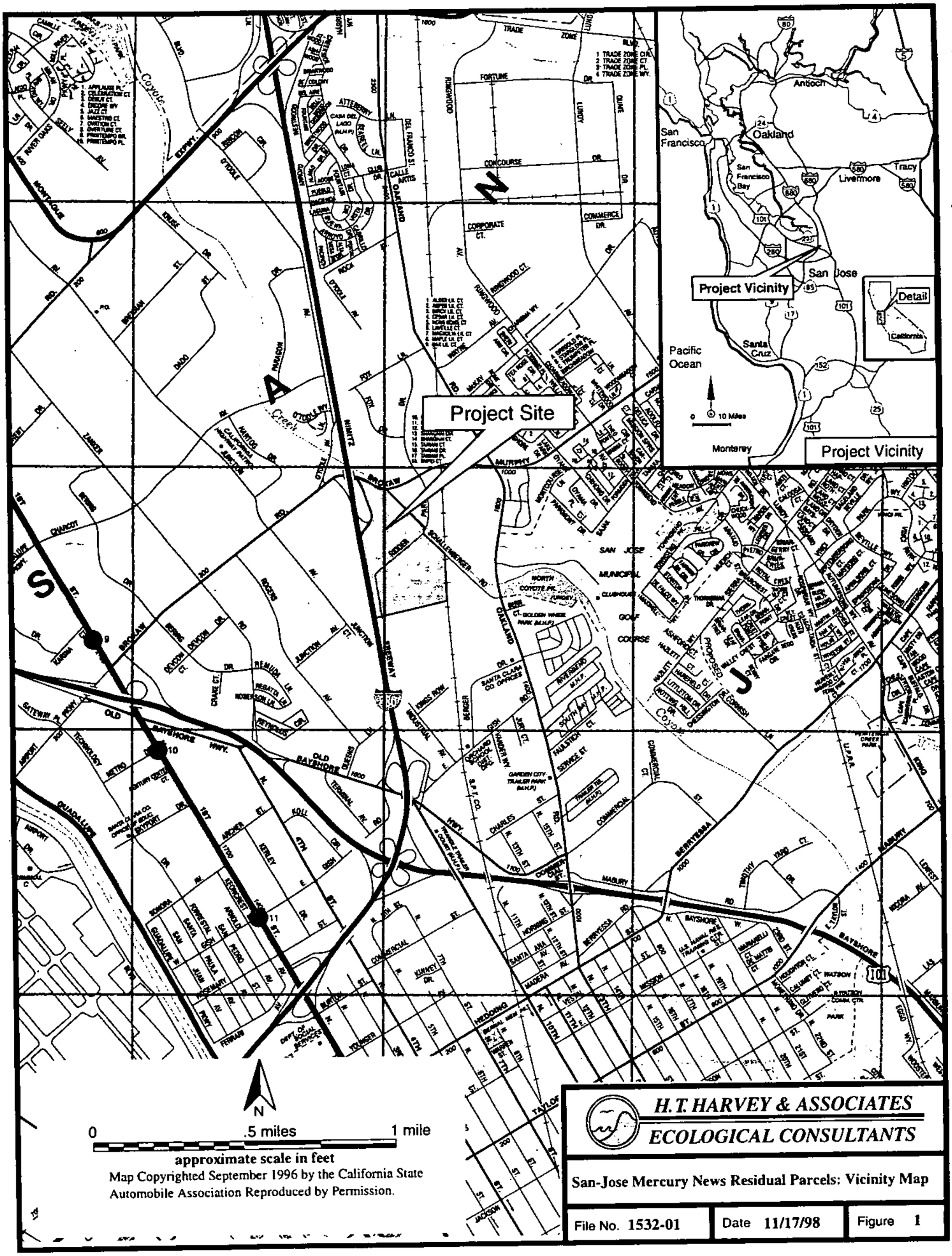
Daniel Stephens, Senior Restoration Ecologist, Principal
Eric Webb, Ph.D., Restoration Ecologist, Project Manager
Brian Cleary, M.S., Plant Ecologist
Max Busnardo, M.S., Restoration Ecologist
David Plumpton, Ph.D., Raptor Ecologist

November 20, 1998

Project Number 1532-01

Alviso Office
906 Elizabeth Street • P.O. Box 1180
Alviso, CA 95002 • 408-263-1814 • Fax: 408-263-3823

Fresno Office
423 West Fallbrook, Suite 206
Fresno, CA 93711 • 209-449-1423 • Fax: 209-449-8248


Project Site
Project Vicinity
San Francisco
Oakland
Antioch
San Francisco Bay
Livermore
Tracy
San Jose
Santa Cruz
Pacific Ocean
Monterey
Detail
California
0 10 Miles
N
0 .5 miles 1 mile
approximate scale in feet
Map Copyrighted September 1996 by the California State Automobile Association Reproduced by Permission.
H.T. HARVEY & ASSOCIATES
ECOLOGICAL CONSULTANTS
San-Jose Mercury News Residual Parcels: Vicinity Map
File No. 1532-01
Date 11/17/98
Figure 1

2.0 RIPARIAN SURVEY

2.1 Introduction

A riparian survey of Coyote Creek bordering the San Jose Mercury News Residual Parcels was conducted (Figure 1). The purpose of this survey was to determine the location of the riparian corridor on the property, evaluate the plant species composition and habitat quality of the riparian corridor and recommend an appropriate setback for any future development at the site.

2.2 Methods

Max Busnardo of H. T. Harvey & Associates conducted a riparian survey on 12 November 1998. The riparian corridor boundary along the western bank of Coyote Creek was delineated on the San Jose Mercury News Residual Parcels (parcels 35, 49, 50, and 51). The portion of the creek surveyed (survey reach) extends from the railroad tracks north to Brokaw Road (Figure 1). The boundary of the riparian corridor was defined as the top-of-bank, or the dripline of riparian vegetation where riparian vegetation extended beyond the top-of-bank. The riparian corridor boundary was mapped onto an aerial photo of the site (scale: 1 in = 100 ft) obtained from San Jose Blue. The species composition and habitat quality of the riparian plant association along the western bank of the survey reach was also assessed.

2.3 Riparian Habitat Characterization

Coyote Creek is a major drainage in the Santa Clara Valley. It carries perennial flows to San Francisco Bay and supports riparian forest throughout much of its length. A relatively dense, multi-layered canopy composed of mature, native tree species covers the riparian corridor throughout the survey reach. Fremont cottonwood (*Populus fremontii*) and California sycamore (*Platanus racemosa*) are the dominant overstory trees and range from approximately 20 feet to greater than 60 feet in height. The mid-level canopy is comprised primarily of box elder (*Acer negundo*), red willow (*Salix laevigata*), and English elm (*Ulmus campestris*), an invasive, non-native species. Mexican elderberry (*Sambucus mexicana*) and California bay (*Umbellularia californica*) also occur at lower abundances. The understory is composed primarily of California blackberry (*Rubus ursinus*) and periwinkle (*Vinca major*). Like English elm, periwinkle is an invasive, non-native species that has escaped from landscape plantings. Poison oak (*Toxicodendron diversilobum*) is a sub-dominant along the western bank of Coyote Creek and is abundant along the east bank of the survey reach. A small patch of giant reed (*Arundo donax*) occurs at the southern end of the survey reach.

A levee borders the western edge of the riparian corridor between Ridder Park Drive and Brokaw Road. Coyote brush (*Baccharis pilularis*), a common native shrub on disturbed sites, is scattered in patches along the top of the levee. Two large, mature California sycamores are rooted approximately 50 feet west of the levee.

2.4 Riparian Setback Recommendation

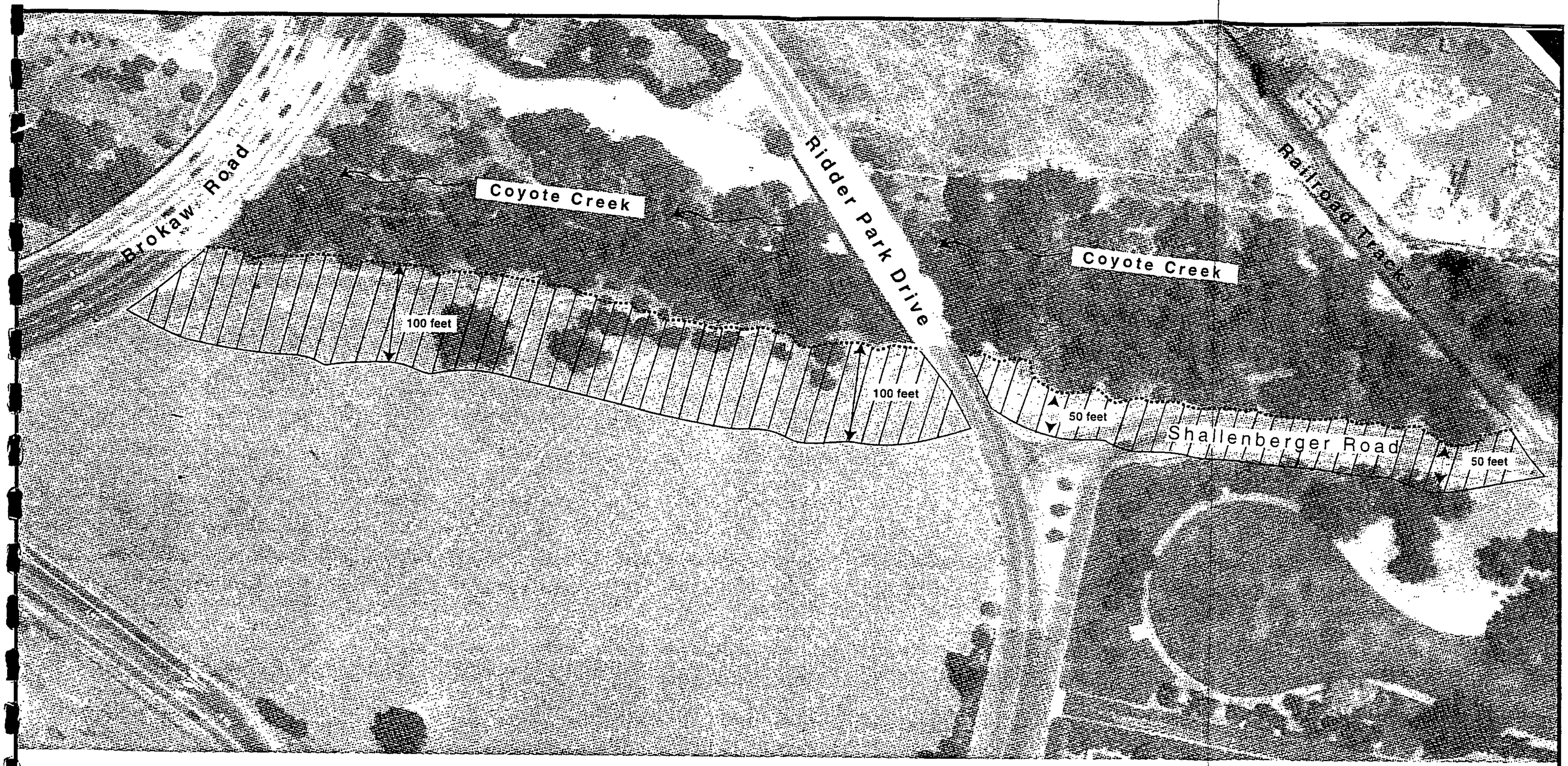
The close proximity of human activity and structures to riparian habitat adversely affects wildlife use within riparian corridors. Riparian corridor setbacks are the principle means of minimizing impacts to wildlife associated with human activities. Riparian setbacks of up to 100 feet are often recommended by the resource agencies (e.g., CDFG and USFWS). For these reasons, the City of San Jose established a Riparian Corridor Policy that uses 100 feet as its basic setback from streams with moderate to high quality riparian habitat (City of San Jose, 1994).

The riparian habitat along the survey reach is of high value to wildlife due to the dense cover, multi-layered structure, and food resources provided by the native riparian trees and shrubs. The riparian trees and shrubs that occur along the survey reach provide food, shelter, nesting, and an appropriate microclimate for wildlife that inhabit riparian ecosystems. Mature riparian habitat, such as that along the survey reach, has been found to support the highest diversity and abundance of bird species of any habitat type in Santa Clara Valley's urban landscape (Rottenborn 1997). Consequently, a 100-foot setback from the riparian corridor is recommended between Ridder Park Drive and Brokaw Road (Figure 2).

Although riparian habitat quality is high throughout the survey reach, a reduced setback of 50 feet is recommended between the railroad tracks and Ridder Park Drive (parcel 51). A reduced setback is recommended for this parcel because it is a site with a disproportionately long riparian frontage and is impacted by the presence of Shallenberger Road that runs along the western edge of the riparian corridor in this reach. The reduced setback will not significantly reduce or adversely impact the riparian corridor.

2.5 Landscaping in Riparian Setback Areas

In accordance with the City of San Jose's Riparian Corridor Policy Study, any landscaping within the riparian setback area must consist of native trees and shrubs that naturally occur in the riparian habitat adjacent to the site (City of San Jose, 1994). Native tree and shrub species appropriate for planting in the setback area would include California sycamore, valley oak (*Quercus lobata*), Mexican elderberry, California bay, Fremont cottonwood (if permanent irrigation is supplied), California rose, California blackberry, common snowberry (*Symphoricarpus rivularis*), coyote brush, and mugwort (*Artemisia douglasiana*).



Legend

Direction of Water Flow

Limit of Riparian Corridor

Riparian Setback Area

N

0 100 feet

H.T. HARVEY & ASSOCIATES
ECOLOGICAL CONSULTANTS

San-Jose Mercury News Residual Parcels: Location of Riparian Corridor Limit and Riparian Setback Area

File No. 1532-01	Date 11/17/98	Figure 2

3.0 TREE SURVEY

3.1 Introduction

A survey of all ordinance size trees outside of the riparian corridor that could potentially be impacted by development on the San Jose Mercury News Residual Parcels was conducted. The purpose of the survey was to determine the species, location, size and health and vigor of the trees that could be impacted by the proposed development.

3.2 Methods

Botanist Brian Cleary of H. T. Harvey & Associates, conducted a tree survey on November 16, 1998. The diameter in inches at 2.0 feet above grade was measured for each tree. The location of each tree was mapped on an aerial photograph provided by San Jose Blue (1 in. = 100 ft.). A single combined diameter for multi-stemmed trees was calculated by adding the largest trunk diameter to half the diameters of the remaining trunks. This additive approach reflects the cross-sectional area of the combined trunks more accurately than adding the trunks together equally. The diameter of each trunk and the additive diameter of each tree are presented in Table 1.

Each tree was assigned a health and vigor rating based on the following scale:

0	=	Dead
1	=	Very Low Vigor
2	=	Low Vigor
3	=	Moderate Vigor
4	=	High Vigor
5	=	Very High Vigor

The City of San Jose Tree Ordinance defines an ordinance tree as "any woody perennial plant characterized by having a main stem or trunk which measures 56 inches or more in circumference (17.83 inches or more in diameter) at a height of 24-inches above natural grade slope." Ordinance status is therefore, determined by the largest trunk of each tree.

3.3 Results

A total of 30 trees were mapped and surveyed. Trees located within the jurisdictional protection of the Coyote Creek riparian corridor (parcels 35 and 51) were not surveyed. Most of the trees occupying the extreme southwestern margin of the property along Industrial Avenue are located on the west side of what is believed to be the parcel boundary fenceline and were therefore, not surveyed. The tree survey map is shown in Figure 3. Table 1 provides a summary of the survey results. The majority of these trees were non-native, ornamental species. Native species included 7 Fremont cottonwood (*Populus fremonttii* ssp. *fremonttii*) and 4 western sycamore (*Platanus racemosa*). Please

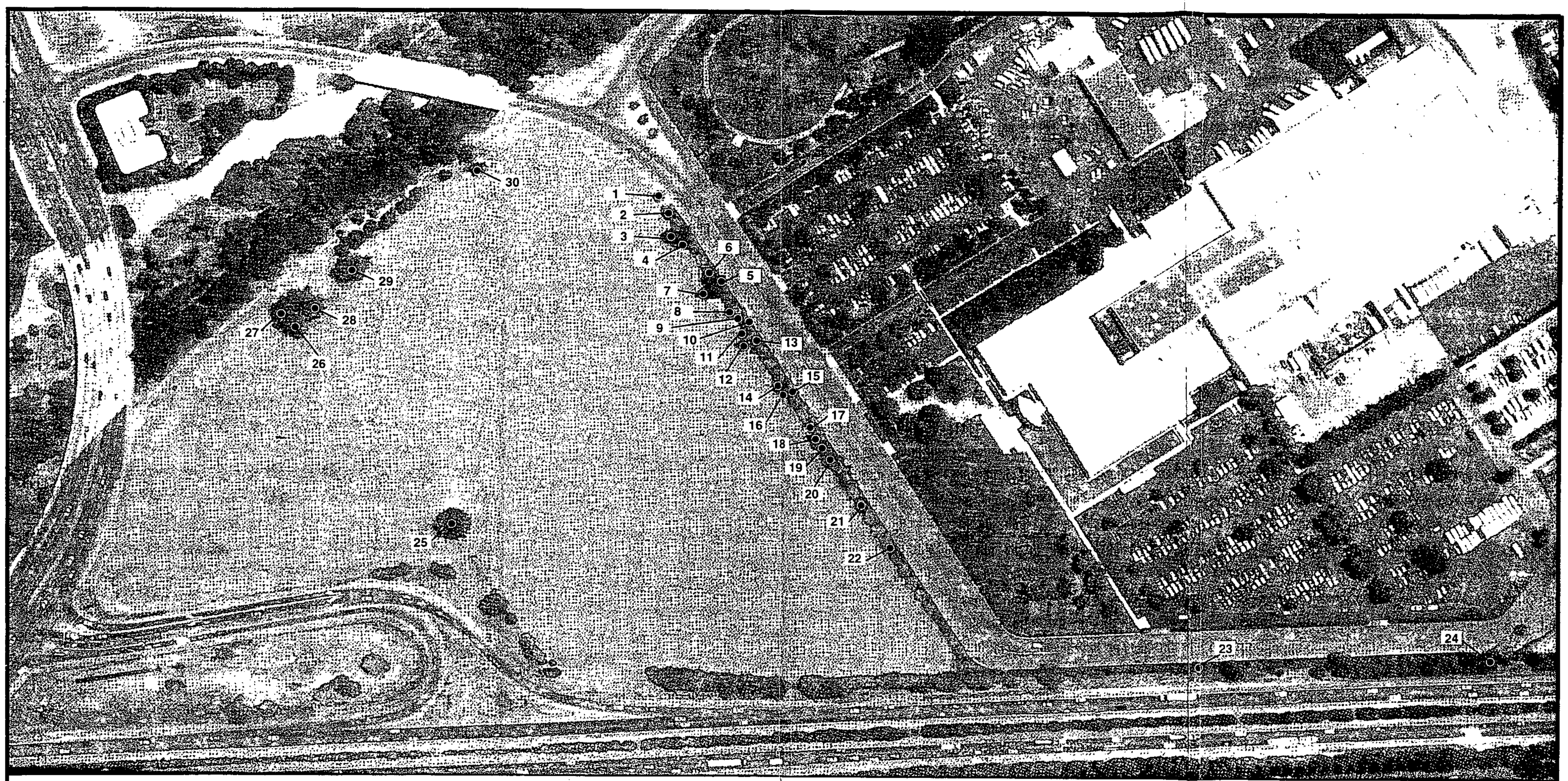
Table 1. Summary of Tree Survey Results for the San Jose Mercury News Residual Parcels, San Jose, CA.

Tree #	Common Name	Scientific Name	Additive Diameter in Inches at 2 feet	Diameter(s) In Inches at 2 feet	Health and Vigor (0-5)
1	oleander	*Nerium oleander*	9	(4,3,3,2,2)	3
2	oleander	*Nerium oleander*	8	(4,3,2,2)	2
3	common olive	*Olea europaea*	11	(5,4,3,2,2)	3
4	oleander	*Nerium oleander*	7	(4,2,2,2)	2
5	Fremont cottonwood	*Populus fremonttii* ssp. *fremonttii*	21	(9,7,6,6,4)	3
6	pepper tree	*Schinus molle*	14	(8,7,4)	2
7	Fremont cottonwood	*Populus fremonttii* ssp. *fremonttii*	20	(9,7,6,4,4)	3
8	Fremont cottonwood	*Populus fremonttii* ssp. *fremonttii*	9	(4,4,3,3)	2
9	silver-leafed gum	*Eucalyptus pulverulenta*	16	16	3
10*	Fremont cottonwood	*Populus fremonttii* ssp. *fremonttii*	37	(20,18,8,5,3)	3
11	silver-leafed gum	*Eucalyptus pulverulenta*	10	(7,5)	2
12*	Fremont cottonwood	*Populus fremonttii* ssp. *fremonttii*	33	(18,16,8,6)	3
13	Fremont cottonwood	*Populus fremonttii* ssp. *fremonttii*	28	(12,11,6,6,4,4)	3
14	silver-leafed gum	*Eucalyptus pulverulenta*	8	8	2
15	Fremont cottonwood	*Populus fremonttii* ssp. *fremonttii*	11	(8,4,2)	1
16	pepper tree	*Schinus molle*	14	(11,5)	3
17	oleander	*Nerium oleander*	7	(3,2,2,2,2)	3
18	silver-leafed gum	*Eucalyptus pulverulenta*	15	(11,5,3)	2
19	pepper tree	*Schinus molle*	11	(7,5)	3
20	silver-leafed gum	*Eucalyptus pulverulenta*	11	(7,7)	3
21	common olive	*Olea europaea*	9	(4,3,3,2,2)	3
22	common olive	*Olea europaea*	3	3	2
23	common olive	*Olea europaea*	8	(4,3,2,2)	3
24	blue gum	*Eucalyptus globulus*	13	(6,4,4,3,2)	2
25	elm	*Ulmus* sp.	40	(12,11,10,10,9, 8,8)	3
26*	western sycamore	*Platanus racemosa*	30	30	4
27*	western sycamore	*Platanus racemosa*	56	56	4
28*	western sycamore	*Platanus racemosa*	68	68	4
29*	western sycamore	*Platanus racemosa*	40	40	4
30	pepper tree	*Schinus molle*	20	(14,12)	3

* = Covered by the City of San Jose's Tree Ordinance

note that tree numbers 10, 12, and 26-29 are trees of ordinance size.

A review of the County of Santa Clara's Heritage Tree list determined that no heritage trees occur on site.



Legend

25 Location of surveyed trees at the project site

0 100 feet

H.T. HARVEY & ASSOCIATES
ECOLOGICAL CONSULTANTS

San-Jose Mercury News Residual Parcels: Tree Survey

File No. 1532-01	Date 11/17/98	Figure 3

4.0 BURROWING OWL SURVEY

4.1 Introduction

The Burrowing Owl is a small, terrestrial owl that occurs in annual and perennial grasslands, deserts, and scrublands, with low-growing vegetation. Suitable owl habitat may also include trees and shrubs if the canopy does not cover more than 30% of the ground surface. Burrows, which provide protection, shelter, and nests for Burrowing Owls, represent an essential component of this species' habitat. Burrowing Owls typically use burrows made by fossorial mammals, such as ground squirrels or badgers, but will also use man-made structures such as culverts, or openings beneath cement, asphalt paving, or debris piles. Burrowing Owls use such sites for breeding, wintering, foraging, and migration stopovers. Occupancy of suitable habitat may be verified by observations of one or more Burrowing Owls on the site, or presence of owl feathers, cast pellets (or prey remains), eggshell fragments, or excrement in or near a burrow entrance.

4.2 Methods

On 9 November 1998, David Plumpton conducted a survey of the San Jose Mercury News Residual Parcels. The purpose of this survey was to identify any existing Burrowing Owls or potential for their use of the site that may be impeded by future development of the parcels.

4.3 Results

The site is mostly comprised of sparse, ruderal vegetation. Additionally, the site supports California ground squirrels (*Spermophilus beecheyi*) which create potential habitat for Burrowing Owls. No Burrowing Owls were observed during our initial survey, but because the site was consistent with potential habitat, a series of protocol-level surveys was required to determine with acceptable certainty whether Burrowing Owls occupied the site at this time. These protocol surveys were conducted on the mornings of 17, 18, and 19 November, 1998. No Burrowing Owls, nor secondary evidence of their occupancy of the site (*e.g.*, feathers, castings, prey remains) were observed during any of these surveys. Thus, it appears that the site is unused by Burrowing Owls at this time. Several small portions of the property have recently been graded and levelled. In those areas that had been graded, it cannot be determined whether Burrowing Owls or their habitat existed prior to this localized grading.

Please note that survey results can be used for pre-construction clearance for no more than 30 days. Additionally, these surveys occurred outside the peak nesting interval (15 April - 15 July). Therefore, these results may be used for information purposes or to provide pre-construction clearance, but cannot alone be used for California Environmental Quality Act (CEQA) project evaluation.

5.0 LITERATURE CITED

City of San Jose. 1994. Riparian Corridor Policy Study. Approved by City Council on May 17, 1994.

Rottenborn, S. C. 1997. The impacts of urbanization on riparian bird communities in central California. Ph.D. Dissertation, Stanford University, Palo Alto, CA.

APPENDIX B

TRANSPORTATION ANALYSIS

DKS Associates
84 W. Santa Clara Street, Suite 360
San Jose, California 95113
(408)-292-9411 fax (408)-292-9511

Memorandum

To: Candice Lownsbery, City of San Jose Public Works Development Services

From: Mark Spencer, DKS Associates

CC: Nora Monette, David J. Powers & Associates

Date: December 14, 2000

Re: Addendum to Creekside Traffic Impact Analysis – with HP Project Trips

---

This memorandum is an addendum to the Final Traffic Impact Analysis prepared for the Creekside/SJ Mercury News project. Additional analysis was conducted in response to a request by City staff to include trips generated by the proposed HP project near the Trimble/First intersection.

Three areas of additional analysis were conducted:

1. Recalculation of Background, Project and Cumulative intersection levels of service (LOS) at study intersections;

2. Recalculation of average delay under Background, Project and Cumulative Conditions for the North San Jose Deficiency Plan (NSJDP) intersections in the PM Peak Hour;

3. For the purposes of CEQA review, recalculation of Cumulative intersection analysis to include the Rivermark-Agnews, US DataPort, and HP projects.

1. There are four (4) intersections that overlap between the Creekside project analysis and the HP project analysis (as provided by City staff). Under the City of San Jose intersection LOS methodology, when the HP trips are added in there are increases in delay and v/c ratios. However, when applying the LOS significance criteria, none of the four intersections would be significantly impacted by the Creekside project.

The only change would be at Brokaw/First under the Background condition, where the projected LOS would go from LOS E to LOS F with the addition of HP project

trips. Since the Creekside project is measured against the background condition, the same significance criteria apply when the intersection is already at LOS E or F.

Table 1 (attached) provides a summary of the intersection LOS with and without the HP project trips. This table can be compared to Table 9 of the Final Traffic Impact Analysis Report (October 24, 2000) for the Creekside project. Also attached to this memo are the revised intersection LOS calculations for the four subject intersections.

2. The North San Jose Deficiency Plan (NSJDP) averaging calculation was also recalculated to see if the 88-second threshold was not exceeded with the addition of HP project trips. Table 2 (attached) provides a summary of the recalculation, which can be compared to Tables 10, 11 and 14 of the Final TIA for the Creekside Project (October 24, 2000). The addition of HP project trips would increase the NSJDP average only slightly, but not enough to result in a significant impact. In the Creekside project TIA, the cumulative condition NSJ methodology resulted in 55.4 seconds of average delay during the p.m. peak hour, and much less in the a.m. peak hour. With the addition of HP project trips, the average delay for the 22 NSJDP intersections would increase to 56.8 seconds during the p.m. peak hour, and from 40.9 seconds to 41.6 seconds during the a.m. peak hour.

3. For the purposes of CEQA review, the Cumulative intersection analysis was recalculated to include the Rivermark-Agnews, US DataPort, and HP projects, as well as background projects previously included in the Approved Trip Inventory (ATI) in the Creekside TIA analysis. The revised calculations for three study intersections were provided from the US DataPort TIA. As shown on Table 3 (attached), no changes to the intersection analysis resulted from the revised data. Table 3 can be compared to Table 22 of the Final TIA for the Creekside project.

Summary

The traffic analysis was recalculated under the City of San Jose intersection methodology as well as the North San Jose Deficiency Plan methodology. After adding in vehicle trips generated by the proposed HP project, there would be no changes to the impacts or conclusions of the Final TIA for the Creekside project.

In addition, the cumulative analysis was recalculated based on information in the US DataPort TIA. As before, there would be no changes to the impacts or conclusions of the Final TIA for the Creekside project as a result of the revised analysis.

Table 1- Intersection LOS Recalculation

AM PEAK HOUR

		BACKGROUND								PROJECT								CUMULATIVE					
		Without HP Trips				With HP Trips				Without HP Trips				With HP Trips				Without HP Trips			With HP Trips		
Node	Intersection	Avg Del	Crit Del	V/C	LOS	Avg Del	Crit Del	V/C	LOS	Avg Del	Crit Del	V/C	LOS	Avg Del	Crit Del	V/C	LOS	Avg Del	V/C	LOS	Avg Del	V/C	LOS
3050	880/Brokaw (E)	14.2	9	0.795	B	14.4	9.2	0.819	B	15.3	10.7	0.824	C	15.6	11.1	0.848	C	15.7	0.843	C	16	0.867	C
3051	880/Brokaw (W)	34.5	31.7	0.941	D	35.9	34.2	0.965	D	34.7	31.8	0.942	D	36.1	34.4	0.966	D	36.2	0.96	D	38.2	0.985	D
3083	Brokaw/First	53.7	76.1	1.054	E	64.2	100.5	1.104	F	54.1	76.9	1.056	E	64.5	100.5	1.104	F	58.1	1.076	E	69.8	1.124	F
3085	Brokaw/Zanker	43.8	55	0.845	E	44.6	57.9	0.882	E	43.7	55	0.845	E	44.5	57.9	0.882	E	44.6	0.865	E	45.6	0.902	E

PM PEAK HOUR

		BACKGROUND								PROJECT								CUMULATIVE					
		Without HP Trips				With HP Trips				Without HP Trips				With HP Trips				Without HP Trips			With HP Trips		
Node	Intersection	Avg Del	Crit Del	V/C	LOS	Avg Del	Crit Del	V/C	LOS	Avg Del	Crit Del	V/C	LOS	Avg Del	Crit Del	V/C	LOS	Avg Del	V/C	LOS	Avg Del	V/C	LOS
3050	880/Brokaw (E)	13.2	15.8	0.411	B	13.4	15.8	0.411	B	13	16.8	0.411	B	13.3	16.8	0.411	B	13.2	0.417	B	13.4	0.417	B
3051	880/Brokaw (W)	22.6	27.9	0.755	C	22.7	28.0	0.8	C	23.3	29.1	0.794	C	23.5	29.3	0.818	C	23.7	0.811	C	23.9	0.835	C
3083	Brokaw/First	54.2	75	1.059	E	78.0	119.1	1.151	F	55.8	78	1.067	E	80.5	123.6	1.159	F	60.3	1.087	F	87	1.179	F
3085	Brokaw/Zanker	46.6	54.3	0.92	E	49.3	66.8	0.947	E	46.6	54.4	0.92	E	49.4	66.9	0.948	E	48.6	0.942	E	52	0.968	E

Table 2- NSJDP Recalculation

Node #	EXISTING				BACKGROUND				PROJECT				CUMULATIVE			
	LOS	AM PEAK Avg. Delay	LOS	PM PEAK Avg. Delay	LOS	AM PEAK Avg. Delay	LOS	PM PEAK Avg. Delay	LOS	AM PEAK Avg. Delay	LOS	PM PEAK Avg. Delay	LOS	AM PEAK Avg. Delay	LOS	PM PEAK Avg. Delay
3020	C	21.7	C	24.3	D	25.1	D	25.2	D	25.2	D	25.2	D	25.3	D	25.4
3026	B	12.1	B	12.7	B	12.1	F	68.0	B	12.1	F	68.0	B	12.3	F	72.3
3027	C	17.7	C	18.9	F	104.3	F	93.8	F	104.3	F	93.8	F	106.5	F	101.1
3030	B	6.6	B	10.1	B	6.7	B	9.0	B	6.7	B	9.0	B	6.8	B	9.1
3031	B	13.8	B	9.4	B	13.5	B	8.7	B	13.5	B	8.7	B	13.6	B	8.8
3050	C	15.4	B	14.5	B	14.4	B	13.4	C	15.6	B	13.3	C	16.0	B	13.4
3051	D	27.7	C	21.7	D	35.9	C	22.7	D	36.1	C	23.5	D	38.2	C	23.9
3054	B	12.4	B	8.1	C	18.8	B	9.4	C	18.8	B	9.4	C	19.8	B	9.5
3055	C	15.8	B	12.5	C	17.9	B	13.7	C	17.9	B	13.7	C	18.2	B	13.8
3083	D	35.4	D	33.7	F	64.2	F	78.0	F	64.5	F	80.5	F	69.8	F	87.0
3084	D	39.6	D	32.9	D	38.1	D	32.9	E	42.0	D	33.0	E	46.3	D	33.5
3085	D	35.2	E	41.0	E	44.6	E	49.3	E	44.5	E	49.4	E	45.6	E	52.0
3096	D	25.3	D	38.0	D	25.3	D	38.0	D	25.3	D	38.0	D	25.7	D	38.9
3098	D	33.9	D	37.8	E	41.4	E	49.3	E	41.4	E	49.3	E	43.3	E	52.6
3106	D	34.0	D	33.2	D	34.4	D	33.3	D	34.1	D	33.4	D	34.9	D	32.7
3119	D	26.5	E	41.1	D	28.0	E	52.5	D	28.0	E	52.5	D	28.3	E	59.0
5801	F	118.0	F	60.1	F	62.5	E	50.4	F	62.6	E	50.7	F	67.5	E	54.1
5802	D	33.8	F	77.8	D	33.6	F	77.7	D	33.7	F	77.6	D	35.0	F	84.3
5807	E	50.4	F	60.8	F	158.4	F	148.7	F	158.4	F	148.7	F	172.1	F	162.8
5808	C	24.4	F	285* ~~4866.0~~	C	19.6	F	74.7	C	19.6	F	74.7	C	19.7	F	82.3
5809	D	30.9	F	123.4	D	31.8	F	122.9	D	31.8	F	122.9	D	33.1	F	133.7
5812	D	29.7	E	47.6	D	36.0	F	92.3	D	36.0	F	92.3	D	37.0	F	98.3
Average Delay (sec.)		30.0		47.5 ~~119.4~~		39.4		52.9		39.6		53.1		41.6		56.8

* delay limited to 1.5 times the cycle length

Table 3
Revised Cumulative Conditions, Intersection Operations - CMP Methodology

No.	Intersection	AM Peak Hour			PM Peak Hour		
		LOS[1]	Avg. Delay[2]	V/C[3]	LOS	Avg. Delay	V/C
1	101 and Brokaw*	D	28.0	0.601	D	26.0	0.575
2	101 and Oakland (N)	E	52.9	1.120	C	19.1	0.870
3	101 and Oakland (S)	B	14.7	0.638	D	31.2	1.002
4	880 and Brokaw (E)	C	15.7	0.843	B	13.2	0.417
5	880 and Brokaw (W)	D	36.2	0.960	C	23.7	0.811
6	Brokaw and First*	F	60.0	1.076	F	75.0	1.087
7	Brokaw and Oakland	E	46.3	1.027	D	33.5	0.787
8	Brokaw and Zanker*	D	39.9	0.865	E	40.0	0.942
9	Lundy and Murphy	D	34.9	0.844	D	32.7	0.773
10	Montague and Oakland	F	67.5	1.059	E	54.1	0.739
11	Montague and Trade Zone	D	35.0	0.895	F	84.3	0.619

Notes:

1. LOS = level of service (based on average delay)
2. Avg. Delay = average delay per vehicle (in seconds per vehicle)
3. V/C = critical volume to capacity ratio

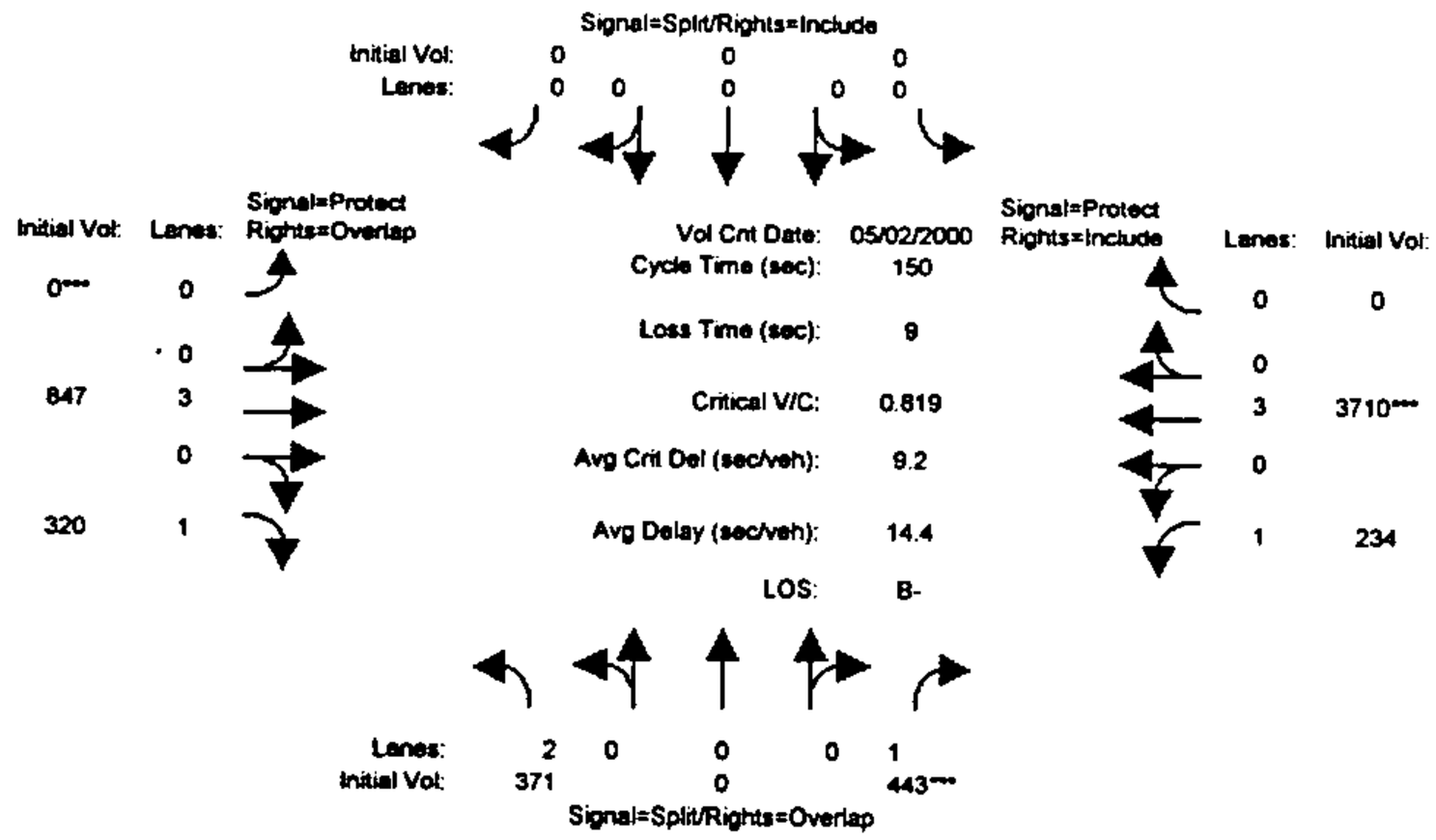
*data from US Dataport TIA, which includes the Creekside, US Dataport, HP and Rivermark-Agnews projects.

Source: DKS Associates

City of San Jose
Citywide Traffix Database
(modified February 4, 2000)

Level Of Service Computation Report
1985 HCM Operations (Future Volume Alternative)
Background (AM)

Intersection #3050: 880/BROKAW (E)



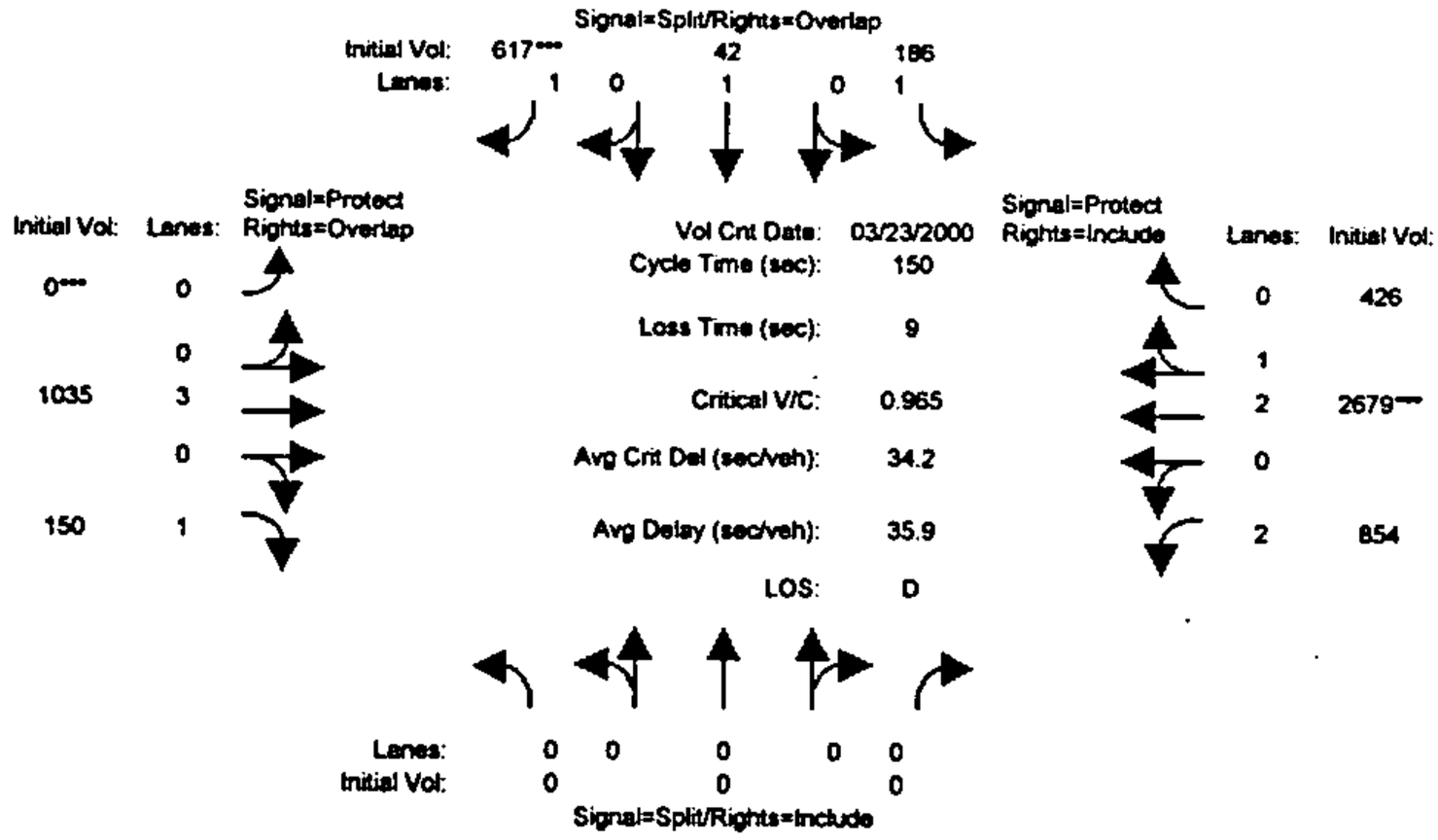
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	10	0	10	0	0	0	0	10	10	7	10	0
Volume Module: >> Count Date: 2 May 2000 <<												
Base Vol:	348	0	398	0	0	0	0	747	147	204	3532	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	348	0	398	0	0	0	0	747	147	204	3532	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	23	0	45	0	0	0	0	100	173	30	178	0
Initial Fut:	371	0	443	0	0	0	0	847	320	234	3710	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	371	0	443	0	0	0	0	847	320	234	3710	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	371	0	443	0	0	0	0	847	320	234	3710	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	371	0	443	0	0	0	0	847	320	234	3710	0
Saturation Flow Module:												
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.88	1.06	0.97	0.97	1.06	0.97	0.97	1.06	0.97	0.97	1.06	0.97
Lanes:	2.00	0.00	1.00	0.00	0.00	0.00	0.00	3.00	1.00	1.00	3.00	0.00
Final Sat.:	3150	0	1750	0	0	0	0	5700	1750	1750	5700	0
Capacity Analysis Module:												
Vol/Sat:	0.12	0.00	0.25	0.00	0.00	0.00	0.00	0.15	0.18	0.13	0.65	0.00
Crit Moves:			****				****				****	
Green Time:	21.9	0.0	72.2	0.0	0.0	0.0	0.0	68.8	90.7	50.3	119	0.0
Volume/Cap:	0.81	0.00	0.53	0.00	0.00	0.00	0.00	0.32	0.30	0.40	0.82	0.00
Delay/Veh:	54.3	0.0	21.0	0.0	0.0	0.0	0.0	19.6	11.0	29.3	7.8	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
ProgAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	54.3	0.0	21.0	0.0	0.0	0.0	0.0	19.6	11.0	29.3	7.8	0.0
DesignQueue:	27	0	20	0	0	0	0	40	11	13	77	0

Copyright (c) 1998 Dowling Associates, Inc. Licensed to DKS ASSOC., OAKLAND,CA

City of San Jose
Citywide Traffix Database
(modified February 4, 2000)

Level Of Service Computation Report
1985 HCM Operations (Future Volume Alternative)
Background (AM)

Intersection #3051: 880/BROKAW (W)

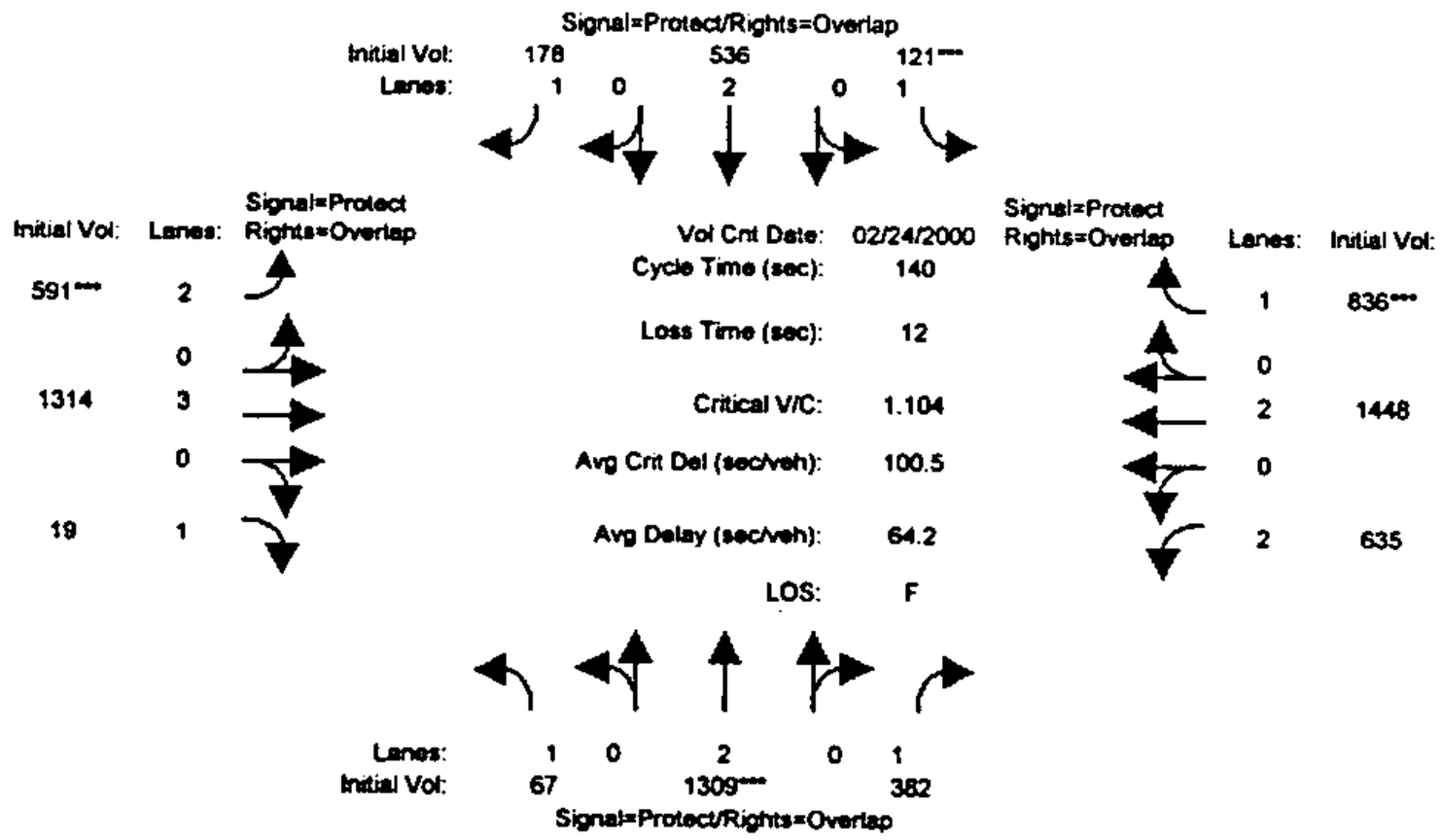


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	10	10	10	0	10	10	7	10	10
Volume Module: >> Count Date: 23 Mar 2000 <<												
Base Vol:	0	0	0	173	42	389	0	778	152	845	2443	422
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	173	42	389	0	778	152	845	2443	422
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	0	0	0	13	0	228	0	257	-2	9	236	4
Initial Fut:	0	0	0	186	42	617	0	1035	150	854	2679	426
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	186	42	617	0	1035	150	854	2679	426
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	186	42	617	0	1035	150	854	2679	426
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	186	42	617	0	1035	150	854	2679	426
Saturation Flow Module:												
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.97	1.06	0.97	0.97	1.06	0.97	0.97	1.06	0.97	0.88	1.04	1.00
Lanes:	0.00	0.00	0.00	1.00	1.00	1.00	0.00	3.00	1.00	2.00	2.57	0.43
Final Sat.:	0	0	0	1750	1900	1750	0	5700	1750	3150	4831	768
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.11	0.02	0.35	0.00	0.18	0.09	0.27	0.55	0.55
Crit Moves:						****	****				****	
Green Time:	0.0	0.0	0.0	54.8	54.8	54.8	0.0	34.6	34.6	51.6	86.2	86.2
Volume/Cap:	0.00	0.00	0.00	0.29	0.06	0.97	0.00	0.79	0.37	0.79	0.97	0.97
Delay/Veh:	0.0	0.0	0.0	25.8	23.5	55.5	0.0	43.5	37.2	36.4	30.0	30.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
ProgAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	25.8	23.5	55.5	0.0	43.5	37.2	36.4	30.0	30.0
DesignQueue:	0	0	0	10	2	36	0	70	10	50	111	18

Copyright (c) 1998 Dowling Associates, Inc. Licensed to DKS ASSOC., OAKLAND,CA

City of San Jose
Citywide Traffix Database
(modified February 4, 2000)
Level Of Service Computation Report
1985 HCM Operations (Future Volume Alternative)
Background (AM)

Intersection #3083: BROKAW/FIRST



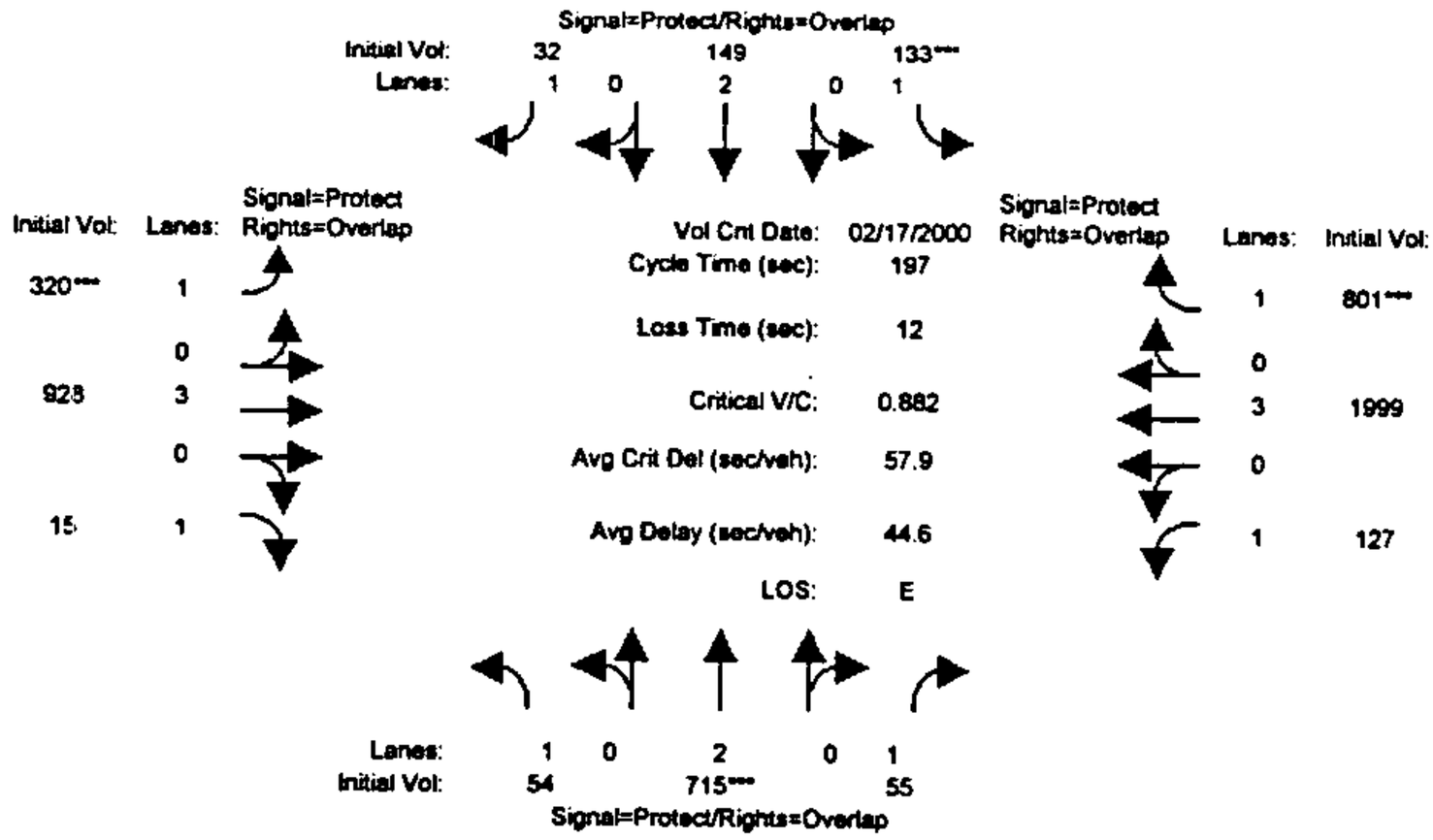
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Volume Module: >> Count Date: 24 Feb 2000 <<												
Base Vol:	60	1131	355	97	340	83	538	1134	12	419	903	445
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	60	1131	355	97	340	83	538	1134	12	419	903	445
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	7	178	27	24	196	95	53	180	7	216	545	391
Initial Fut:	67	1309	382	121	536	178	591	1314	19	635	1448	836
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	67	1309	382	121	536	178	591	1314	19	635	1448	836
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	67	1309	382	121	536	178	591	1314	19	635	1448	836
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	67	1309	382	121	536	178	591	1314	19	635	1448	836
Saturation Flow Module:												
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.97	1.06	0.97	0.97	1.06	0.97	0.88	1.06	0.97	0.88	1.06	0.97
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	2.00	3.00	1.00	2.00	2.00	1.00
Final Sat.:	1750	3800	1750	1750	3800	1750	3150	5700	1750	3150	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.04	0.34	0.22	0.07	0.14	0.10	0.19	0.23	0.01	0.20	0.38	0.48
Crit Moves:		****		****			****					****
Green Time:	7.0	43.7	78.9	8.8	45.4	69.2	23.8	40.3	47.3	35.3	51.8	60.6
Volume/Cap:	0.77	1.10	0.39	1.10	0.43	0.21	1.10	0.80	0.03	0.80	1.03	1.10
Delay/Veh:	70.9	94.4	13.1	159.8	28.4	15.2	111.4	37.1	23.6	41.4	60.3	93.9
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
ProgAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	70.9	94.4	13.1	159.8	28.4	15.2	111.4	37.1	23.6	41.4	60.3	93.9
DesignQueue:	5	77	14	9	29	7	40	77	1	39	79	42

Copyright (c) 1998 Dowling Associates, Inc. Licensed to DKS ASSOC., OAKLAND,CA

City of San Jose
Citywide Traffix Database
(modified February 4, 2000)

Level Of Service Computation Report
1985 HCM Operations (Future Volume Alternative)
Background (AM)

Intersection #3085: BROKAW/ZANKER



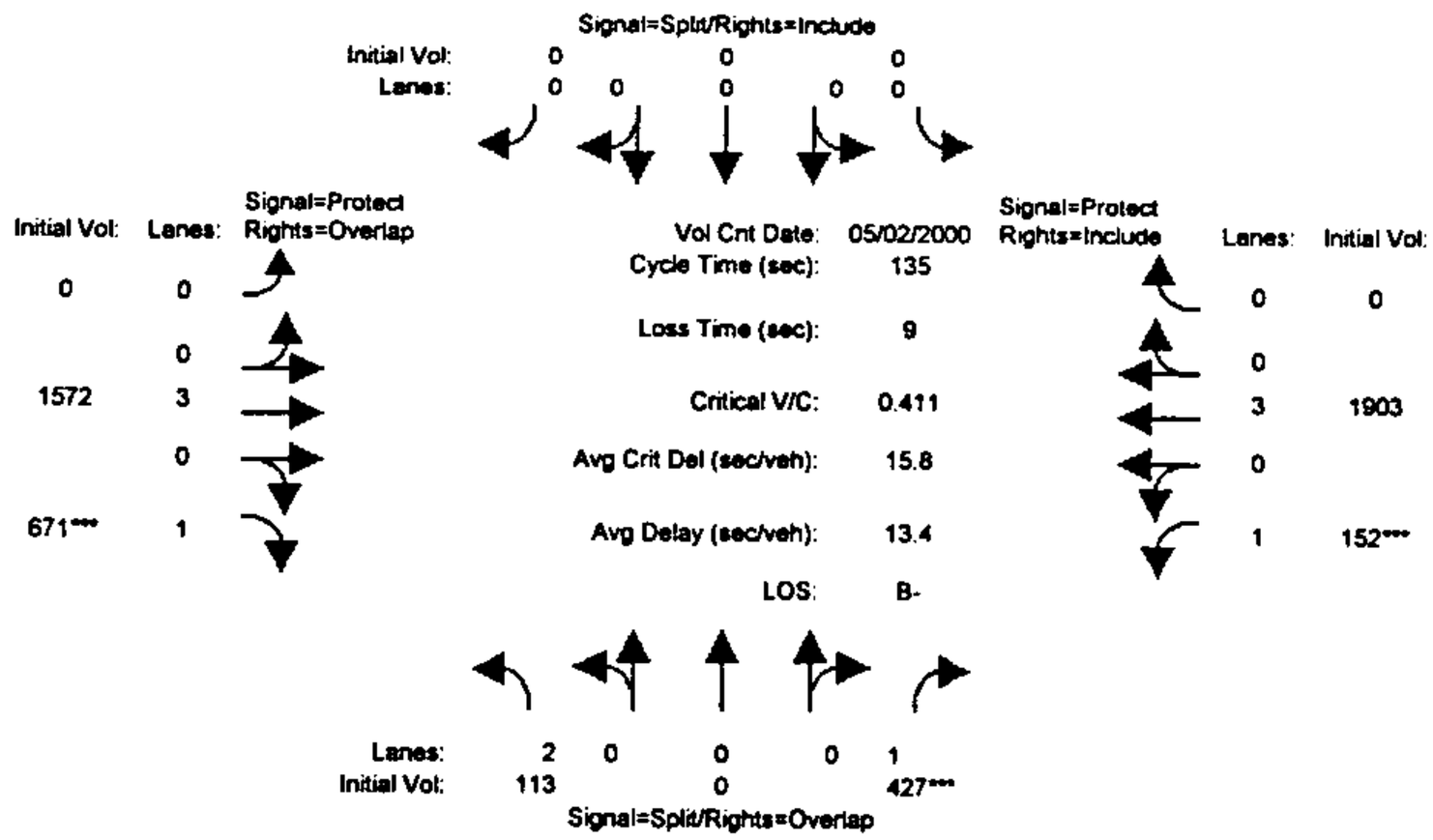
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Volume Module: >> Count Date: 17 Feb 2000 <<												
Base Vol:	58	698	58	112	132	38	299	881	23	132	1759	694
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	58	698	58	112	132	38	299	881	23	132	1759	694
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	-4	17	-3	21	17	-6	21	47	-8	-5	240	107
Initial Fut:	54	715	55	133	149	32	320	928	15	127	1999	801
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	54	715	55	133	149	32	320	928	15	127	1999	801
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	54	715	55	133	149	32	320	928	15	127	1999	801
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	54	715	55	133	149	32	320	928	15	127	1999	801
Saturation Flow Module:												
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.97	1.06	0.97	0.97	1.06	0.97	0.97	1.06	0.97	0.97	1.06	0.97
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	3.00	1.00	1.00	3.00	1.00
Final Sat.:	1750	3800	1750	1750	3800	1750	1750	5700	1750	1750	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.03	0.19	0.03	0.08	0.04	0.02	0.18	0.16	0.01	0.07	0.35	0.46
Crit Moves:		****		****			****					****
Green Time:	24.3	42.0	80.9	17.0	34.7	75.5	40.8	87.2	111.5	38.9	85.2	102.2
Volume/Cap:	0.25	0.88	0.08	0.88	0.22	0.05	0.88	0.37	0.02	0.37	0.81	0.88
Delay/Veh:	59.5	65.1	26.9	96.0	52.9	29.0	72.7	27.8	14.2	52.3	38.7	39.2
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
ProgAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	59.5	65.1	26.9	96.0	52.9	29.0	72.7	27.8	14.2	52.3	38.7	39.2
DesignQueue:	5	65	4	14	14	2	29	59	1	11	137	47

Copyright (c) 1998 Dowling Associates, Inc. Licensed to DKS ASSOC., OAKLAND,CA

City of San Jose
Citywide Traffix Database
(modified February 4, 2000)

Level Of Service Computation Report
1985 HCM Operations (Future Volume Alternative)
Background (PM)

Intersection #3050: 880/BROKAW (E)



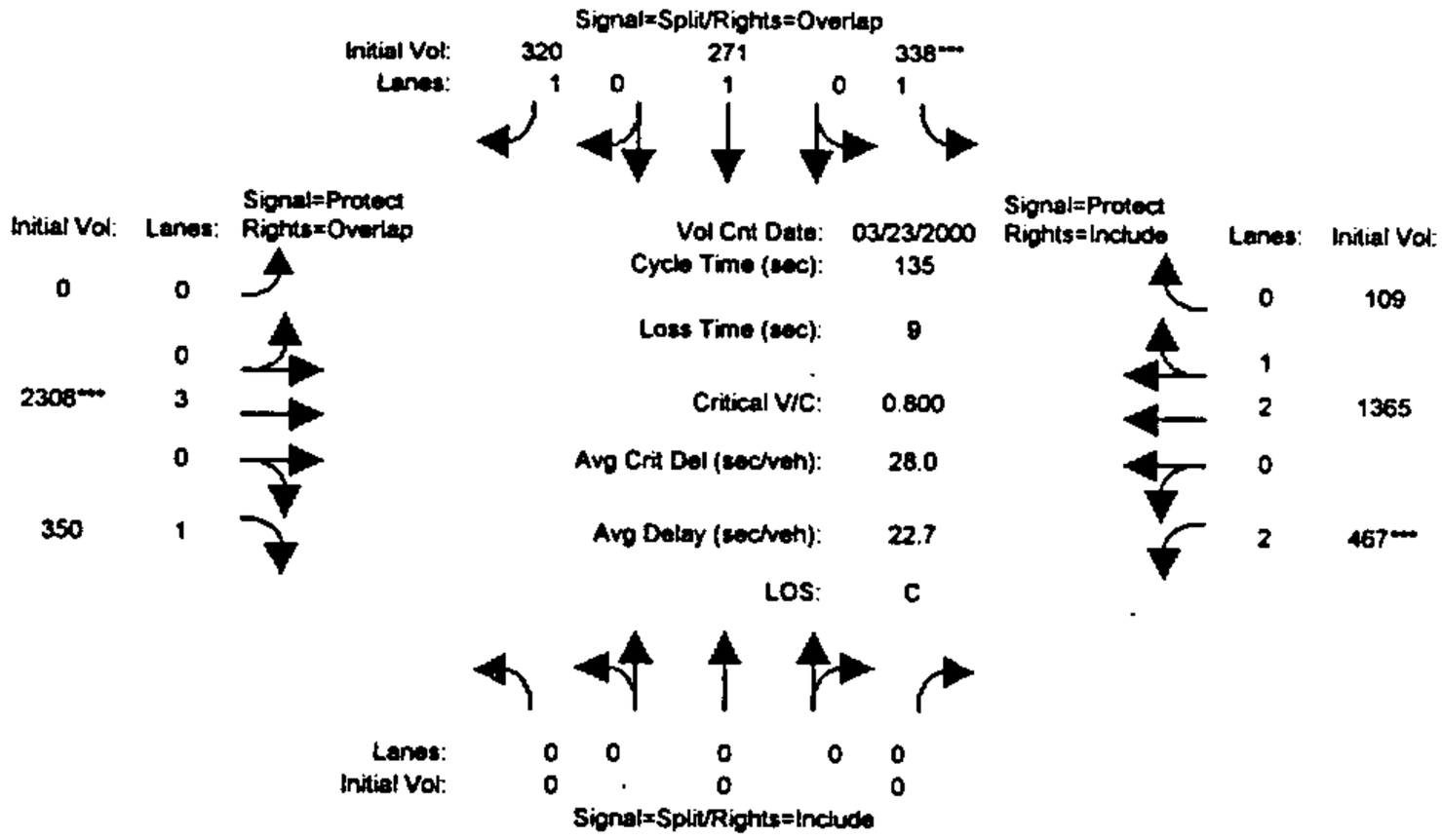
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	0	10	0	0	0	0	10	10	7	10	0
Volume Module: >> Count Date: 2 May 2000 <<												
Base Vol:	120	0	404	0	0	0	0	1354	409	149	1765	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	120	0	404	0	0	0	0	1354	409	149	1765	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	-7	0	23	0	0	0	0	218	262	3	138	0
Initial Fut:	113	0	427	0	0	0	0	1572	671	152	1903	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	113	0	427	0	0	0	0	1572	671	152	1903	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	113	0	427	0	0	0	0	1572	671	152	1903	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	113	0	427	0	0	0	0	1572	671	152	1903	0
Saturation Flow Module:												
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.88	1.06	0.97	0.97	1.06	0.97	0.97	1.06	0.97	0.97	1.06	0.97
Lanes:	2.00	0.00	1.00	0.00	0.00	0.00	0.00	3.00	1.00	1.00	3.00	0.00
Final Sat.:	3150	0	1750	0	0	0	0	5700	1750	1750	5700	0
Capacity Analysis Module:												
Vol/Sat:	0.04	0.00	0.24	0.00	0.00	0.00	0.00	0.28	0.38	0.09	0.33	0.00
Crit Moves:			****						****	****		
Green Time:	35.8	0.0	55.6	0.0	0.0	0.0	0.0	70.4	106.2	19.8	90.2	0.0
Volume/Cap:	0.14	0.00	0.59	0.00	0.00	0.00	0.00	0.53	0.49	0.59	0.50	0.00
Delay/Veh:	28.7	0.0	24.5	0.0	0.0	0.0	0.0	16.3	4.0	43.5	8.6	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
ProgAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	28.7	0.0	24.5	0.0	0.0	0.0	0.0	16.3	4.0	43.5	8.6	0.0
DesignQueue:	6	0	20	0	0	0	0	61	12	10	52	0

Copyright (c) 1998 Dowling Associates, Inc. Licensed to DKS ASSOC., OAKLAND,CA

City of San Jose
Citywide Traffix Database
(modified February 4, 2000)

Level Of Service Computation Report
1985 HCM Operations (Future Volume Alternative)
Background (PM)

Intersection #3051: 880/BROKAW (W)



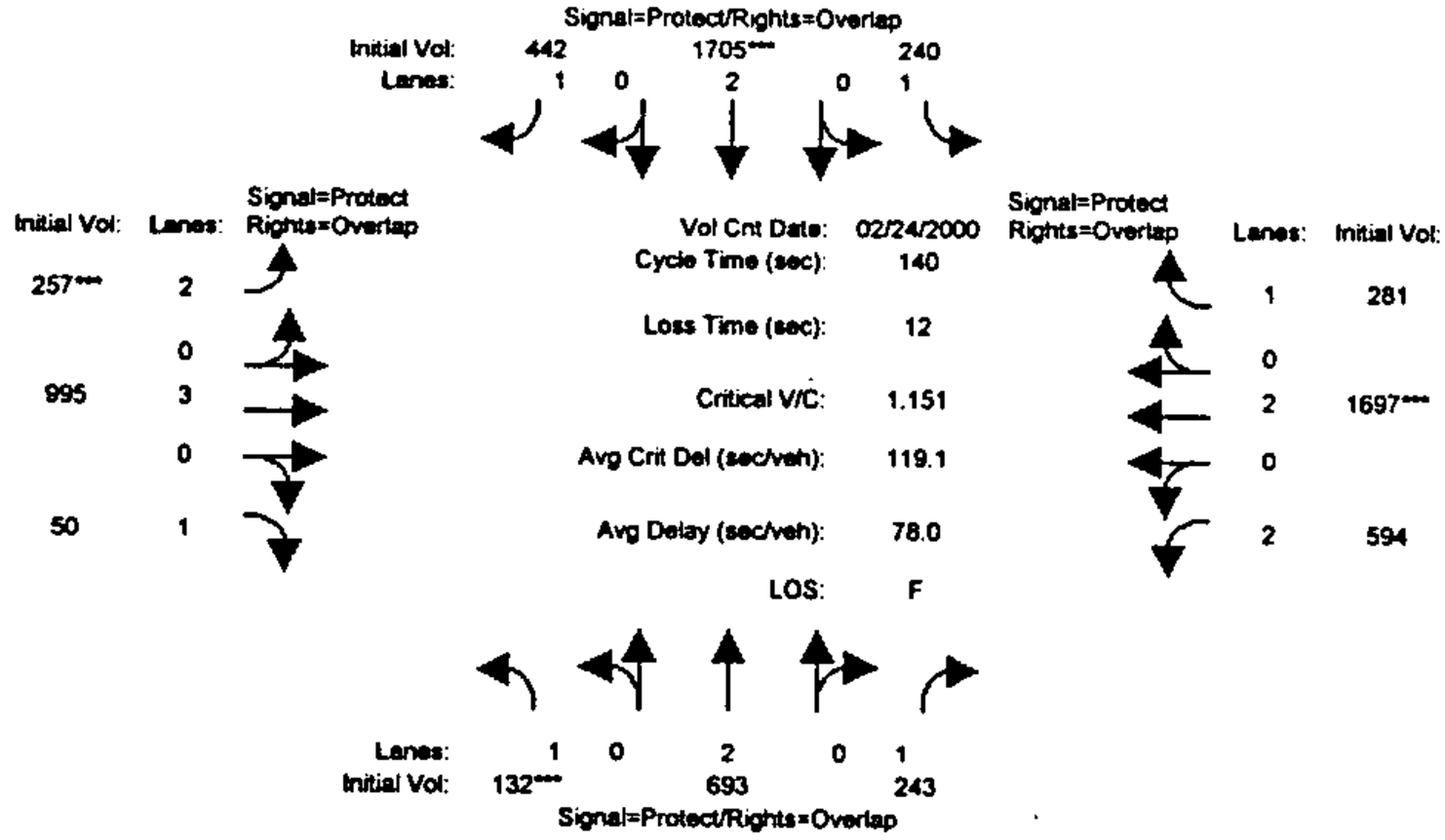
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	10	10	10	0	10	10	7	10	10
Volume Module: >> Count Date: 23 Mar 2000 <<												
Base Vol:	0	0	0	335	271	114	0	1834	330	458	1268	72
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	335	271	114	0	1834	330	458	1268	72
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	0	0	0	3	0	206	0	474	20	9	97	37
Initial Fut:	0	0	0	338	271	320	0	2308	350	467	1365	109
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	338	271	320	0	2308	350	467	1365	109
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	338	271	320	0	2308	350	467	1365	109
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	338	271	320	0	2308	350	467	1365	109
Saturation Flow Module:												
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.97	1.06	0.97	0.97	1.06	0.97	0.97	1.06	0.97	0.88	1.04	1.00
Lanes:	0.00	0.00	0.00	1.00	1.00	1.00	0.00	3.00	1.00	2.00	2.77	0.23
Final Sat.:	0	0	0	1750	1900	1750	0	5700	1750	3150	5185	414
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.19	0.14	0.18	0.00	0.40	0.20	0.15	0.26	0.26
Crit Moves:				****				****		****		
Green Time:	0.0	0.0	0.0	32.6	32.6	32.6	0.0	68.4	68.4	25.0	93.4	93.4
Volume/Cap:	0.00	0.00	0.00	0.80	0.59	0.76	0.00	0.80	0.39	0.80	0.38	0.38
Delay/Veh:	0.0	0.0	0.0	43.8	35.9	41.4	0.0	22.2	15.8	45.4	6.6	6.6
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
ProgAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	43.8	35.9	41.4	0.0	22.2	15.8	45.4	6.6	6.6
DesignQueue:	0	0	0	20	16	19	0	96	14	29	34	3

Copyright (c) 1998 Dowling Associates, Inc. Licensed to DKS ASSOC., OAKLAND,CA

City of San Jose
Citywide Traffix Database
(modified February 4, 2000)

Level Of Service Computation Report
1985 HCM Operations (Future Volume Alternative)
Background (PM)

Intersection #3083: BROKAW/FIRST



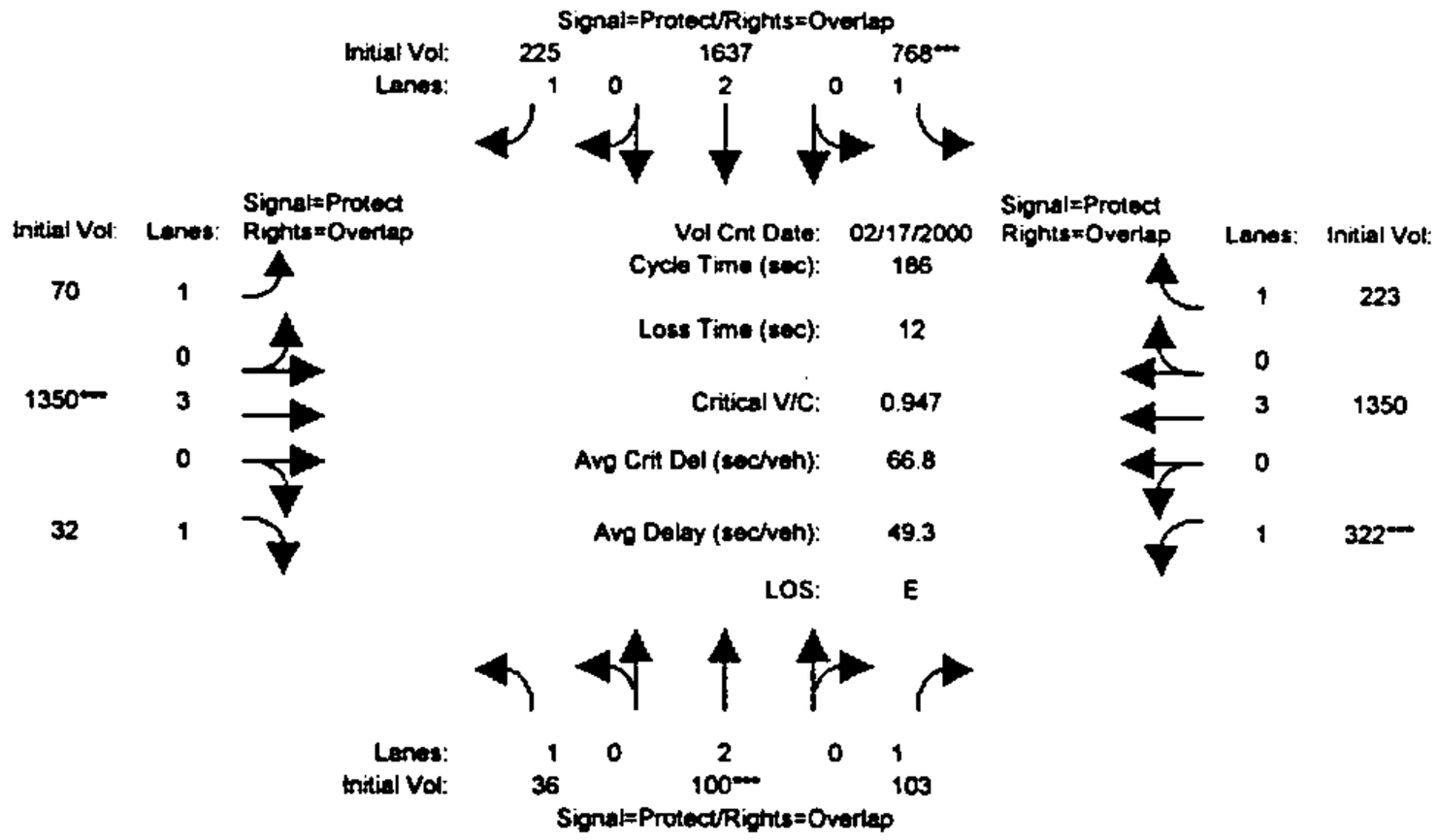
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Volume Module: >> Count Date: 24 Feb 2000 <<												
Base Vol:	119	538	138	163	1204	355	173	722	37	496	1193	228
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	119	538	138	163	1204	355	173	722	37	496	1193	228
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	13	155	105	77	501	87	84	273	13	98	504	53
Initial Fut:	132	693	243	240	1705	442	257	995	50	594	1697	281
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	132	693	243	240	1705	442	257	995	50	594	1697	281
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	132	693	243	240	1705	442	257	995	50	594	1697	281
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	132	693	243	240	1705	442	257	995	50	594	1697	281
Saturation Flow Module:												
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.97	1.06	0.97	0.97	1.06	0.97	0.88	1.06	0.97	0.88	1.06	0.97
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	2.00	3.00	1.00	2.00	2.00	1.00
Final Sat.:	1750	3800	1750	1750	3800	1750	3150	5700	1750	3150	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.08	0.18	0.14	0.14	0.45	0.25	0.08	0.17	0.03	0.19	0.45	0.16
Crit Moves:	****				****		****				****	
Green Time:	9.2	36.4	69.8	27.4	54.6	64.5	9.9	30.9	40.1	33.4	54.3	81.7
Volume/Cap:	1.15	0.70	0.28	0.70	1.15	0.55	1.15	0.79	0.10	0.79	1.15	0.28
Delay/Veh:	183.0	37.2	15.6	44.2	114	21.3	158.9	41.6	27.9	42.1	114	11.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
ProgAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	183.0	37.2	15.6	44.2	114	21.3	158.9	41.6	27.9	42.1	114	11.0
DesignQueue:	10	42	10	16	92	20	19	63	3	37	92	9

Copyright (c) 1998 Dowling Associates, Inc. Licensed to DKS ASSOC., OAKLAND,CA

City of San Jose
Citywide Traffix Database
(modified February 4, 2000)

Level Of Service Computation Report
1985 HCM Operations (Future Volume Alternative)
Background (PM)

Intersection #3085: BROKAW/ZANKER



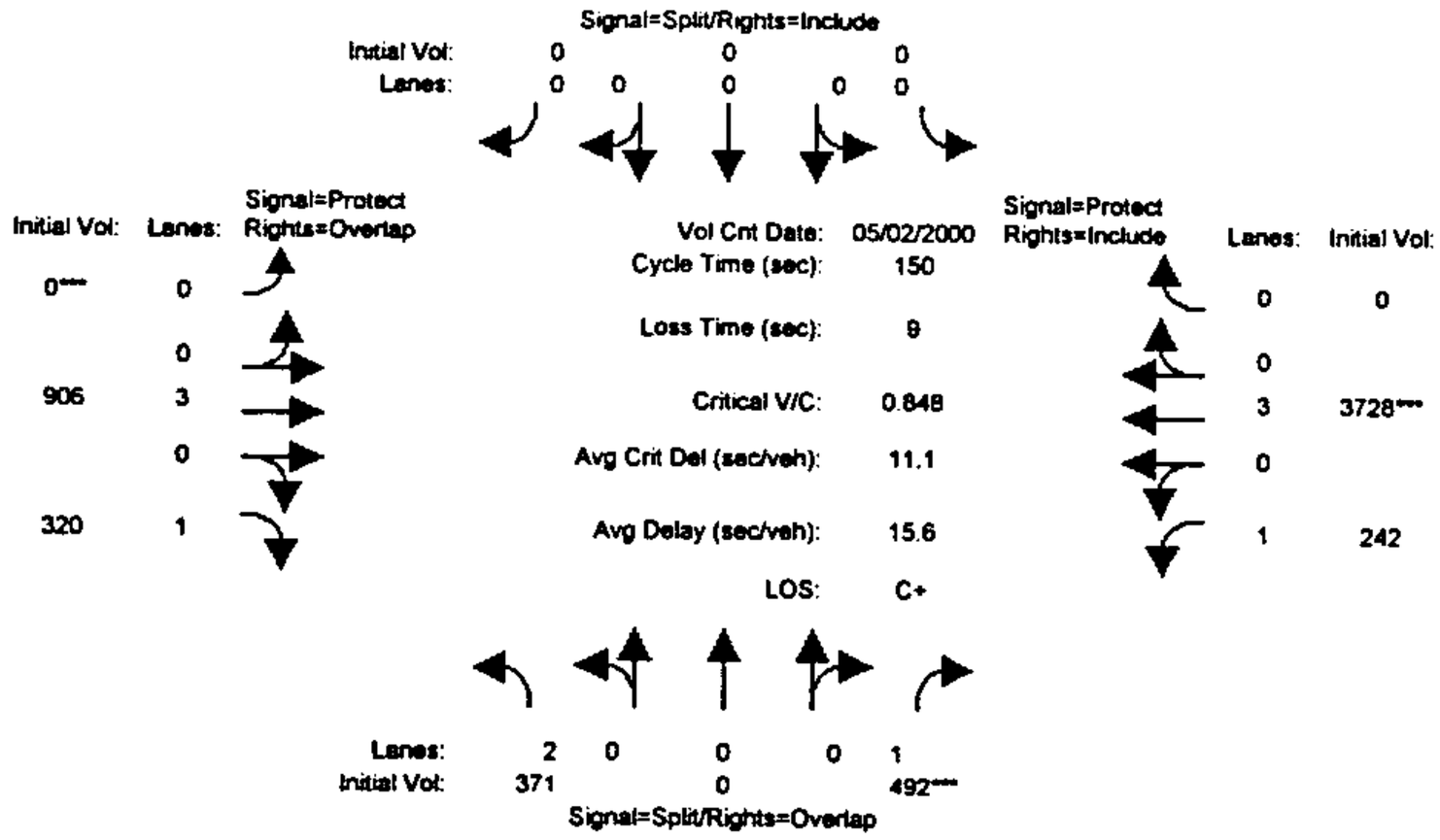
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Volume Module: >> Count Date: 17 Feb 2000 <<												
Base Vol:	44	83	108	659	1620	207	81	1128	36	325	1266	202
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	44	83	108	659	1620	207	81	1128	36	325	1266	202
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	-8	17	-5	109	17	18	-11	222	-4	-3	84	21
Initial Fut:	36	100	103	768	1637	225	70	1350	32	322	1350	223
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	36	100	103	768	1637	225	70	1350	32	322	1350	223
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	36	100	103	768	1637	225	70	1350	32	322	1350	223
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	36	100	103	768	1637	225	70	1350	32	322	1350	223
Saturation Flow Module:												
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.97	1.06	0.97	0.97	1.06	0.97	0.97	1.06	0.97	0.97	1.06	0.97
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	3.00	1.00	1.00	3.00	1.00
Final Sat.:	1750	3800	1750	1750	3800	1750	1750	5700	1750	1750	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.02	0.03	0.06	0.44	0.43	0.13	0.04	0.24	0.02	0.18	0.24	0.13
Crit Moves:		****		****				****		****		
Green Time:	7.0	10.0	45.1	83.7	86.7	98.3	11.6	45.2	52.2	35.1	68.7	152.4
Volume/Cap:	0.55	0.49	0.24	0.98	0.92	0.24	0.64	0.98	0.07	0.98	0.64	0.16
Delay/Veh:	73.5	66.5	43.2	57.5	41.7	18.1	72.8	66.9	37.3	88.9	37.3	2.6
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
ProgAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	73.5	66.5	43.2	57.5	41.7	18.1	72.8	66.9	37.3	88.9	37.3	2.6
DesignQueue:	4	10	8	49	102	11	7	113	2	28	94	4

Copyright (c) 1998 Dowling Associates, Inc. Licensed to DKS ASSOC., OAKLAND,CA

City of San Jose
Citywide Traffix Database
(modified February 4, 2000)

Level Of Service Computation Report
1985 HCM Operations (Future Volume Alternative)
Project (AM)

Intersection #3050: 880/BROKAW (E)

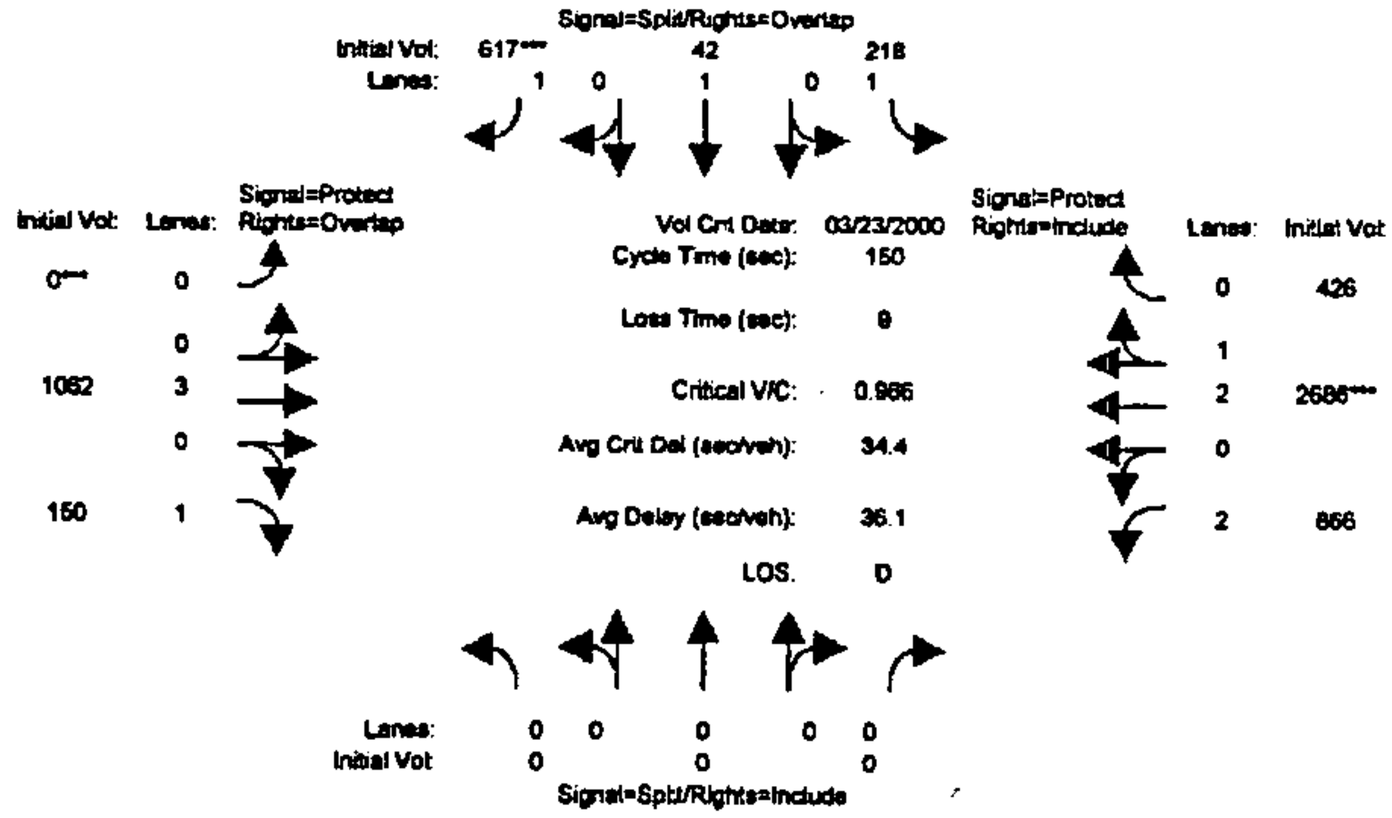


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	10	0	10	0	0	0	0	10	10	7	10	0
Volume Module: >> Count Date: 2 May 2000 <<												
Base Vol:	348	0	398	0	0	0	0	747	147	204	3532	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	348	0	398	0	0	0	0	747	147	204	3532	0
Added Vol:	0	0	49	0	0	0	0	59	0	8	18	0
Project:	23	0	45	0	0	0	0	100	173	30	178	0
Initial Fut:	371	0	492	0	0	0	0	906	320	242	3728	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	371	0	492	0	0	0	0	906	320	242	3728	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	371	0	492	0	0	0	0	906	320	242	3728	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	371	0	492	0	0	0	0	906	320	242	3728	0
Saturation Flow Module:												
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.88	1.06	0.97	0.97	1.06	0.97	0.97	1.06	0.97	0.97	1.06	0.97
Lanes:	2.00	0.00	1.00	0.00	0.00	0.00	0.00	3.00	1.00	1.00	3.00	0.00
Final Sat.:	3150	0	1750	0	0	0	0	5700	1750	1750	5700	0
Capacity Analysis Module:												
Vol/Sat:	0.12	0.00	0.28	0.00	0.00	0.00	0.00	0.16	0.18	0.14	0.65	0.00
Crit Moves:			****				****				****	
Green Time:	25.3	0.0	75.1	0.0	0.0	0.0	0.0	65.9	91.2	49.8	116	0.0
Volume/Cap:	0.70	0.00	0.56	0.00	0.00	0.00	0.00	0.36	0.30	0.42	0.85	0.00
Delay/Veh:	47.5	0.0	20.4	0.0	0.0	0.0	0.0	21.3	10.8	29.8	9.8	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
ProgAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	47.5	0.0	20.4	0.0	0.0	0.0	0.0	21.3	10.8	29.8	9.8	0.0
DesignQueue:	26	0	22	0	0	0	0	44	11	14	86	0

Copyright (c) 1998 Dowling Associates, Inc. Licensed to DKS ASSOC., OAKLAND,CA

City of San Jose
Citywide Traffix Database
(modified February 4, 2000)
Level Of Service Computation Report
1985 HCM Operations (Future Volume Alternative)
Project (AM)

Intersection #3051: 880/BROKAW (W)



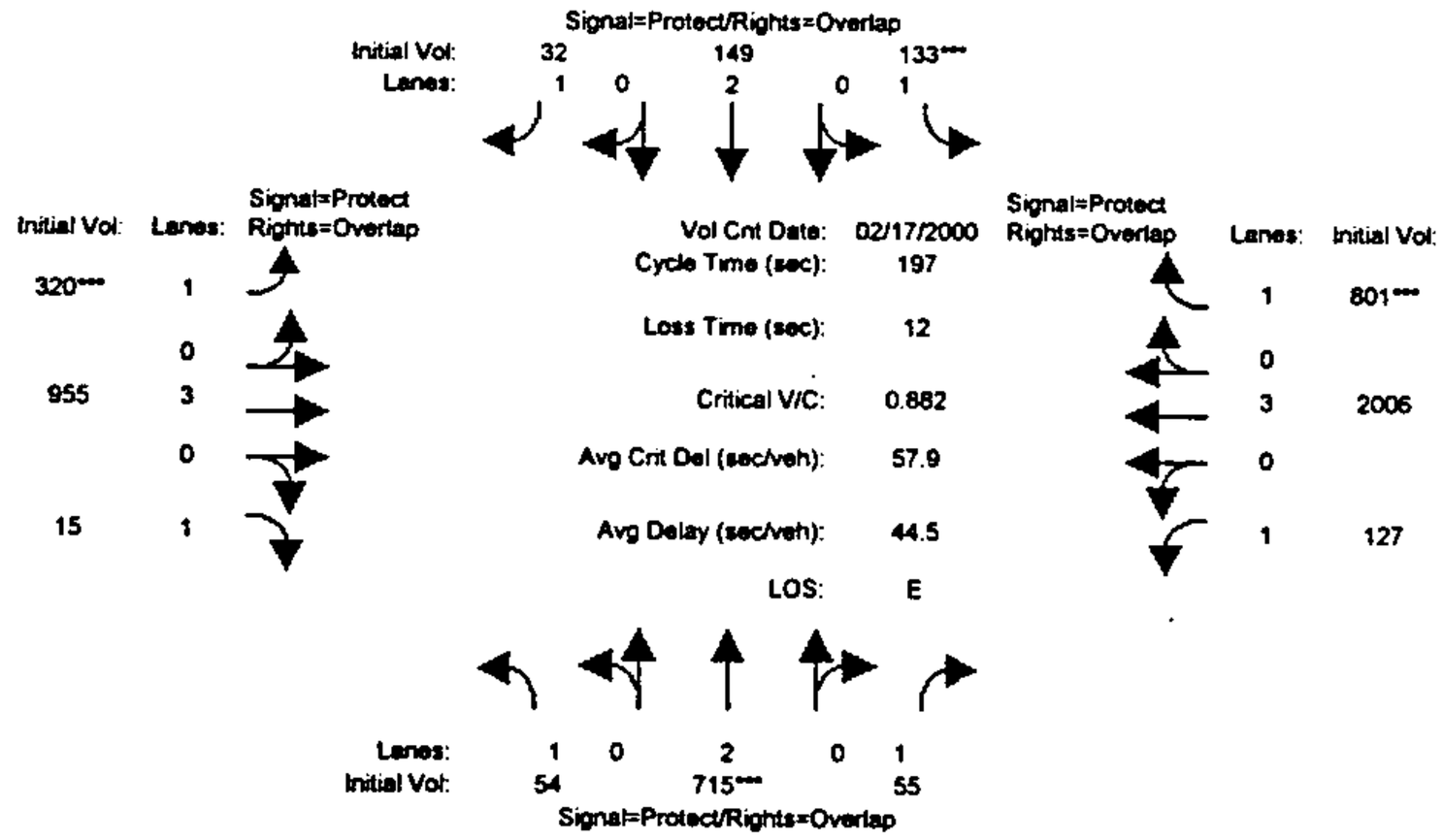
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	10	10	10	0	10	10	7	10	10
Volume Module: >> Count Date: 23 Mar 2000 <<												
Base Vol:	0	0	0	173	42	389	0	778	152	845	2443	422
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	173	42	389	0	778	152	845	2443	422
Added Vol:	0	0	0	32	0	0	0	27	0	12	7	0
Project:	0	0	0	13	0	228	0	257	-2	9	236	4
Initial Fut:	0	0	0	218	42	617	0	1062	150	866	2686	426
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	218	42	617	0	1062	150	866	2686	426
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	218	42	617	0	1062	150	866	2686	426
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	218	42	617	0	1062	150	866	2686	426
Saturation Flow Module:												
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.97	1.06	0.97	0.97	1.06	0.97	0.97	1.06	0.97	0.88	1.04	1.00
Lanes:	0.00	0.00	0.00	1.00	1.00	1.00	0.00	3.00	1.00	2.00	2.57	0.43
Final Sat.:	0	0	0	1750	1900	1750	0	5700	1750	3150	4832	766
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.12	0.02	0.35	0.00	0.19	0.09	0.27	0.56	0.56
Crit Moves:						****	****				****	
Green Time:	0.0	0.0	0.0	54.7	54.7	54.7	0.0	34.9	34.9	51.4	86.3	86.3
Volume/Cap:	0.00	0.00	0.00	0.34	0.06	0.97	0.00	0.80	0.37	0.80	0.97	0.97
Delay/Veh:	0.0	0.0	0.0	26.4	23.5	55.8	0.0	43.9	37.0	37.1	30.2	30.2
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
ProgAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	26.4	23.5	55.8	0.0	43.9	37.0	37.1	30.2	30.2
DesignQueue:	0	0	0	12	2	36	0	71	10	50	111	17

Copyright (c) 1998 Dowling Associates, Inc. Licensed to DKS ASSOC., OAKLAND,CA

City of San Jose
Citywide Traffix Database
(modified February 4, 2000)

Level Of Service Computation Report
1985 HCM Operations (Future Volume Alternative)
Project (AM)

Intersection #3085: BROKAW/ZANKER



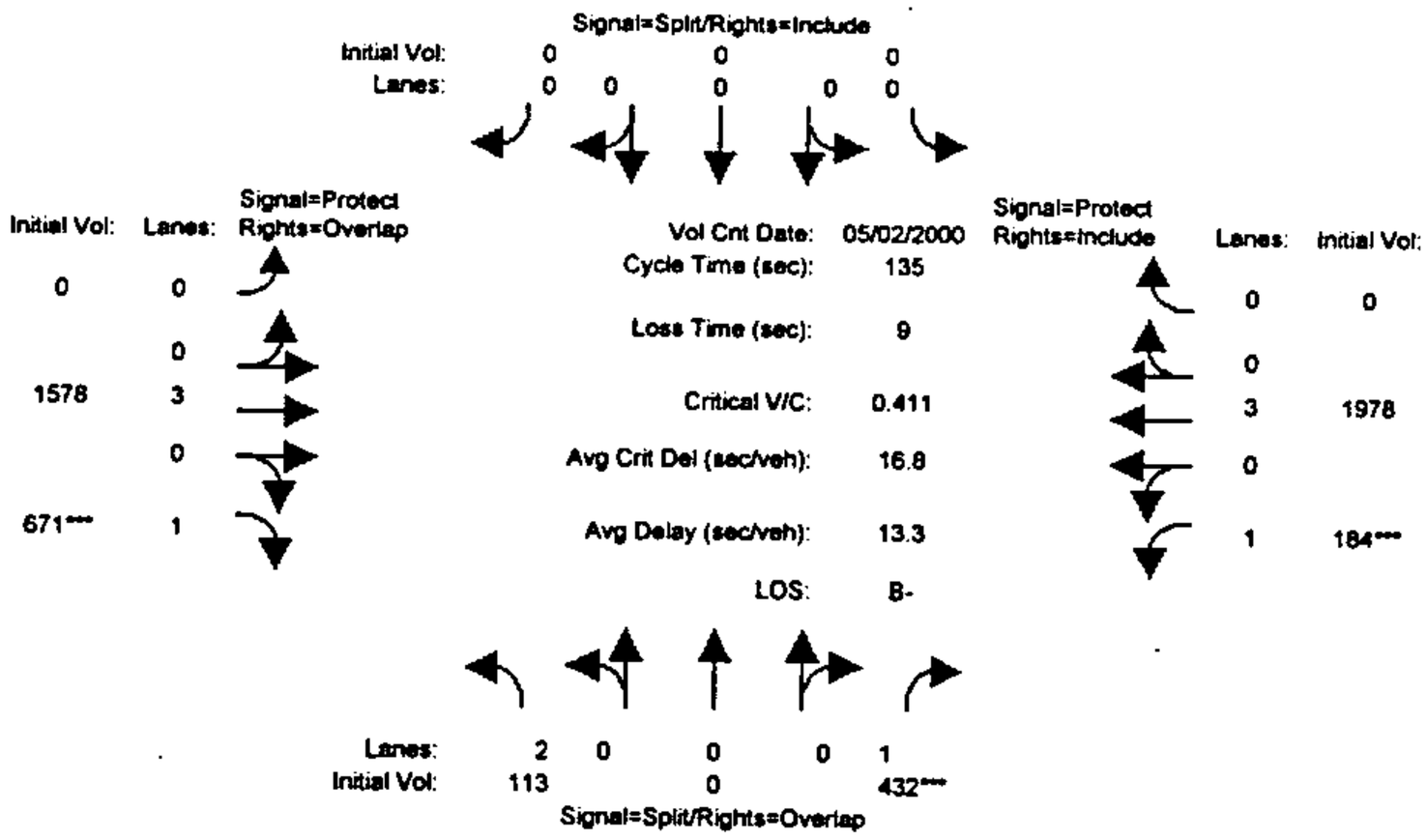
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Volume Module: >> Count Date: 17 Feb 2000 <<												
Base Vol:	58	698	58	112	132	38	299	881	23	132	1759	694
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	58	698	58	112	132	38	299	881	23	132	1759	694
Added Vol:	0	0	0	0	0	0	0	27	0	0	7	0
Project:	-4	17	-3	21	17	-6	21	47	-8	-5	240	107
Initial Fut:	54	715	55	133	149	32	320	955	15	127	2006	801
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	54	715	55	133	149	32	320	955	15	127	2006	801
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	54	715	55	133	149	32	320	955	15	127	2006	801
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	54	715	55	133	149	32	320	955	15	127	2006	801
Saturation Flow Module:												
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.97	1.06	0.97	0.97	1.06	0.97	0.97	1.06	0.97	0.97	1.06	0.97
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	3.00	1.00	1.00	3.00	1.00
Final Sat.:	1750	3800	1750	1750	3800	1750	1750	5700	1750	1750	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.03	0.19	0.03	0.08	0.04	0.02	0.18	0.17	0.01	0.07	0.35	0.46
Crit Moves:		****		****			****					****
Green Time:	24.3	42.0	80.1	17.0	34.7	75.5	40.8	87.9	112.2	38.1	85.2	102.2
Volume/Cap:	0.25	0.88	0.08	0.88	0.22	0.05	0.88	0.38	0.02	0.38	0.81	0.88
Delay/Veh:	59.5	65.1	27.2	96.0	52.9	29.0	72.7	27.6	14.0	52.9	38.8	39.2
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
ProgAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	59.5	65.1	27.2	96.0	52.9	29.0	72.7	27.6	14.0	52.9	38.8	39.2
DesignQueue:	5	65	4	14	14	2	29	61	1	11	137	47

Copyright (c) 1998 Dowling Associates, Inc. Licensed to DKS ASSOC., OAKLAND,CA

City of San Jose
Citywide Traffix Database
(modified February 4, 2000)

Level Of Service Computation Report
1985 HCM Operations (Future Volume Alternative)
Project (PM)

Intersection #3050: 880/BROKAW (E)



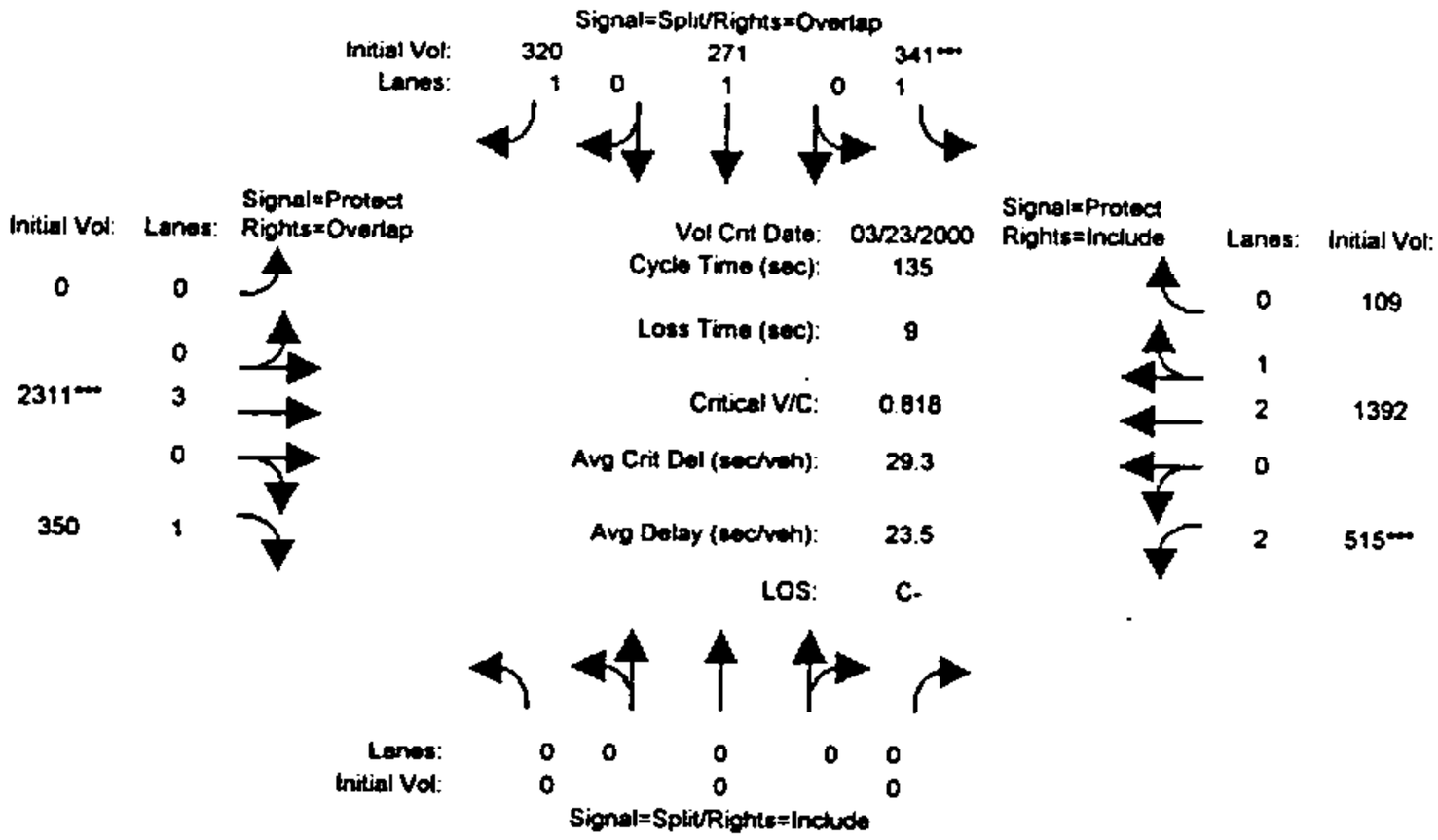
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	0	10	0	0	0	0	10	10	7	10	0
Volume Module: >> Count Date: 2 May 2000 <<												
Base Vol:	120	0	404	0	0	0	0	1354	409	149	1765	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	120	0	404	0	0	0	0	1354	409	149	1765	0
Added Vol:	0	0	5	0	0	0	0	6	0	32	75	0
Project:	-7	0	23	0	0	0	0	218	262	3	138	0
Initial Fut:	113	0	432	0	0	0	0	1578	671	184	1978	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	113	0	432	0	0	0	0	1578	671	184	1978	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	113	0	432	0	0	0	0	1578	671	184	1978	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	113	0	432	0	0	0	0	1578	671	184	1978	0
Saturation Flow Module:												
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.88	1.06	0.97	0.97	1.06	0.97	0.97	1.06	0.97	0.97	1.06	0.97
Lanes:	2.00	0.00	1.00	0.00	0.00	0.00	0.00	3.00	1.00	1.00	3.00	0.00
Final Sat.:	3150	0	1750	0	0	0	0	5700	1750	1750	5700	0
Capacity Analysis Module:												
Vol/Sat:	0.04	0.00	0.25	0.00	0.00	0.00	0.00	0.28	0.38	0.11	0.35	0.00
Crit Moves:			****						****	****		
Green Time:	32.1	0.0	55.9	0.0	0.0	0.0	0.0	70.1	102.2	23.8	93.9	0.0
Volume/Cap:	0.15	0.00	0.60	0.00	0.00	0.00	0.00	0.53	0.51	0.60	0.50	0.00
Delay/Veh:	30.9	0.0	24.4	0.0	0.0	0.0	0.0	16.6	5.2	41.1	7.4	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
ProgAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	30.9	0.0	24.4	0.0	0.0	0.0	0.0	16.6	5.2	41.1	7.4	0.0
DesignQueue:	7	0	20	0	0	0	0	61	13	12	50	0

Copyright (c) 1998 Dowling Associates, Inc. Licensed to DKS ASSOC., OAKLAND,CA

City of San Jose
Citywide Traffix Database
(modified February 4, 2000)

Level Of Service Computation Report
1985 HCM Operations (Future Volume Alternative)
Project (PM)

Intersection #3051: 880/BROKAW (W)



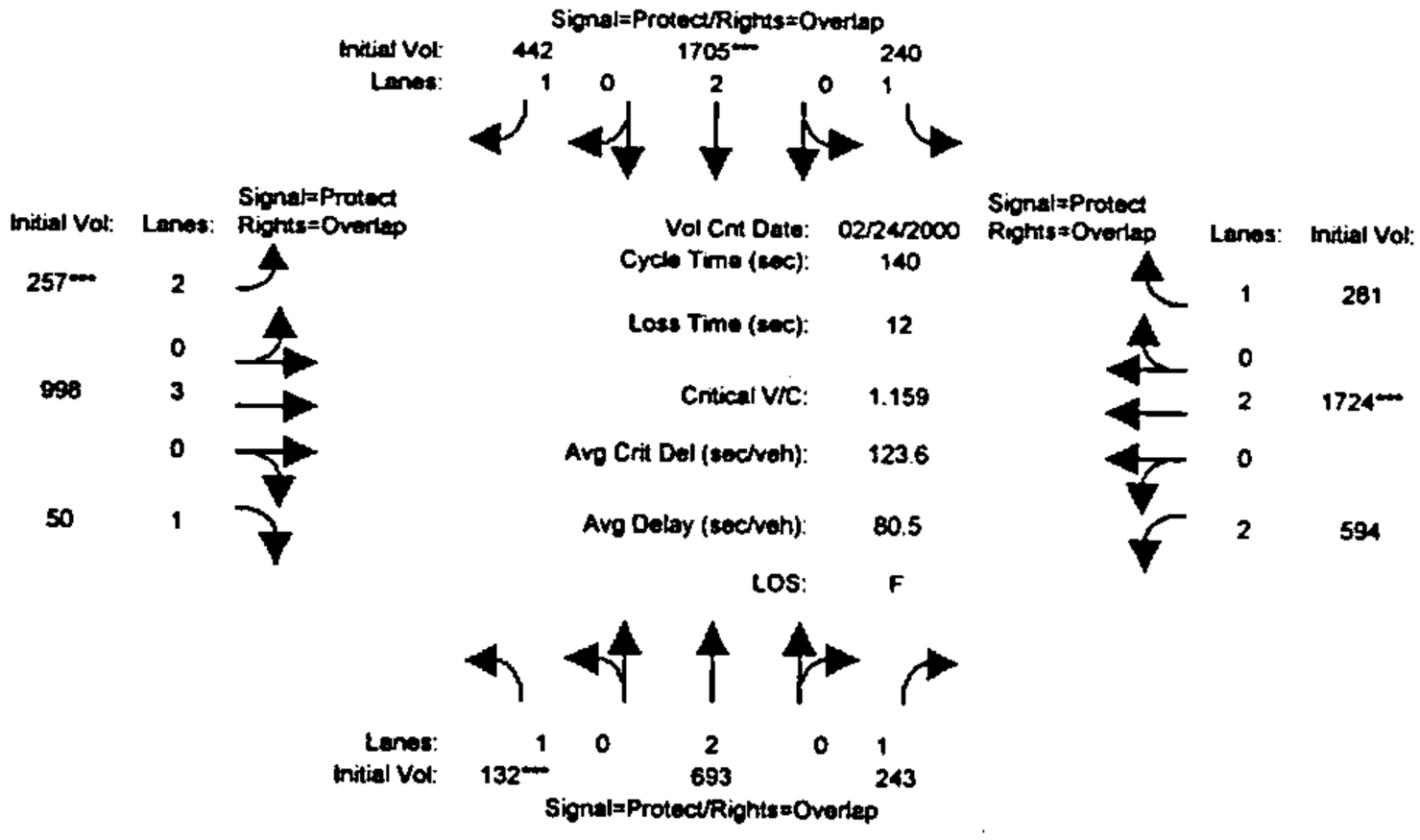
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	10	10	10	0	10	10	7	10	10
Volume Module: >> Count Date: 23 Mar 2000 <<												
Base Vol:	0	0	0	335	271	114	0	1834	330	458	1268	72
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	335	271	114	0	1834	330	458	1268	72
Added Vol:	0	0	0	3	0	0	0	3	0	48	27	0
Project:	0	0	0	3	0	206	0	474	20	9	97	37
Initial Fut:	0	0	0	341	271	320	0	2311	350	515	1392	109
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	341	271	320	0	2311	350	515	1392	109
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	341	271	320	0	2311	350	515	1392	109
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	341	271	320	0	2311	350	515	1392	109
Saturation Flow Module:												
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.97	1.06	0.97	0.97	1.06	0.97	0.97	1.06	0.97	0.88	1.04	1.00
Lanes:	0.00	0.00	0.00	1.00	1.00	1.00	0.00	3.00	1.00	2.00	2.77	0.23
Final Sat.:	0	0	0	1750	1900	1750	0	5700	1750	3150	5193	407
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.19	0.14	0.18	0.00	0.41	0.20	0.16	0.27	0.27
Crit Moves:				****				****		****		
Green Time:	0.0	0.0	0.0	32.1	32.1	32.1	0.0	66.9	66.9	27.0	93.9	93.9
Volume/Cap:	0.00	0.00	0.00	0.82	0.60	0.77	0.00	0.82	0.40	0.82	0.39	0.39
Delay/Veh:	0.0	0.0	0.0	45.3	36.3	42.2	0.0	23.4	16.5	45.1	6.5	6.5
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
ProgAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	45.3	36.3	42.2	0.0	23.4	16.5	45.1	6.5	6.5
DesignQueue:	0	0	0	20	16	19	0	98	14	32	34	3

Copyright (c) 1998 Dowling Associates, Inc. Licensed to DKS ASSOC., OAKLAND,CA

City of San Jose
Citywide Traffix Database
(modified February 4, 2000)

Level Of Service Computation Report
1985 HCM Operations (Future Volume Alternative)
Project (PM)

Intersection #3083: BROKAW/FIRST



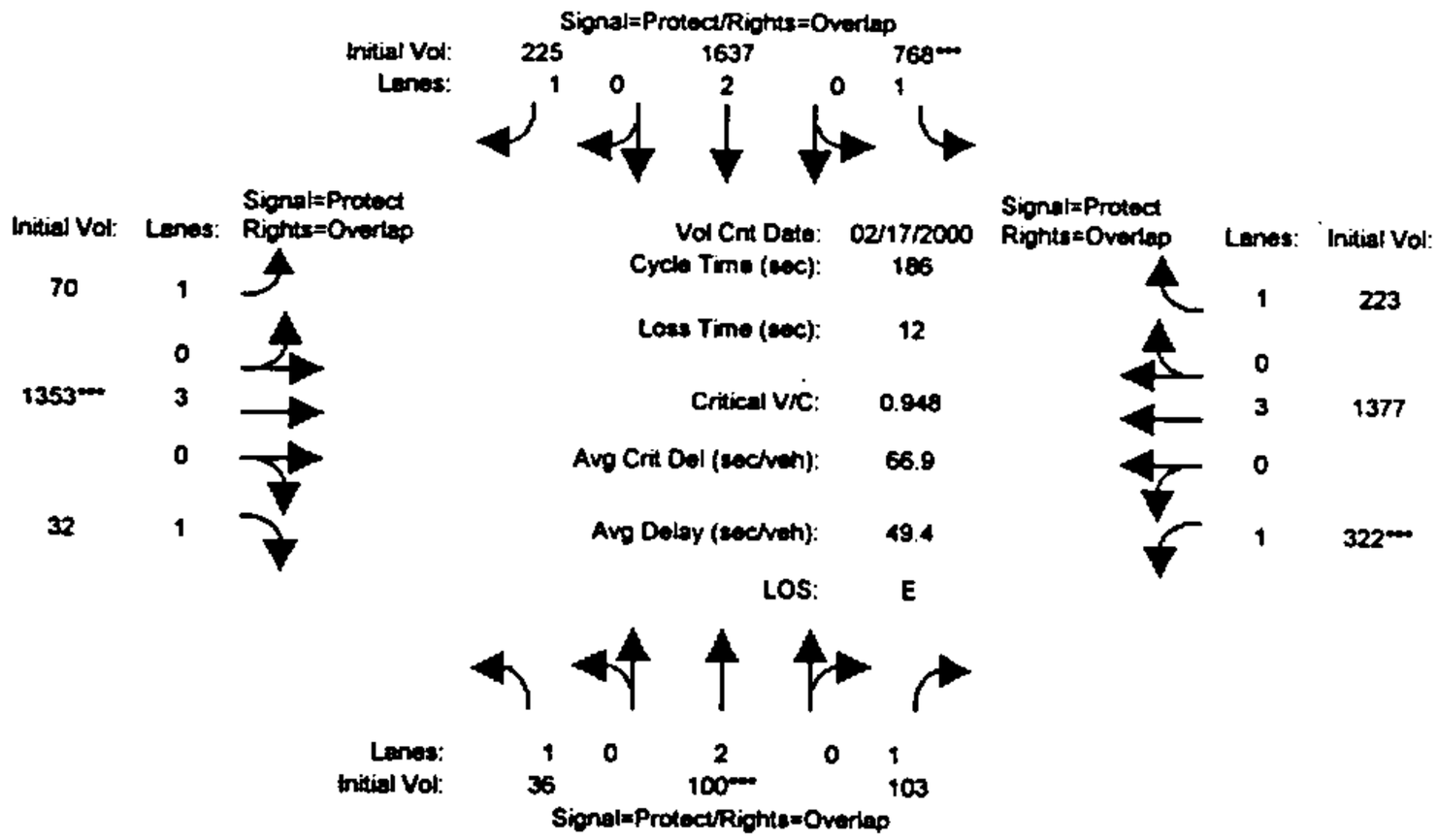
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Volume Module: >> Count Date: 24 Feb 2000 <<												
Base Vol:	119	538	138	163	1204	355	173	722	37	496	1193	228
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	119	538	138	163	1204	355	173	722	37	496	1193	228
Added Vol:	0	0	0	0	0	0	0	3	0	0	27	0
Project:	13	155	105	77	501	87	84	273	13	98	504	53
Initial Fut:	132	693	243	240	1705	442	257	998	50	594	1724	281
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	132	693	243	240	1705	442	257	998	50	594	1724	281
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	132	693	243	240	1705	442	257	998	50	594	1724	281
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	132	693	243	240	1705	442	257	998	50	594	1724	281
Saturation Flow Module:												
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.97	1.06	0.97	0.97	1.06	0.97	0.88	1.06	0.97	0.88	1.06	0.97
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	2.00	3.00	1.00	2.00	2.00	1.00
Final Sat.:	1750	3800	1750	1750	3800	1750	3150	5700	1750	3150	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.08	0.18	0.14	0.14	0.45	0.25	0.08	0.18	0.03	0.19	0.45	0.16
Crit Moves:	****				****		****				****	
Green Time:	9.1	36.1	69.7	27.2	54.2	64.1	9.9	31.1	40.3	33.5	54.8	82.0
Volume/Cap:	1.16	0.71	0.28	0.71	1.16	0.55	1.16	0.79	0.10	0.79	1.16	0.27
Delay/Veh:	187.8	37.4	15.6	44.5	118	21.6	163.5	41.4	27.8	41.8	118	10.9
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
ProgAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	187.8	37.4	15.6	44.5	118	21.6	163.5	41.4	27.8	41.8	118	10.9
DesignQueue:	10	42	10	16	92	20	19	63	3	37	93	9

Copyright (c) 1998 Dowling Associates, Inc. Licensed to DKS ASSOC., OAKLAND,CA

City of San Jose
Citywide Traffix Database
(modified February 4, 2000)

Level Of Service Computation Report
1985 HCM Operations (Future Volume Alternative)
Project (PM)

Intersection #3085: BROKAW/ZANKER



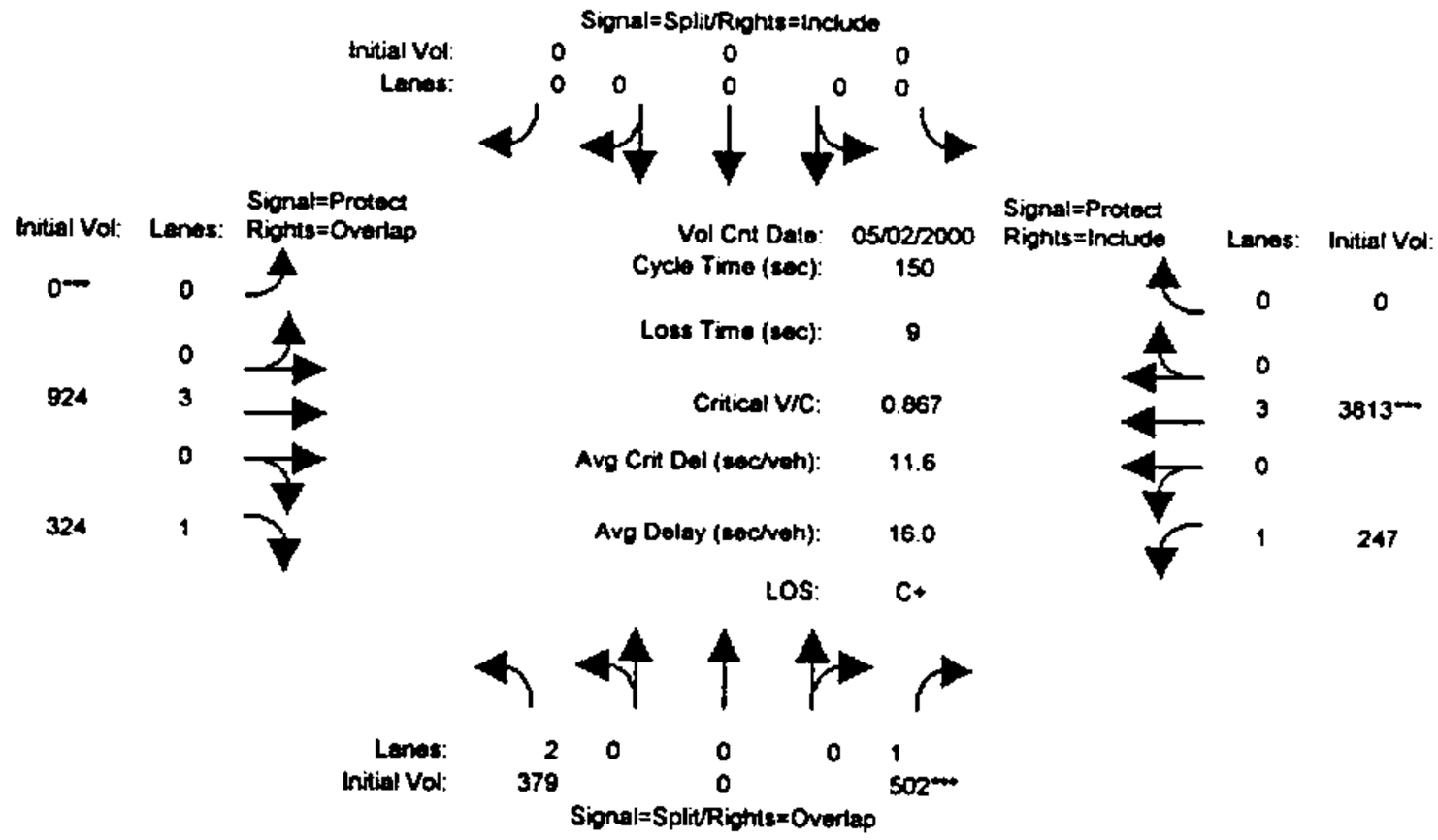
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Volume Module: >> Count Date: 17 Feb 2000 <<												
Base Vol:	44	83	108	659	1620	207	81	1128	36	325	1266	202
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	44	83	108	659	1620	207	81	1128	36	325	1266	202
Added Vol:	0	0	0	0	0	0	0	3	0	0	27	0
Project:	-8	17	-5	109	17	18	-11	222	-4	-3	84	21
Initial Fut:	36	100	103	768	1637	225	70	1353	32	322	1377	223
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	36	100	103	768	1637	225	70	1353	32	322	1377	223
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	36	100	103	768	1637	225	70	1353	32	322	1377	223
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	36	100	103	768	1637	225	70	1353	32	322	1377	223
Saturation Flow Module:												
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.97	1.06	0.97	0.97	1.06	0.97	0.97	1.06	0.97	0.97	1.06	0.97
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	3.00	1.00	1.00	3.00	1.00
Final Sat.:	1750	3800	1750	1750	3800	1750	1750	5700	1750	1750	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.02	0.03	0.06	0.44	0.43	0.13	0.04	0.24	0.02	0.18	0.24	0.13
Crit Moves:		****		****				****		****		
Green Time:	7.0	10.0	45.1	83.7	86.7	98.1	11.4	45.3	52.3	35.1	68.9	152.6
Volume/Cap:	0.55	0.49	0.24	0.98	0.92	0.24	0.65	0.98	0.07	0.98	0.65	0.16
Delay/Veh:	73.5	66.5	43.2	57.6	41.8	18.2	73.6	67.0	37.2	89.0	37.4	2.6
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
ProgAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	73.5	66.5	43.2	57.6	41.8	18.2	73.6	67.0	37.2	89.0	37.4	2.6
DesignQueue:	4	10	8	49	102	11	7	113	2	28	96	4

Copyright (c) 1998 Dowling Associates, Inc. Licensed to DKS ASSOC., OAKLAND,CA

City of San Jose
Citywide Traffix Database
(modified February 4, 2000)

Level Of Service Computation Report
1985 HCM Operations (Future Volume Alternative)
Cumulative (AM)

Intersection #3050: 880/BROKAW (E)



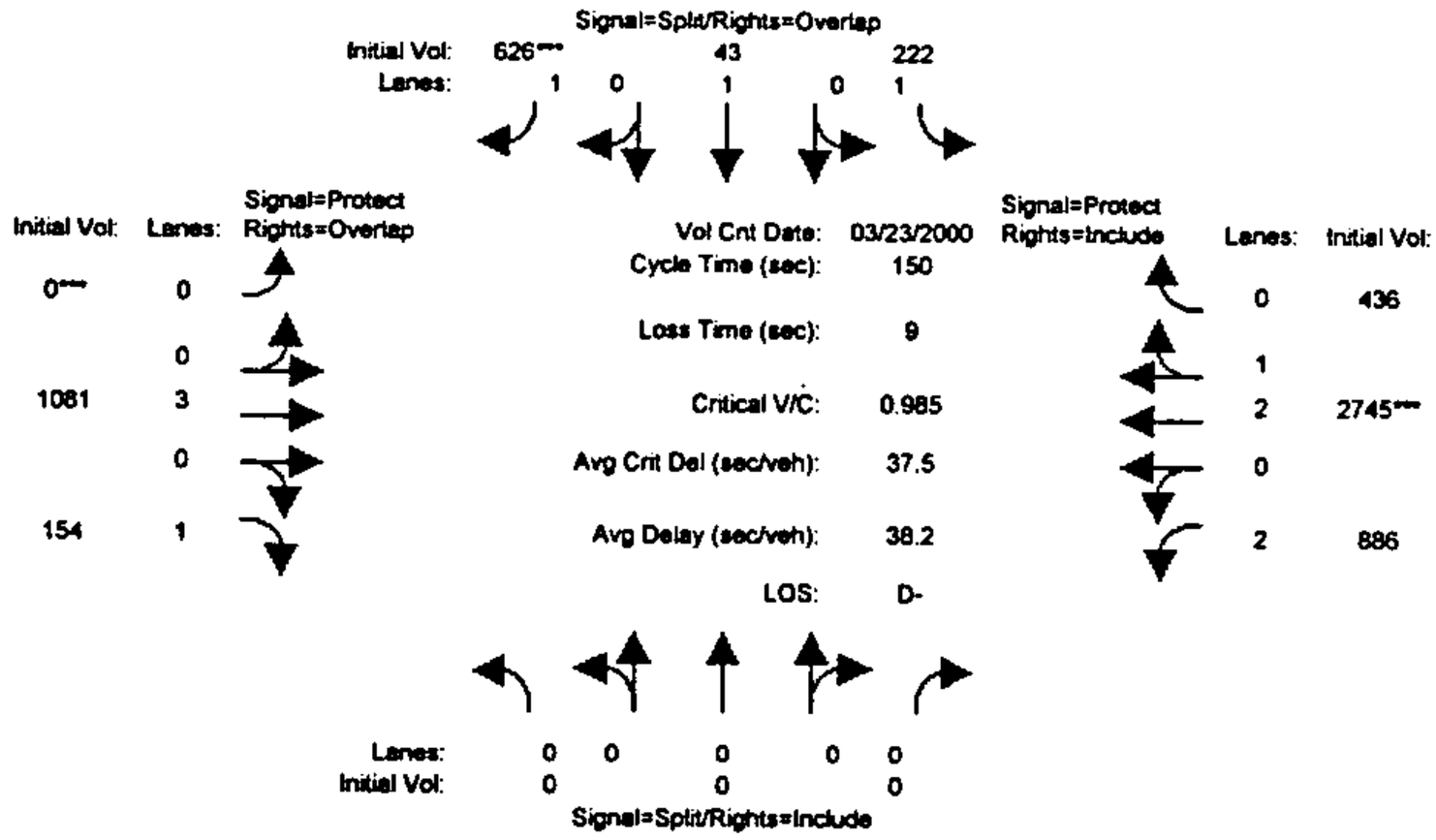
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	0	10	0	0	0	0	10	10	7	10	0
Volume Module: >> Count Date: 2 May 2000 <<												
Base Vol:	356	0	408	0	0	0	0	765	151	209	3617	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	356	0	408	0	0	0	0	765	151	209	3617	0
Added Vol:	0	0	49	0	0	0	0	59	0	8	18	0
Other Proj.:	23	0	45	0	0	0	0	100	173	30	178	0
Initial Fut:	379	0	502	0	0	0	0	924	324	247	3813	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	379	0	502	0	0	0	0	924	324	247	3813	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	379	0	502	0	0	0	0	924	324	247	3813	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	379	0	502	0	0	0	0	924	324	247	3813	0
Saturation Flow Module:												
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.88	1.06	0.97	0.97	1.06	0.97	0.97	1.06	0.97	0.97	1.06	0.97
Lanes:	2.00	0.00	1.00	0.00	0.00	0.00	0.00	3.00	1.00	1.00	3.00	0.00
Final Sat.:	3150	0	1750	0	0	0	0	5700	1750	1750	5700	0
Capacity Analysis Module:												
Vol/Sat:	0.12	0.00	0.29	0.00	0.00	0.00	0.00	0.16	0.19	0.14	0.67	0.00
Crit Moves:			****				****				****	
Green Time:	25.2	0.0	75.3	0.0	0.0	0.0	0.0	65.7	90.9	50.1	116	0.0
Volume/Cap:	0.72	0.00	0.57	0.00	0.00	0.00	0.00	0.37	0.31	0.42	0.87	0.00
Delay/Veh:	48.0	0.0	20.5	0.0	0.0	0.0	0.0	21.5	10.9	29.8	10.4	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
ProgAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	48.0	0.0	20.5	0.0	0.0	0.0	0.0	21.5	10.9	29.8	10.4	0.0
DesignQueue:	27	0	22	0	0	0	0	45	11	14	88	0

Copyright (c) 1998 Dowling Associates, Inc. Licensed to DKS ASSOC., OAKLAND,CA

City of San Jose
Citywide Traffix Database
(modified February 4, 2000)

Level Of Service Computation Report
1985 HCM Operations (Future Volume Alternative)
Cumulative (AM)

Intersection #3051: 880/BROKAW (W)



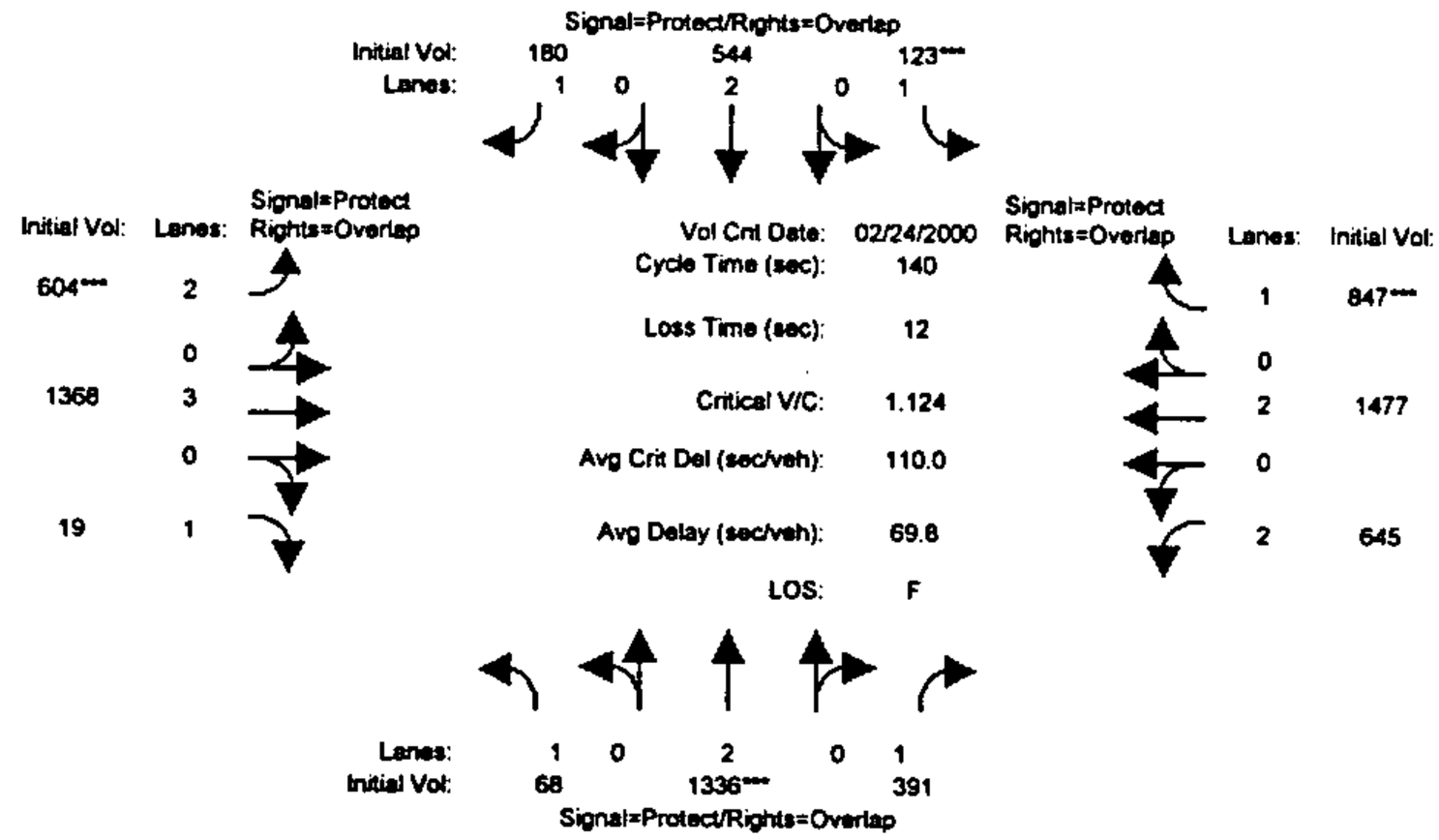
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Min. Green:	0	0	0	10	10	10	0	10	10	7	10	10
Volume Module: >> Count Date: 23 Mar 2000 <<												
Base Vol:	0	0	0	177	43	398	0	797	156	865	2502	432
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	177	43	398	0	797	156	865	2502	432
Added Vol:	0	0	0	32	0	0	0	27	0	12	7	0
Other Proj.:	0	0	0	13	0	228	0	257	-2	9	236	4
Initial Fut:	0	0	0	222	43	626	0	1081	154	886	2745	436
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	222	43	626	0	1081	154	886	2745	436
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	222	43	626	0	1081	154	886	2745	436
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	222	43	626	0	1081	154	886	2745	436
Saturation Flow Module:												
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.97	1.06	0.97	0.97	1.06	0.97	0.97	1.06	0.97	0.88	1.04	1.00
Lanes:	0.00	0.00	0.00	1.00	1.00	1.00	0.00	3.00	1.00	2.00	2.57	0.43
Final Sat.:	0	0	0	1750	1900	1750	0	5700	1750	3150	4831	767
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.13	0.02	0.36	0.00	0.19	0.09	0.28	0.57	0.57
Crit Moves:						****	****				****	
Green Time:	0.0	0.0	0.0	54.5	54.5	54.5	0.0	34.8	34.8	51.7	86.5	86.5
Volume/Cap:	0.00	0.00	0.00	0.35	0.06	0.98	0.00	0.82	0.38	0.82	0.98	0.98
Delay/Veh:	0.0	0.0	0.0	26.6	23.7	60.0	0.0	44.4	37.1	37.6	33.1	33.1
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
ProgAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	26.6	23.7	60.0	0.0	44.4	37.1	37.6	33.1	33.1
DesignQueue:	0	0	0	12	2	36	0	73	10	52	114	18

Copyright (c) 1998 Dowling Associates, Inc. Licensed to DKS ASSOC., OAKLAND,CA

City of San Jose
Citywide Traffix Database
(modified February 4, 2000)

Level Of Service Computation Report
1985 HCM Operations (Future Volume Alternative)
Cumulative (AM)

Intersection #3083: BROKAW/FIRST



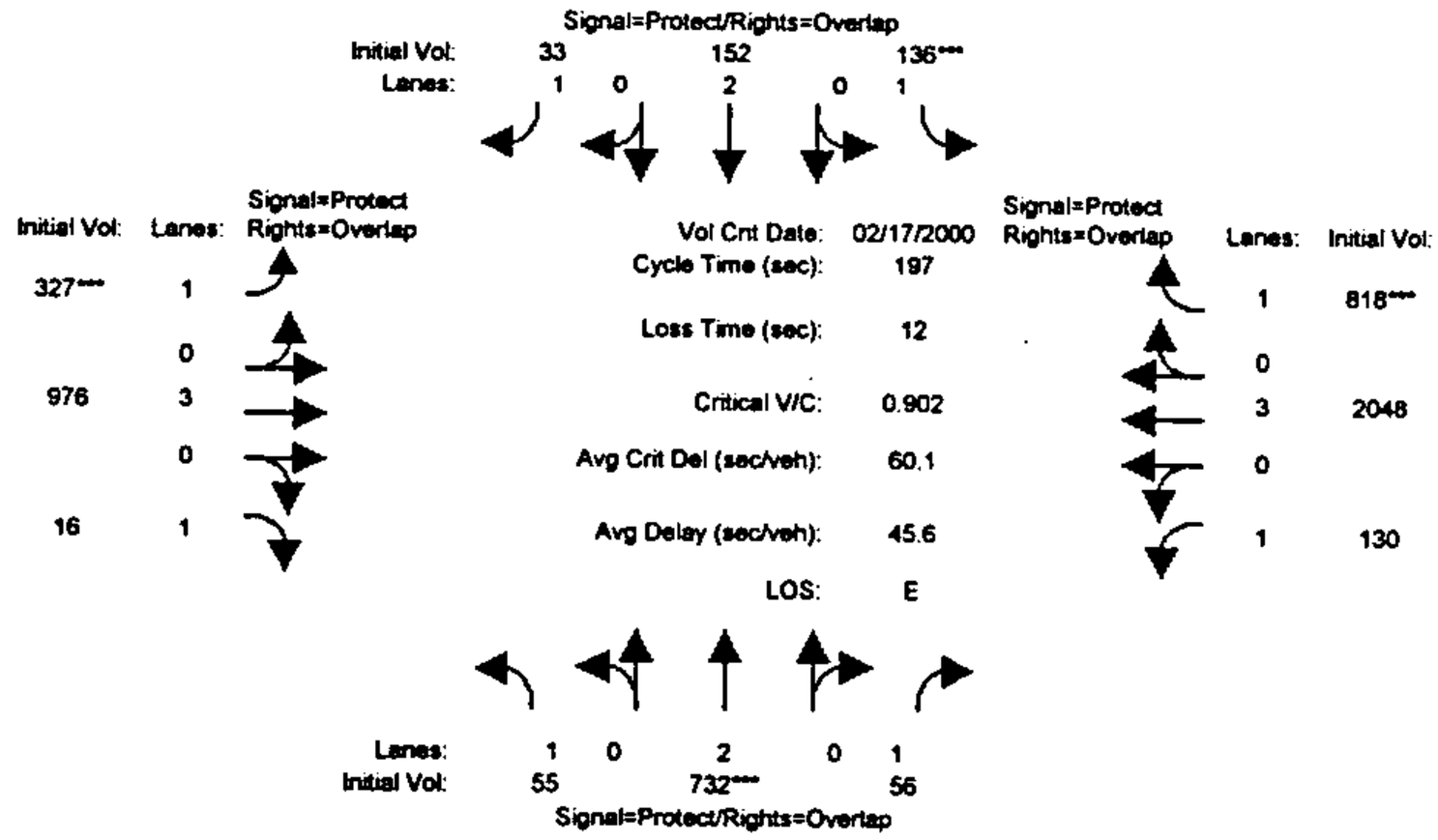
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Volume Module: >> Count Date: 24 Feb 2000 <<												
Base Vol:	61	1158	364	99	348	85	551	1161	12	429	925	456
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	61	1158	364	99	348	85	551	1161	12	429	925	456
Added Vol:	0	0	0	0	0	0	0	27	0	0	7	0
Other Proj.:	7	178	27	24	196	95	53	180	7	216	545	391
Initial Fut:	68	1336	391	123	544	180	604	1368	19	645	1477	847
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	68	1336	391	123	544	180	604	1368	19	645	1477	847
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	68	1336	391	123	544	180	604	1368	19	645	1477	847
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	68	1336	391	123	544	180	604	1368	19	645	1477	847
Saturation Flow Module:												
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.97	1.06	0.97	0.97	1.06	0.97	0.88	1.06	0.97	0.88	1.06	0.97
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	2.00	3.00	1.00	2.00	2.00	1.00
Final Sat.:	1750	3800	1750	1750	3800	1750	3150	5700	1750	3150	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.04	0.35	0.22	0.07	0.14	0.10	0.19	0.24	0.01	0.20	0.39	0.48
Crit Moves:		****		****			****					****
Green Time:	7.0	43.8	78.5	8.8	45.6	69.5	23.9	40.7	47.7	34.7	51.5	60.3
Volume/Cap:	0.78	1.12	0.40	1.12	0.44	0.21	1.12	0.83	0.03	0.83	1.06	1.12
Delay/Veh:	72.4	104	13.4	169.8	28.4	15.1	120.5	37.7	23.4	42.9	69.2	103.6
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
ProgAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	72.4	104	13.4	169.8	28.4	15.1	120.5	37.7	23.4	42.9	69.2	103.6
DesignQueue:	5	79	14	9	30	7	41	81	1	39	81	43

Copyright (c) 1998 Dowling Associates, Inc. Licensed to DKS ASSOC., OAKLAND,CA

City of San Jose
Citywide Traffix Database
(modified February 4, 2000)

Level Of Service Computation Report
1985 HCM Operations (Future Volume Alternative)
Cumulative (AM)

Intersection #3085: BROKAW/ZANKER



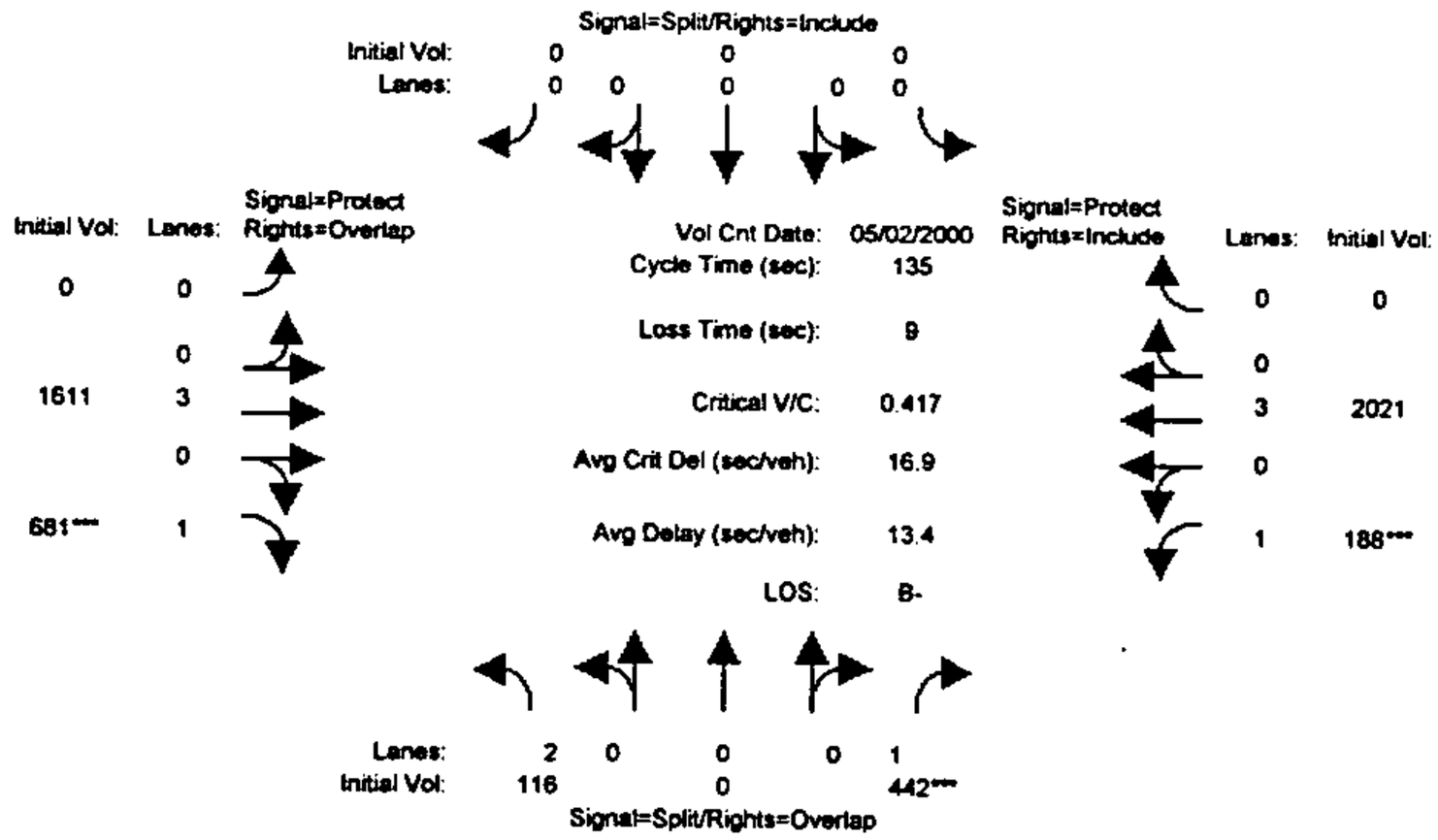
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Volume Module: >> Count Date: 17 Feb 2000 <<												
Base Vol:	59	715	59	115	135	39	306	902	24	135	1801	711
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	59	715	59	115	135	39	306	902	24	135	1801	711
Added Vol:	0	0	0	0	0	0	0	27	0	0	7	0
Other Proj.:	-4	17	-3	21	17	-6	21	47	-8	-5	240	107
Initial Fut:	55	732	56	136	152	33	327	976	16	130	2048	818
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	55	732	56	136	152	33	327	976	16	130	2048	818
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	55	732	56	136	152	33	327	976	16	130	2048	818
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	55	732	56	136	152	33	327	976	16	130	2048	818
Saturation Flow Module:												
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.97	1.06	0.97	0.97	1.06	0.97	0.97	1.06	0.97	0.97	1.06	0.97
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	3.00	1.00	1.00	3.00	1.00
Final Sat.:	1750	3800	1750	1750	3800	1750	1750	5700	1750	1750	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.03	0.19	0.03	0.08	0.04	0.02	0.19	0.17	0.01	0.07	0.36	0.47
Crit Moves:		****		****			****					****
Green Time:	24.3	42.1	80.2	17.0	34.7	75.6	40.8	87.8	112.2	38.1	85.1	102.1
Volume/Cap:	0.25	0.90	0.08	0.90	0.23	0.05	0.90	0.38	0.02	0.38	0.83	0.90
Delay/Veh:	59.5	66.8	27.2	99.6	52.9	29.0	75.3	27.8	14.0	53.0	39.5	41.3
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
ProgAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	59.5	66.8	27.2	99.6	52.9	29.0	75.3	27.8	14.0	53.0	39.5	41.3
DesignQueue:	5	66	4	14	14	2	30	62	1	12	141	49

Copyright (c) 1998 Dowling Associates, Inc. Licensed to DKS ASSOC., OAKLAND,CA

City of San Jose
Citywide Traffix Database
(modified February 4, 2000)

Level Of Service Computation Report
1985 HCM Operations (Future Volume Alternative)
Cumulative (PM)

Intersection #3050: 880/BROKAW (E)



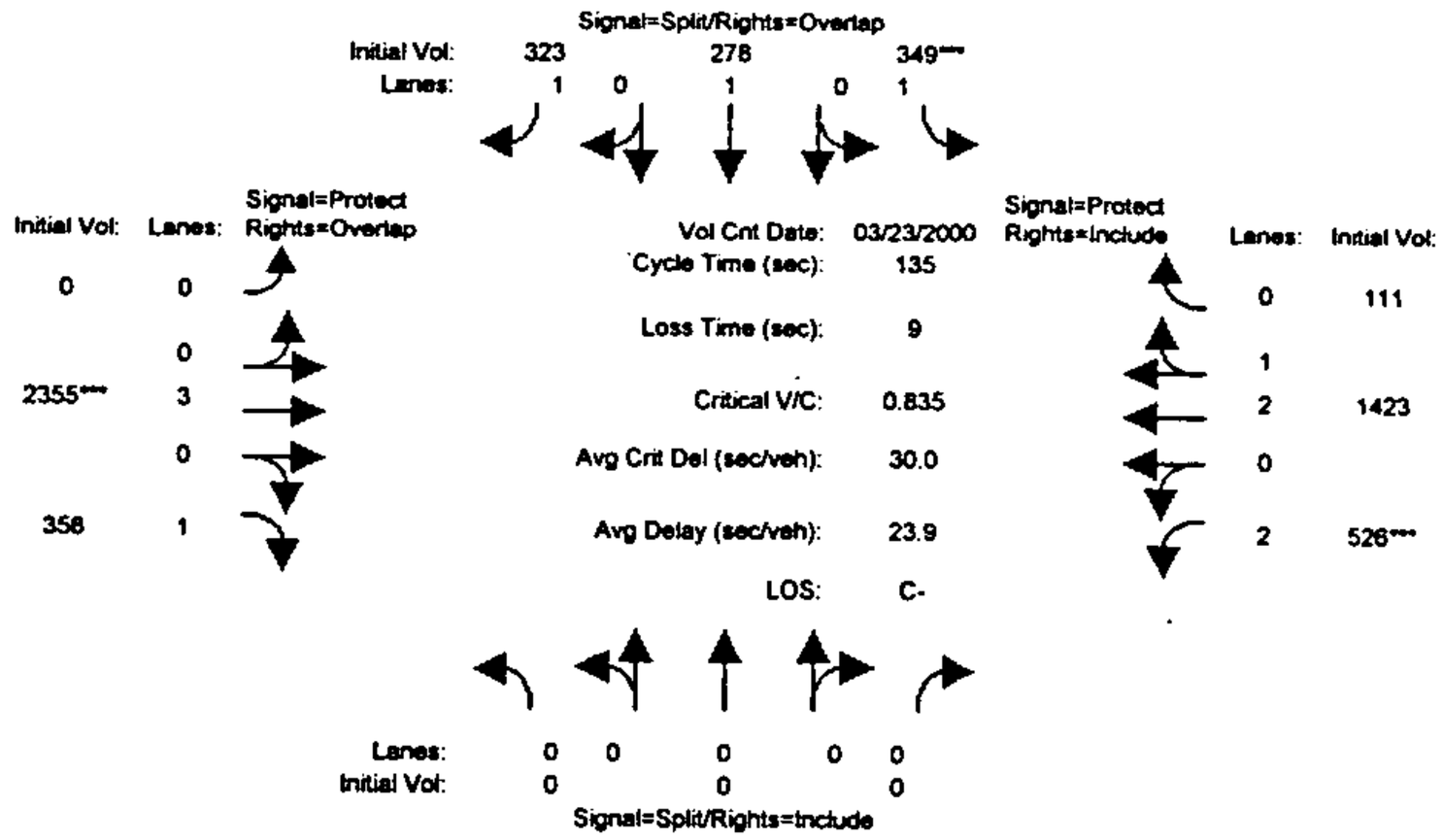
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	10	0	10	0	0	0	0	10	10	7	10	0
Volume Module: >> Count Date: 2 May 2000 <<												
Base Vol:	123	0	414	0	0	0	0	1387	419	153	1808	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	123	0	414	0	0	0	0	1387	419	153	1808	0
Added Vol:	0	0	5	0	0	0	0	6	0	32	75	0
Other Proj.:	-7	0	23	0	0	0	0	218	262	3	138	0
Initial Fut:	116	0	442	0	0	0	0	1611	681	188	2021	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	116	0	442	0	0	0	0	1611	681	188	2021	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	116	0	442	0	0	0	0	1611	681	188	2021	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	116	0	442	0	0	0	0	1611	681	188	2021	0
Saturation Flow Module:												
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.88	1.06	0.97	0.97	1.06	0.97	0.97	1.06	0.97	0.97	1.06	0.97
Lanes:	2.00	0.00	1.00	0.00	0.00	0.00	0.00	3.00	1.00	1.00	3.00	0.00
Final Sat.:	3150	0	1750	0	0	0	0	5700	1750	1750	5700	0
Capacity Analysis Module:												
Vol/Sat:	0.04	0.00	0.25	0.00	0.00	0.00	0.00	0.28	0.39	0.11	0.35	0.00
Crit Moves:			****						****	****		
Green Time:	32.2	0.0	56.1	0.0	0.0	0.0	0.0	69.9	102.2	23.8	93.8	0.0
Volume/Cap:	0.15	0.00	0.61	0.00	0.00	0.00	0.00	0.55	0.51	0.61	0.51	0.00
Delay/Veh:	30.9	0.0	24.5	0.0	0.0	0.0	0.0	16.8	5.3	41.4	7.5	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
ProgAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	30.9	0.0	24.5	0.0	0.0	0.0	0.0	16.8	5.3	41.4	7.5	0.0
DesignQueue:	7	0	21	0	0	0	0	63	14	12	51	0

Copyright (c) 1998 Dowling Associates, Inc. Licensed to DKS ASSOC., OAKLAND,CA

City of San Jose
Citywide Traffix Database
(modified February 4, 2000)

Level Of Service Computation Report
1985 HCM Operations (Future Volume Alternative)
Cumulative (PM)

Intersection #3051: 880/BROKAW (W)



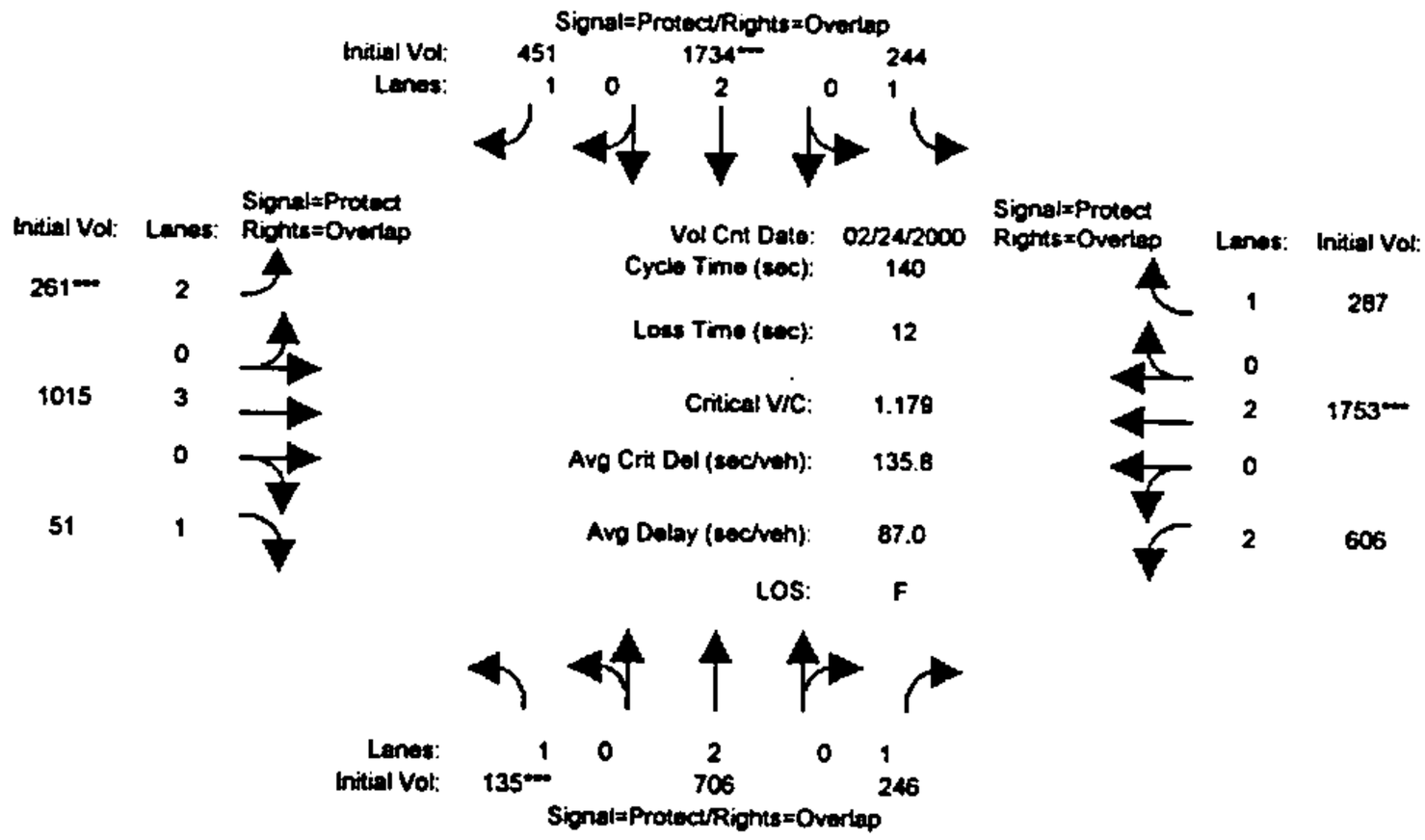
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	10	10	10	0	10	10	7	10	10
Volume Module: >> Count Date: 23 Mar 2000 <<												
Base Vol:	0	0	0	343	278	117	0	1878	338	469	1299	74
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	343	278	117	0	1878	338	469	1299	74
Added Vol:	0	0	0	3	0	0	0	3	0	48	27	0
Other Proj.:	0	0	0	3	0	206	0	474	20	9	97	37
Initial Fut:	0	0	0	349	278	323	0	2355	358	526	1423	111
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	349	278	323	0	2355	358	526	1423	111
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	349	278	323	0	2355	358	526	1423	111
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	349	278	323	0	2355	358	526	1423	111
Saturation Flow Module:												
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.97	1.06	0.97	0.97	1.06	0.97	0.97	1.06	0.97	0.88	1.04	1.00
Lanes:	0.00	0.00	0.00	1.00	1.00	1.00	0.00	3.00	1.00	2.00	2.77	0.23
Final Sat.:	0	0	0	1750	1900	1750	0	5700	1750	3150	5194	405
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.20	0.15	0.18	0.00	0.41	0.20	0.17	0.27	0.27
Crit Moves:				****				****		****		
Green Time:	0.0	0.0	0.0	32.2	32.2	32.2	0.0	66.8	66.8	27.0	93.8	93.8
Volume/Cap:	0.00	0.00	0.00	0.84	0.61	0.77	0.00	0.84	0.41	0.84	0.39	0.39
Delay/Veh:	0.0	0.0	0.0	46.6	36.6	42.4	0.0	24.0	16.7	46.1	6.6	6.6
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
ProgAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	46.6	36.6	42.4	0.0	24.0	16.7	46.1	6.6	6.6
DesignQueue:	0	0	0	21	17	19	0	100	14	33	35	3

Copyright (c) 1998 Dowling Associates, Inc. Licensed to DKS ASSOC., OAKLAND,CA

City of San Jose
Citywide Traffix Database
(modified February 4, 2000)

Level Of Service Computation Report
1985 HCM Operations (Future Volume Alternative)
Cumulative (PM)

Intersection #3083: BROKAW/FIRST



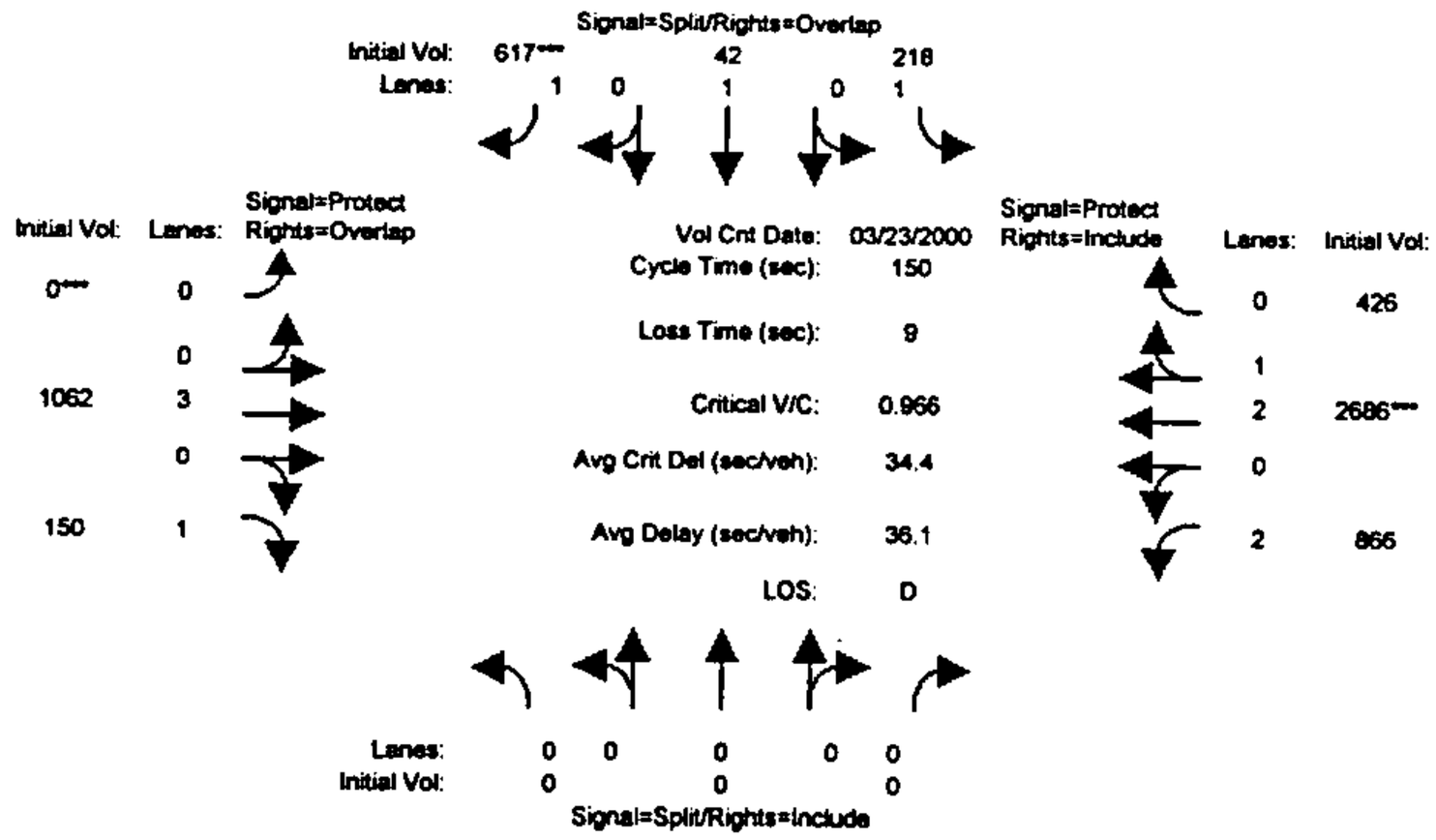
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Volume Module: >> Count Date: 24 Feb 2000 <<												
Base Vol:	122	551	141	167	1233	364	177	739	38	508	1222	234
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	122	551	141	167	1233	364	177	739	38	508	1222	234
Added Vol:	0	0	0	0	0	0	0	3	0	0	27	0
Other Proj.:	13	155	105	77	501	87	84	273	13	98	504	53
Initial Fut:	135	706	246	244	1734	451	261	1015	51	606	1753	287
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	135	706	246	244	1734	451	261	1015	51	606	1753	287
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	135	706	246	244	1734	451	261	1015	51	606	1753	287
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	135	706	246	244	1734	451	261	1015	51	606	1753	287
Saturation Flow Module:												
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.97	1.06	0.97	0.97	1.06	0.97	0.88	1.06	0.97	0.88	1.06	0.97
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	2.00	3.00	1.00	2.00	2.00	1.00
Final Sat.:	1750	3800	1750	1750	3800	1750	3150	5700	1750	3150	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.08	0.19	0.14	0.14	0.46	0.26	0.08	0.18	0.03	0.19	0.46	0.16
Crit Moves:	****				****		****				****	
Green Time:	9.2	36.2	69.8	27.2	54.2	64.0	9.8	31.1	40.2	33.6	54.8	82.0
Volume/Cap:	1.18	0.72	0.28	0.72	1.18	0.56	1.18	0.80	0.10	0.80	1.18	0.28
Delay/Veh:	199.8	37.7	15.6	45.1	131	21.8	175.3	41.9	27.8	42.4	130	11.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
ProgAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	199.8	37.7	15.6	45.1	131	21.8	175.3	41.9	27.8	42.4	130	11.0
DesignQueue:	10	43	10	16	94	20	19	64	3	37	94	10

Copyright (c) 1998 Dowling Associates, Inc. Licensed to DKS ASSOC., OAKLAND,CA

City of San Jose
Citywide Traffix Database
(modified February 4, 2000)

Level Of Service Computation Report
1985 HCM Operations (Future Volume Alternative)
Project (AM)

Intersection #3051: 880/BROKAW (W)



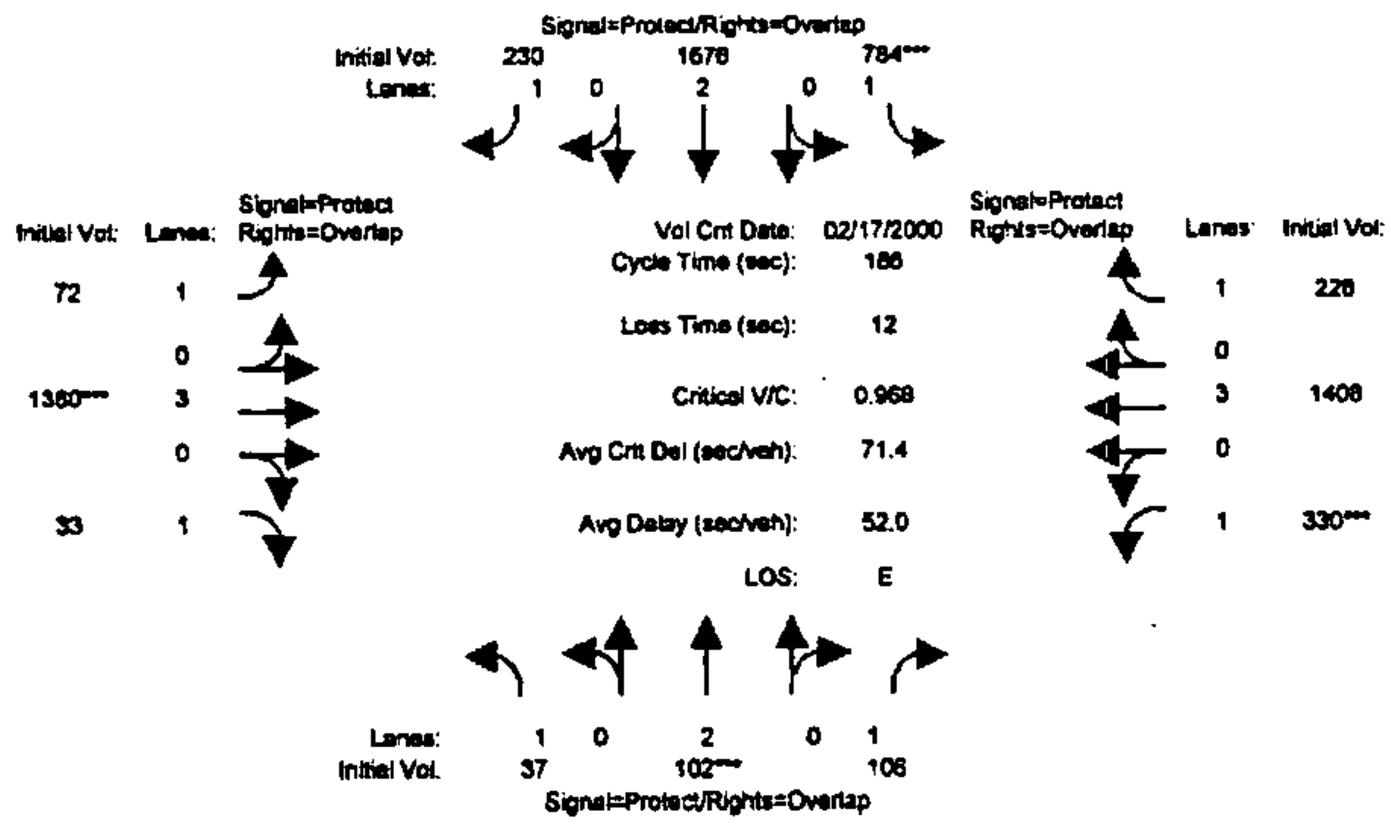
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	10	10	10	0	10	10	7	10	10
Volume Module: >> Count Date: 23 Mar 2000 <<												
Base Vol:	0	0	0	173	42	389	0	778	152	845	2443	422
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	173	42	389	0	778	152	845	2443	422
Added Vol:	0	0	0	32	0	0	0	27	0	12	7	0
Project:	0	0	0	13	0	228	0	257	-2	9	236	4
Initial Fut:	0	0	0	218	42	617	0	1062	150	866	2686	426
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	218	42	617	0	1062	150	866	2686	426
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	218	42	617	0	1062	150	866	2686	426
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	218	42	617	0	1062	150	866	2686	426
Saturation Flow Module:												
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.97	1.06	0.97	0.97	1.06	0.97	0.97	1.06	0.97	0.88	1.04	1.00
Lanes:	0.00	0.00	0.00	1.00	1.00	1.00	0.00	3.00	1.00	2.00	2.57	0.43
Final Sat.:	0	0	0	1750	1900	1750	0	5700	1750	3150	4832	766
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.12	0.02	0.35	0.00	0.19	0.09	0.27	0.56	0.56
Crit Moves:						****	****				****	
Green Time:	0.0	0.0	0.0	54.7	54.7	54.7	0.0	34.9	34.9	51.4	86.3	86.3
Volume/Cap:	0.00	0.00	0.00	0.34	0.06	0.97	0.00	0.80	0.37	0.80	0.97	0.97
Delay/Veh:	0.0	0.0	0.0	26.4	23.5	55.8	0.0	43.9	37.0	37.1	30.2	30.2
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
ProgAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	26.4	23.5	55.8	0.0	43.9	37.0	37.1	30.2	30.2
DesignQueue:	0	0	0	12	2	36	0	71	10	50	111	17

Copyright (c) 1998 Dowling Associates, Inc. Licensed to DKS ASSOC., OAKLAND,CA

City of San Jose
Citywide Traffix Database
(modified February 4, 2000)

Level Of Service Computation Report
1985 HCM Operations (Future Volume Alternative)
Cumulative (PM)

Intersection #3085: BROKAW/ZANKER



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Volume Module: >> Count Date: 17 Feb 2000 <<												
Base Vol:	45	85	111	675	1659	212	83	1155	37	333	1297	207
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	45	85	111	675	1659	212	83	1155	37	333	1297	207
Added Vol:	0	0	0	0	0	0	0	3	0	0	27	0
Other Proj.:	-8	17	-5	109	17	18	-11	222	-4	-3	84	21
Initial Fut:	37	102	106	784	1676	230	72	1380	33	330	1408	228
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	37	102	106	784	1676	230	72	1380	33	330	1408	228
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	37	102	106	784	1676	230	72	1380	33	330	1408	228
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	37	102	106	784	1676	230	72	1380	33	330	1408	228
Saturation Flow Module:												
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.97	1.06	0.97	0.97	1.06	0.97	0.97	1.06	0.97	0.97	1.06	0.97
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	3.00	1.00	1.00	3.00	1.00
Final Sat.:	1750	3800	1750	1750	3800	1750	1750	5700	1750	1750	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.02	0.03	0.06	0.45	0.44	0.13	0.04	0.24	0.02	0.19	0.25	0.13
Crit Moves:		****		****				****		****		
Green Time:	7.0	10.0	45.2	83.6	86.6	98.1	11.5	45.2	52.2	35.2	68.9	152.5
Volume/Cap:	0.56	0.50	0.25	1.00	0.95	0.25	0.67	1.00	0.07	1.00	0.67	0.16
Delay/Veh:	74.2	66.7	43.2	62.7	44.4	18.2	74.5	71.3	37.3	94.4	37.8	2.6
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
ProgAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	74.2	66.7	43.2	62.7	44.4	18.2	74.5	71.3	37.3	94.4	37.8	2.6
DesignQueue:	4	10	8	50	105	12	7	115	2	29	98	4

Copyright (c) 1998 Dowling Associates, Inc. Licensed to DKS ASSOC., OAKLAND,CA

SAN JOSE MERCURY NEWS

Spieker Properties

Final Report

Prepared for

City of San Jose

By

***DKS** Associates*
84 West Santa Clara Street, Suite 360
San Jose, CA 94513
(408) 292-9411

October, 2000

Table of Contents

1.0 INTRODUCTION 1

2.0 CITY OF SAN JOSE, TRAFFIC IMPACT ANALYSIS 6

2.1 EXISTING CONDITIONS 6
2.1.1 Existing Roadway Network 7
2.1.2 Public Transit 8
2.1.3 Bicycle and Pedestrian Facilities 9
2.1.4 Traffic Operations – Existing Conditions 9
2.1.4.1 City of San Jose Intersection Analysis Methodology 11
2.1.4.2 North San Jose Deficiency Plan Methodology 13
2.1.4.3 Golden Triangle Methodology 17
2.2 BACKGROUND CONDITIONS 19
2.2.1 Planned Roadway Improvements 20
2.2.2 Traffic Operations – Background Conditions 20
2.2.2.1 City of San Jose Intersection Analysis Methodology 20
2.2.2.2 North San Jose Deficiency Plan Methodology 20
2.2.2.3 Golden Triangle Methodology 24
2.3 PROPOSED PROJECT CONDITIONS 24
2.3.1 Trip Generation 24
2.3.2 Trip Distribution 24
2.3.3 Trip Assignment 24
2.3.4 Traffic Operations – Project Conditions 27
2.3.4.1 City of San Jose Methodology 27
2.3.4.2 North San Jose Deficiency Plan Methodology 27
2.3.4.3 Golden Triangle Methodology 31
2.3.5 Left-turn Queue and Storage Analysis 31
2.3.6 Transit Analysis 31
2.3.7 Pedestrian and Bicycle Analysis 31
2.3.8 Internal Circulation and Parking Analysis 33
2.3.9 Project Driveway Analysis 33
2.4 CUMULATIVE CONDITIONS 34
2.4.1 City of San Jose Methodology 34
2.4.2 North San Jose Deficiency Plan Methodology 37
2.4.3 Golden Triangle Methodology 38
2.5 MITIGATION MEASURES 38

3.0 SANTA CLARA COUNTY CONGESTION MANAGEMENT PROGRAM, TRAFFIC IMPACT ANALYSIS 42

3.1 EXISTING CONDITIONS 42

3.1.1 Traffic Operations – Existing Conditions 42

3.2 BACKGROUND CONDITIONS 47

3.2.1 Planned Roadway Improvements 47

3.2.2 Traffic Operations – Background Conditions 49

3.3 PROJECT CONDITIONS 49

3.3.1 Trip Generation 50

3.3.2 Trip Distribution 50

3.3.3 Trip Assignment 51

3.3.4 Traffic Operations – Project Conditions 51

3.3.5 Freeway Analysis 54

3.3.6 Transit Analysis 56

3.3.7 Pedestrian and Bicycle Analysis 56

3.3.8 Site Plan and Parking Analysis 56

3.4 CUMULATIVE CONDITIONS 56

3.5 MITIGATION MEASURES 58

4.0 CONCLUSIONS 59

4.1 CITY OF SAN JOSE TRAFFIC IMPACT ANALYSIS 59

4.1.1 Project Impacts 59

4.1.2 Mitigations 59

4.2 CMP TRAFFIC IMPACT ANALYSIS 59

4.2.1 Project Impacts 59

4.2.2 Mitigations 60

List of Figures

Figure 1 Study Area 2

Figure 2 Site Plan 3

Figure 3 Transit Routes 10

Figure 4 Study Intersection - Existing Lane Designations 14

Figure 5 Existing Peak Hour Volumes 15

Figure 6 Background Peak Hour Volumes 21

Figure 7 Project Condition 26

Figure 8 Cumulative Peak Hour Volumes 35

Figure 9 Proposed Mitigation – US 101 Northbound Off-ramp/Old Oakland Road 40

Figure 10 Proposed Mitigation – Murphy Avenue/Oyama Drive 41

Figure 11 Study Area 43

Figure 12 Study Intersection - Existing Lane Designations 45
Figure 13 Existing Peak Hour Volumes 46
Figure 14 Background Peak Hour Volumes 48
Figure 15 Project Condition 52
Figure 16 Cumulative Peak Hour Volumes 57

List of Tables

Table 1 Signalized Intersection Level of Service Descriptions – Highway Capacity Manual 11
Table 2 Existing Conditions, Intersection Operations – City of San Jose Methodology 16
Table 3 Existing Conditions, Intersection Operations – North San Jose Deficiency Plan Methodology 18
Table 4 Signalized Intersection Level of Service Descriptions - Golden Triangle Methodology 19
Table 5 Background Conditions, Intersection Operations – City of San Jose Methodology 22
Table 6 Background Conditions, Intersection Operations – North San Jose Deficiency Plan Methodology 23
Table 7 Project Trip Generation 25
Table 8 Proposed Project Trip Distribution 25
Table 9 City of San Jose Traffic Impact Analysis Summary 28
Table 10 Project Conditions, Intersection Operations – North San Jose Deficiency Plan Methodology 29
Table 11 Project Conditions, Intersection Operations – North San Jose Deficiency Plan Methodology 30
Table 12 Left-turn Design Queues Under Each Condition 33
Table 13 Cumulative Conditions, Intersection Operations - City of San Jose Methodology 36
Table 14 Cumulative Conditions, Intersection Operations North San Jose Deficiency Plan Methodology 37
Table 15 Existing Conditions, Intersection Operations - CMP Methodology 47
Table 16 Background Conditions, Intersection Operations, - CMP Methodology 49
Table 17 Project Trip Generation 50
Table 18 Proposed Project Trip Distribution 51
Table 19 CMP Traffic Impact Analysis Summary 53
Table 20 Density-Based Freeway Level of Service Criteria 54
Table 21 Freeway Segment Level of Service Analysis Summary 55
Table 22 Cumulative Conditions, Intersection Operations - CMP Methodology 58

List of Appendices

Appendix A - City of San Jose Analysis
Appendix B - North San Jose Deficiency Plan Analysis
Appendix C - Congestion Management Program Analysis
Appendix D - Mitigations and Traffix Reports

1.0 INTRODUCTION

This report provides an evaluation of traffic and transportation issues related to the proposed Mercury News project located on the southwest quadrant of the intersection of Brokaw Road and Ridder Park Drive in the City of San Jose, California. Figure 1 illustrates the project location relative to the adjacent roadway network.

The proposed San Jose Mercury News Project has a total floor area of 265,000 square feet. The project site plan is illustrated on Figure 2. A total of 1,062 on-site parking spaces are proposed as shown on the project site plan. Vehicular access to the project is planned to be provided off of Ridder Park Drive.

The traffic analysis performed in this report uses the level of service methodologies of both the City of San Jose and the Santa Clara County Congestion Management Program (CMP). Section 2 details the analysis for the City of San Jose, and Section 3 details the analysis for the CMP. Section 4 contains the report conclusions.

This report analyzes the following traffic scenarios:

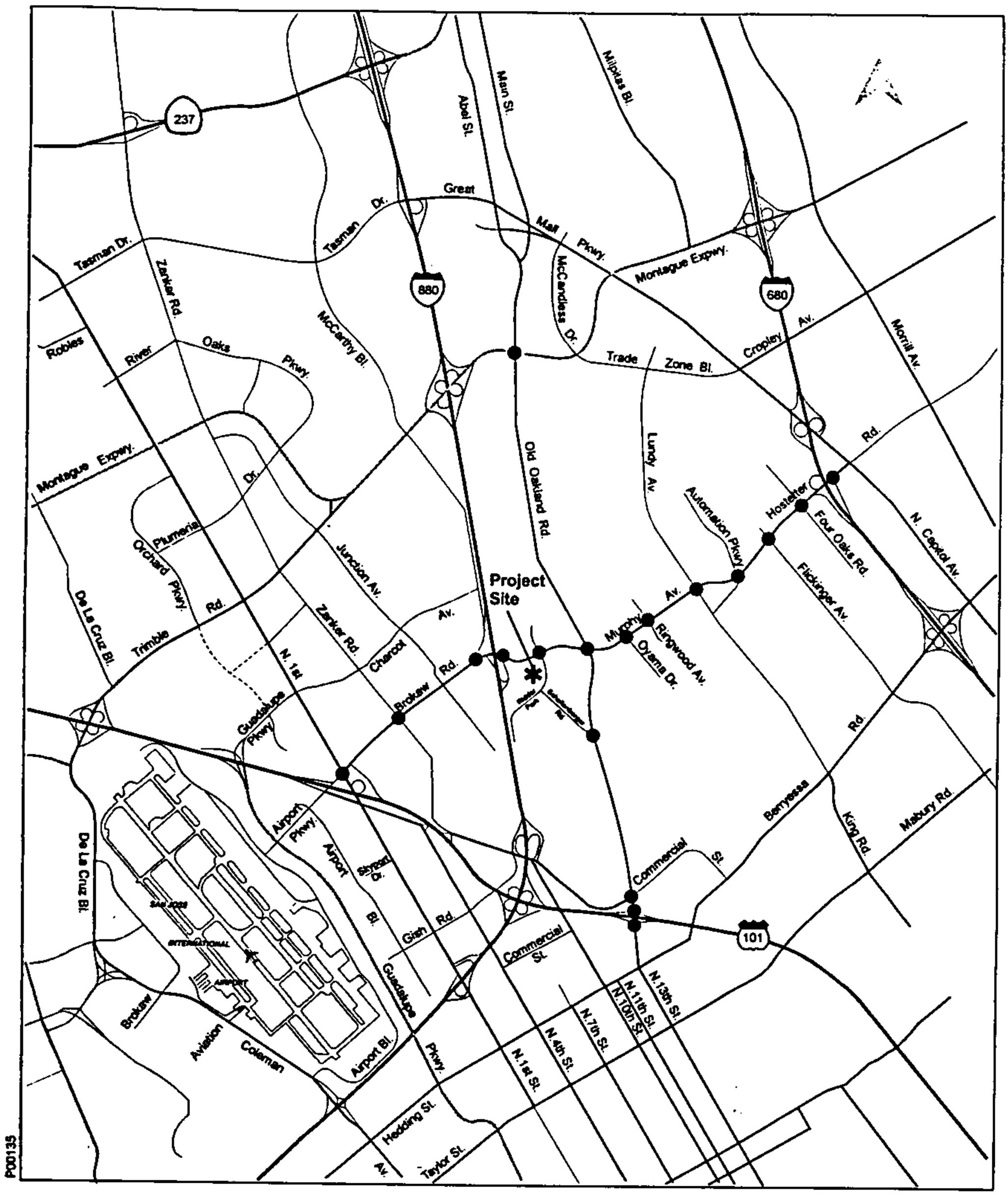
Scenario 1- Existing Condition – Level of service based on existing traffic counts.

Scenario 2- Background Condition – Level of service based on existing traffic plus any approved changes to the transportation network that would occur prior to the completed construction of the proposed project, including approved trips from other developments and planned roadway or intersection improvements.

Scenario 3- Proposed Project Condition – Level of service with the anticipated impacts of the proposed project added to the background conditions.

Scenario 4- Cumulative Condition – Level of service with traffic growth that occurs between the existing condition and the opening of the proposed project added to the traffic generated by the approved projects and the proposed project.

Quantitative analyses were performed for the weekday AM and PM peak hours for each of these analysis scenarios.



● City of San Jose
Study Intersections

DKS Associates

Figure 1
Study Area
City of San Jose Traffic Impact Analysis

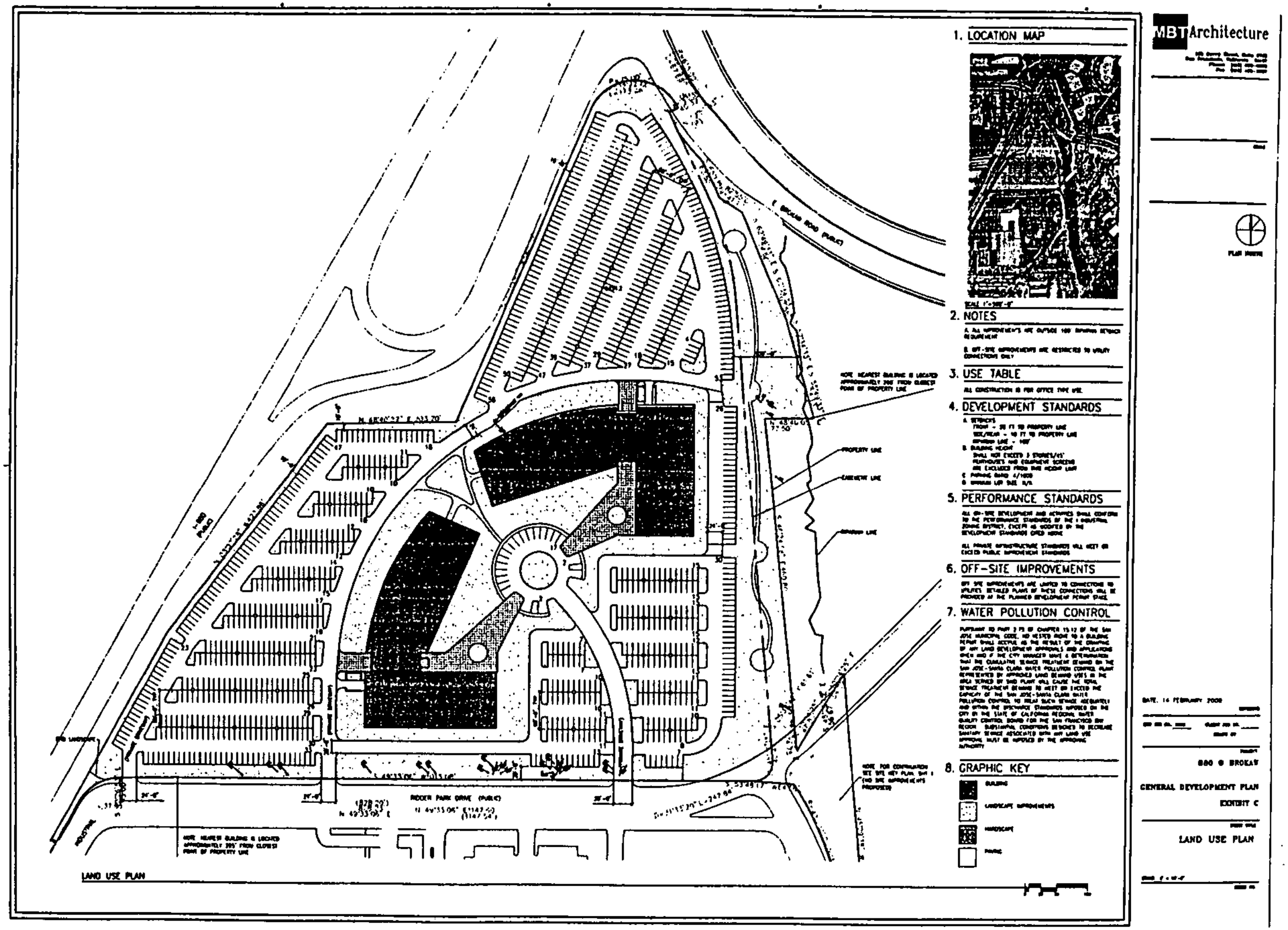


Figure 2
Site Plan

Based on consultation with City of San Jose staff, the following 18 intersections were analyzed as part of the City of San Jose traffic impact analysis:

1. Old Oakland Road/US 101northbound ramps
2. Old Oakland Road/US 101 southbound ramps
3. Brokaw Road/I-880 southbound off ramp
4. Brokaw Road/I-880 northbound on-off ramp
5. Brokaw Road/North 1st Street
6. Brokaw Road-Murphy Avenue/Old Oakland Road
7. Brokaw Road/Zanker Road
8. Lundy Avenue/Murphy Avenue-Hostetter Road
9. Automation Parkway/Hostetter Road
10. Ridder Park Road/Brokaw Road
11. Commercial Street/Old Oakland Road
12. Flickinger Avenue/Hostetter Road
13. Four Oaks Road/Hostetter Road
14. Murphy Avenue/Oyama Drive
15. Murphy Avenue/Ringwood Avenue
16. Old Oakland Road/Schallenberger Road
17. Hostetter Road/I-680 Northbound off ramp
18. Montague Expressway/Old Oakland Road

Additionally, the 22 intersections that comprise the North San Jose Deficiency Plan (NSJDP) intersections were evaluated according to the NSJDP guidelines. The Golden Triangle methodology was also used to evaluate those study intersections that were subject to the Golden Triangle policy.

Congestion Management Program analysis was performed for the following intersections (nine of which overlap with the City of San Jose study intersections):

- US 101 ramps/Brokaw Road
- Old Oakland Road/US 101northbound ramps
- Old Oakland Road/US 101 southbound ramps
- Brokaw Road/I-880 northbound on-off off ramp
- Brokaw Road/I-880 southbound off ramp
- Brokaw Road/North 1st Street
- Brokaw Road-Murphy Avenue/Old Oakland Road
- Brokaw Road/Zanker Road
- Lundy Avenue/Murphy Avenue-Hostetter Road
- Montague Expressway/Old Oakland Road
- Montague Expressway/Trade Zone Boulevard

The following sections of the report analyze the four level of service scenarios and the project impacts and mitigation measures. Additionally, an analysis of the site plan and internal traffic

circulation, proposed parking supply and expected demand, potential driveway impacts, left turn queue and storage analysis, and freeway operations are contained in this report.

2.0 CITY OF SAN JOSE, TRAFFIC IMPACT ANALYSIS

This section provides an evaluation of traffic and transportation issues related to the proposed San Jose Mercury News project according to City of San Jose traffic analysis guidelines. The proposed project is located on the southwest quadrant of the intersection of Murphy Avenue and Ridder Park Drive in the City of San Jose, California. Figure 1 illustrates the project location relative to the adjacent roadway network.

The proposed San Jose Mercury News Project has a total floor area of 265,000 square feet. The project site plan is illustrated on Figure 2. A total of 1,062 on-site parking spaces are proposed as shown on the project site plan. Vehicular access to the project is planned to be provided off of Ridder Park Drive.

The City of San Jose methodology is based on a volume-to-capacity ratio of conflicting movements, similar to the Circular 212 method (Transportation Research Board, 1980). Analysis was also completed for the City of San Jose using the North San Jose Deficiency Plan methodology and the Golden Triangle methodology.

This report analyzes the following traffic scenarios:

Scenario 1- Existing Condition – Level of service based on existing traffic counts.

Scenario 2- Background Condition – Level of service based on existing traffic plus any approved changes to the transportation network that would occur prior to the completed construction of the proposed project, including approved trips from other developments and planned roadway or intersection improvements.

Scenario 3- Proposed Project Condition – Level of service with the anticipated impacts of the proposed project added to the background conditions.

Scenario 4- Cumulative Condition – Level of service with traffic growth that occur between the existing condition and the opening of the proposed project added to the traffic generated by the approved projects and the proposed project.

Quantitative analyses were performed for the weekday AM and PM peak hours for each of these analysis scenarios.

The following chapters of this section present the analysis of the four level of service scenarios and the project impacts and mitigation measures. Additionally, an analysis of the site plan and internal traffic circulation, and proposed parking supply and expected demand are contained in this section.

2.1 Existing Conditions

In this chapter, a summary of the existing traffic conditions in the study area is provided. A description of the existing network, including freeways and county expressways, will be presented. A description of study area High Occupancy Vehicle (HOV) facilities is also provided. The remainder of the chapter discusses existing traffic operations for the study area intersections.

2.1.1 Existing Roadway Network

Freeways

Interstate 880 (I-880) extends southeast from I-980 in Oakland in the East Bay to I-280 in San Jose, south of the study area. I-880 has three lanes in each direction north of Montague Expressway and two lanes in each direction south of Montague Expressway. Full access is provided by ramps to and from Montague Expressway, Brokaw Road, Old Bayshore Highway, US 101, North 1st Street and Coleman Avenue. South of I-280, I-880 continues south and west towards Santa Cruz as SR 17 (I-880 becomes SR 17 south of I-280). I-880 has no HOV lanes in Santa Clara County. I-880 has HOV lanes in both directions between Fremont and Hayward in Alameda County.

Interstate 680 (I-680) extends south from I-80 in Solano County to US 101 in the San Jose area. I-680 terminates where it meets I-280 at the junction of US 101. In the South Bay area, the I-680 facility has four travel lanes in each direction. Full access is provided by ramps to and from Montague Expressway/Landess Avenue, North Capitol Avenue, Hostetter Road and Berryessa Road. I-680 has no HOV lanes in the study area.

US Highway 101 In the North San Jose region, US 101 passes southeast-northwest as it extends from Los Angeles in the south to the Oregon border. In the vicinity of the study area, full cloverleaf interchanges are located at Montague Expressway, Trimble Road and I-880. Partial interchanges are located at Guadalupe Parkway, North 1st Street and North 4th Street. There are three mixed-flow lanes in each direction in the study area plus a HOV lane in each direction of travel.

County Expressways

Montague Expressway is a six-lane expressway that runs between I-680 and US 101 in a southwest-northeast orientation. In each direction of travel, Montague Expressway has one HOV lane, which is restricted to vehicles with two of more passengers. The HOV lanes are operational westbound during the morning commute period (5:00 – 9:00 AM) and eastbound during the evening commute period (3:00 – 7:00 PM). HOV restrictions are not applicable outside of these commute periods. In the study area, the amount of PM peak period traffic on Montague Expressway creates long queues for northbound and eastbound traffic that do not dissipated with each signal cycle.

Principal Arterials

Berryessa Road is a four-lane divided arterial with a bike lane in each direction. Parking restrictions vary along this 40 mph facility. This east-west roadway extends from just east of I-680 to Oakland Road.

Brokaw Road is a six-lane major arterial with a posted speed of 40 mph. It runs southwest-northeast between Oakland Road (east of I-880) and Airport Parkway (southwest of US 101). Brokaw Road has left-turn pockets and on-street parking is prohibited. In the study area in the PM peak period, westbound queues tend to back up through the intersection with North 1st Street because of the heavy volume of cars waiting to enter the US 101 interchange located west of North 1st Street.

Great Mall Parkway/Capitol Avenue originates at the Great Mall Interchange with I-880, changes names to Capitol Avenue as it travels across Montague Expressway and merges with the Capitol Expressway east of I-680. This roadway is a six-lane divided arterial with a two-way left-turn lane when it is named the Great Mall Parkway, but becomes a four-lane undivided arterial when its name changes to Capitol Avenue.

Hostetter Road/Murphy Avenue The Hostetter Road/Murphy Avenue roadway originates at North Capitol Avenue and terminates when it changes names to Brokaw Road at the intersection of Oakland Road. This facility is a six-lane divided arterial with a bike lane in each direction. In the study area the AM peak period westbound traffic is heavy. Westbound vehicles back from Oakland Avenue to Flickinger Avenue so that westbound queues at the traffic signals do not fully dissipate with each cycle.

Arterials

Lundy Avenue is a four-lane divided arterial with a north-south orientation. Lundy Avenue changes name to King Road at the intersection of Berryessa Road. Parking is prohibited along this 40 mph facility. Properties south of Murphy Avenue are primarily residential while properties north of Murphy Avenue are primarily industrial and research and development.

North 1st Street extends south of SR 237 and north of downtown San Jose. North 1st Street is a four-lane north-south divided arterial with two lanes in each direction. South of Mission Street, North 1st Street has one lane in each direction. North 1st Street is characterized by left-turn pockets and the Santa Clara Valley Transportation Authority (VTA) light rail line occupying the roadway median. In the AM peak period, the queue of northbound vehicles in the study area does not dissipate with each cycle, creating residual queues.

North 4th Street is a four-lane north-south arterial, from SR 237 to Jackson Street, with two lanes in each direction and a speed limit of 30 mph. South of Jackson Street, North 4th Street is one way heading southbound. Parking is prohibited along North 4th Street.

Old Oakland Road is a segment of roadway which is alternatively named Main Street north of the Montague Expressway and North 13th Street south of US 101. Old Oakland Road is a four-lane divided arterial that parallels I-880 and traverses both commercial, industrial and residential properties. In the AM peak period, a long northbound queue forms from vehicles waiting to access US 101 North. The queue does not dissipate with each signal cycle and extends south from the interchange. (The queue from vehicles wishing to turn onto US 101 north gathers in the western-most northbound lane only, which allows through and right movements to pass relatively unobstructed.) The northbound queue can also affect vehicles exiting US 101 south and wishing turn north onto Oakland. In the PM peak period, southbound traffic on Oakland Road in the study area tends to back up from the US 101 interchange beyond Commercial Avenue. The queues are long enough that they do not dissipate with each signal cycle.

2.1.2 Public Transit

The project site is well served by public transit, as shown on Figure 3. The VTA bus routes that would mostly be used as single or connecting routes are Routes 56, 59, 66 and 180.

Route 56. Route 56 operates solely during the AM and PM weekday peaks (6:00 AM to 9:00 AM and 3:00 PM to 6:00 PM) with a service headway of 30 minutes. It offers service from the intersection of Fair Oaks and El Camino Real in Sunnyvale to downtown Milpitas. Route 56 provides access to a variety of residential and commercial properties as well as the VTA light rail line.

Route 59. Route 59 provides service from east San Jose to Great America. The primary roadways of travel include Cropley Avenue, Hostetter Road/Murphy Avenue/Brokaw Road, North 1st Street and Tasman Drive. This route operates only on weekdays from 6:00 AM to 6:30 PM. Headways are 40-45 minutes during the commute hours (5:00 to 9:00 AM and 3:00 to 6:00 PM) and 60 minutes during the mid-day (9:00 AM to 3:00 PM). Route 59 provides access to the US Post Office, the VTA light rail line and the Santa Clara Convention Center.

Route 66. Route 66 extends from the Santa Teresa Hospital in south San Jose to Milpitas. Route 66 travels through the San Jose Central Business District along First and Second streets, providing excellent access to the VTA light rail system. Route 66 travels on Santa Teresa Boulevard, Snell Avenue, Monterey Road, North 1st Street, Hedding Street and Oakland Road/Main Street while following its north-south path. This route operates on weekdays from 5:00 AM to 11:30 PM. Headways are 15 minutes during the commute hours (5:00 to 9:00 AM and 3:00 to 6:00 PM), 30 minutes during the mid-day (9:00 AM to 3:00 PM) and 30-60 minutes at night (after 6:00 PM). On weekends and holidays, service is provided at 30-60 minute headways from 6:00 AM to 11:00 PM. Attractions of interest accessible from route 66 include the Great Mall of Milpitas, Santa Clara Community Center and San Jose Civic Center.

Route 180. Route 180 is an express route providing service between the Fremont BART station and the San Jose Diridon rail station. The route travels primarily in the I-680, I-880 and North 1st Street corridors. Hours of operation are 4:30 AM to 12 Midnight during the weekday. Headways are 15 minutes during the commute hours (5:00 to 9:00 AM and 3:00 to 6:00 PM), 30 minutes during the mid-day (9:00 AM to 3:00 PM) and 30-60 minutes at night (after 6:00 PM). Service is provided on the weekends from 6:30 AM to 11:30 PM with 30-60 minute headways.

2.1.3 Bicycle and Pedestrian Facilities

The project site is located close to bicycle lanes on the Brokaw/Murphy corridor and on Old Oakland Road.

Sidewalks are provided on the roadways in the study area and adjacent to the project site. The study intersections are currently signalized and equipped with pedestrian crossing signals, push buttons, and crosswalks.

2.1.4 Traffic Operations – Existing Conditions

The traffic operations in the study area were evaluated for the City of San Jose using three different methodologies: the City of San Jose methodology, the North San Jose Deficiency Plan (NSJDP) methodology, and the Golden Triangle methodology.

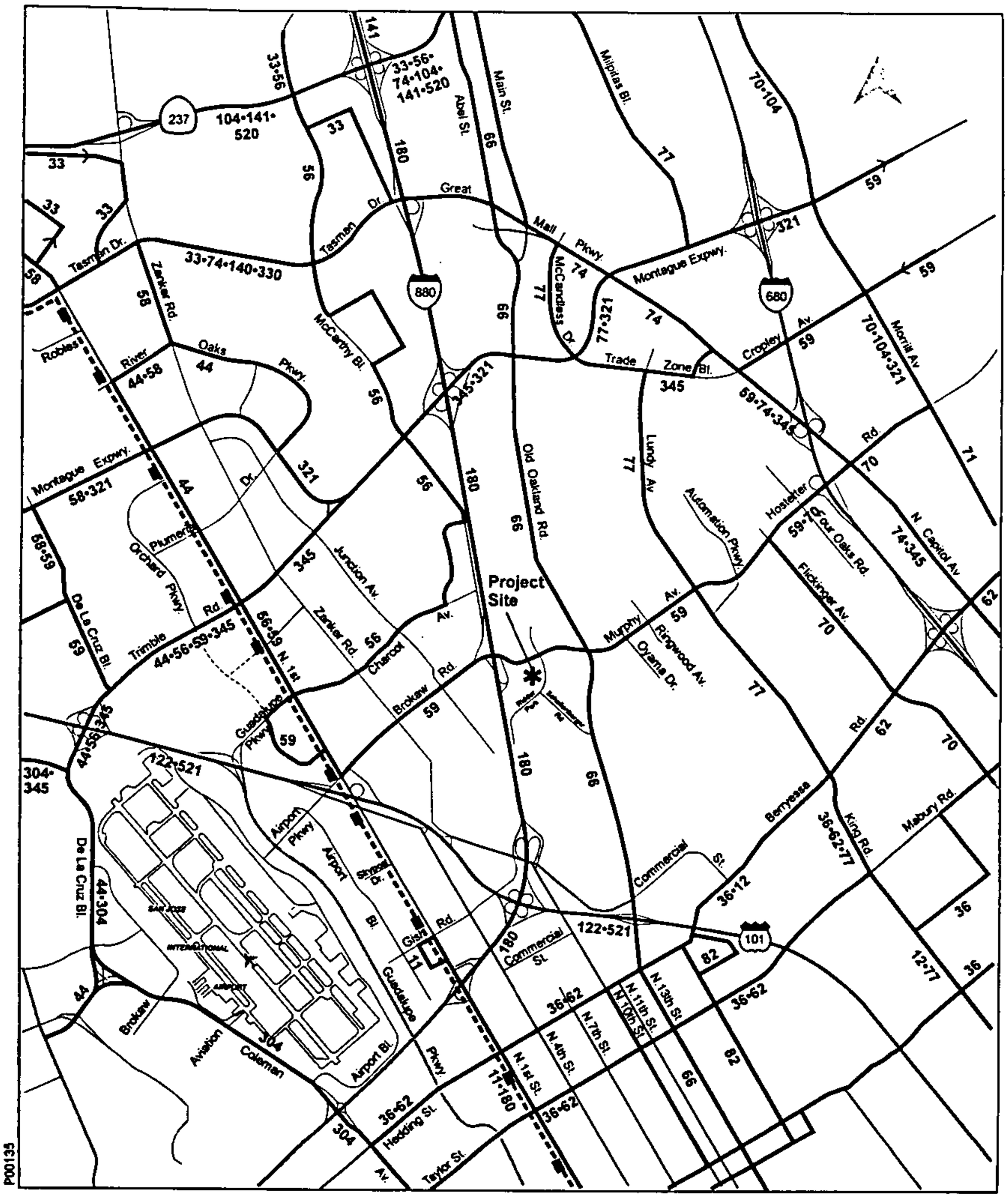


Figure 3
Transit Routes

***DKS** Associates*

2.1.4.1 City of San Jose Intersection Analysis Methodology

The City of San Jose requires traffic analysis to be performed using the Traffix for Windows software. The analysis uses procedures from the *Highway Capacity Manual* for evaluation of signalized intersection operations. This methodology uses the average delay per vehicle to determine the level of service (LOS) for each intersection.

Intersection Level of Service

The existing traffic operational conditions were evaluated based on the field observations and by conducting level of service (LOS) analysis using the AM and PM peak hour turning movement (intersection) counts. Intersection operational LOS is a measure of driving conditions and vehicle delay. Levels of service range from A (best) to F (poorest). LOS A, B, and C indicate satisfactory conditions where traffic can move relatively freely. LOS D describes conditions where delay is more noticeable. LOS E indicates conditions where traffic volumes are at or close to capacity, resulting in significant delays and average travel speeds that are one-third the uncongested travel speeds, or lower. LOS F characterizes conditions where traffic demand exceeds available capacity, with very slow speeds (stop-and-go) and long delays and queuing at signalized intersections. Table 1 outlines LOS definitions for signalized intersections using the City of San Jose methodology.

Table 1
Signalized Intersection Level of Service Descriptions – Highway Capacity Manual

Los	Delay [1]	Description of Traffic Conditions
A	< 5.1	Insignificant delays: No approach phase is fully utilized and no vehicle waits longer than one red indication.
B	5.1-15.0	Minimal delays: An occasional approach phase is fully utilized. Drivers begin to feel restricted.
C	15.1-25.0	Acceptable delay: Major approach phase may become fully utilized. Most drivers feel somewhat restricted.
D	25.1-40.0	Tolerable delay: Drivers may wait through more than one red indication. Queues may develop but dissipate rapidly, without excessive delays.
E	40.1-60.0	Significant delay: Volumes approaching capacity. Vehicles may wait through several signal cycles and long queues form upstream.
F	> 60	Excessive delay: Represents conditions at capacity, with extremely long delays. Queues may block upstream intersections.

Note:
1. Average intersection stopped delay measured in seconds/vehicle.

Source: Highway Capacity Manual, TRB Special Report 209, 1994

Significant Impact Criteria
Traffic analysis results from the Background Condition are compared to the results from the Proposed Project Condition to determine the impacts of a proposed project. The City of San Jose defines an impact as significant if:

- The addition of the project traffic causes an intersection operating at LOS D or better under the background condition to operate at LOS E or F, or,
- For intersections already operating at unacceptable LOS E or F under the background condition, the proposed project causes:
  - An increase in critical delay by 4.0 or more seconds; and,
  - An increase in the critical volume-to-capacity ratio (v/c) of 0.010 or more.

If there is a decrease (negative change) in critical delay or v/c with the added traffic, then only one of the two criteria need to apply to determine the impact of the proposed project.

Intersection Operations
Intersection operations were evaluated for the weekday AM and PM peak hour period of the study intersections. The following 18 study intersections were chosen based on consultation with City of San Jose staff:

1. 101 and Oakland (N)
2. 101 and Oakland (S)
3. 880 and Brokaw (E)
4. 880 and Brokaw (W)
5. Brokaw and First
6. Brokaw and Oakland
7. Brokaw and Zanker
8. Lundy and Murphy
9. Automation and Hostetter
10. Brokaw and Ridder Park
11. Commercial and Oakland
12. Flickinger and Hostetter
13. Four Oaks and Hostetter
14. Murphy and Oyama
15. Murphy and Ringwood
16. Oakland and Schallenberger
17. 680 and Hostetter
18. Montague and Oakland

All study intersections for the City of San Jose analysis are shown in Figure 4, as well as the existing lane designations at these intersections.

Existing turning movement volumes at the study intersections were obtained from the City of San Jose. The existing tuning movement volumes at all study intersections are shown on Figure 5.

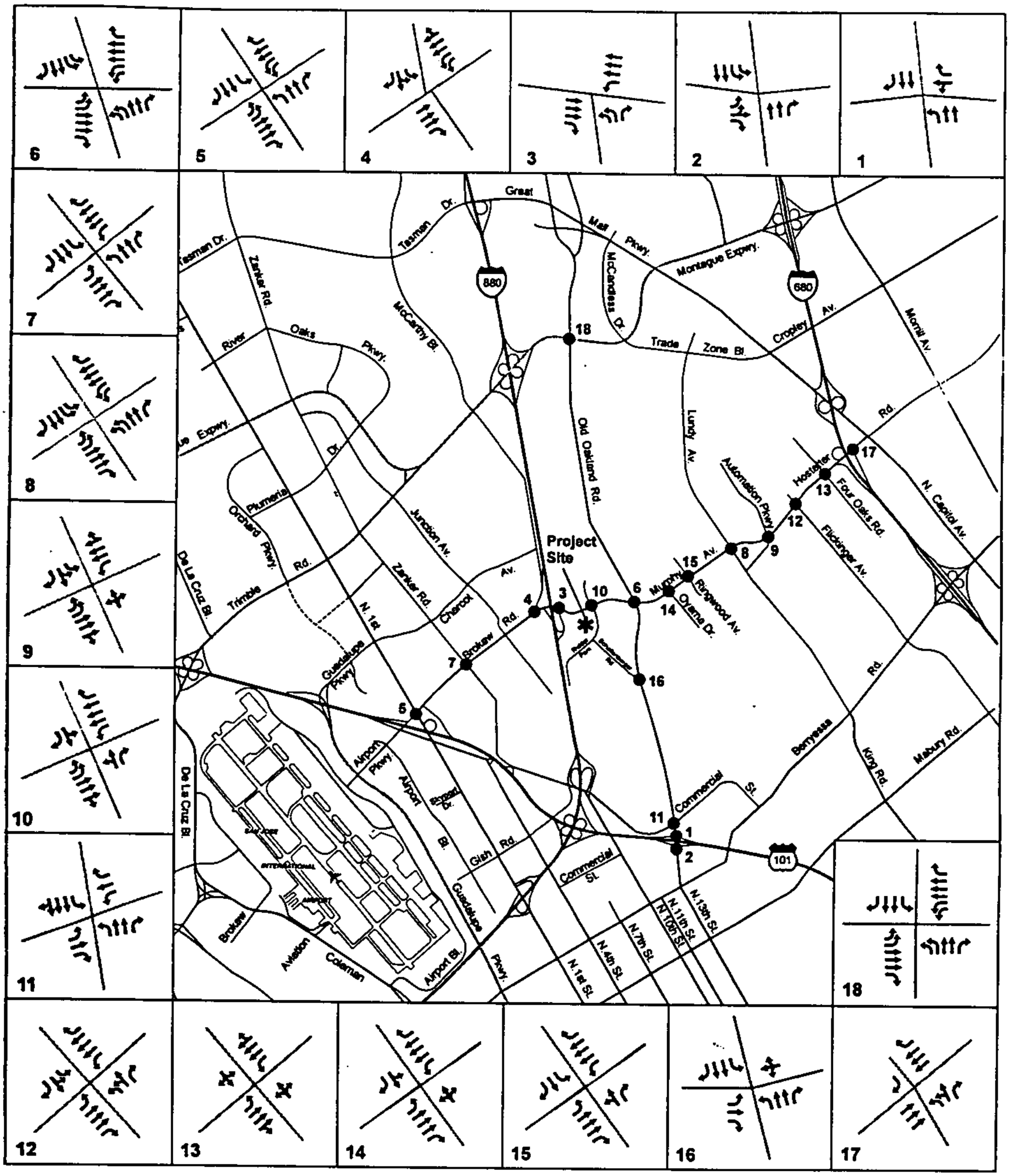
The LOS analysis was performed using the Traffix for Windows 7.1 software. The Traffix analysis output of the intersection operations under the existing conditions, using the City of San Jose methodology, is included in Appendix A to this report. A summary of existing levels of service from the provided City of San Jose Traffix files is shown in Table 2.

2.1.4.2 North San Jose Deficiency Plan Methodology

For proposed projects located within the area defined for the NSJDP, the City of San Jose requires traffic analysis to be performed using the NSJDP methodology. The analysis uses procedures from the *Highway Capacity Manual* for evaluation of signalized intersection operations. This methodology evaluates the average delay of 22 designated intersections taken together.

Significant Impact Criteria

The current NSJDP requires that the 22 designated intersections maintain a minimum average delay of 88 seconds in the project condition. A project related impact would be considered significant if the addition of the project traffic caused the average delay of the 22 intersections to exceed 88 seconds in the project condition.

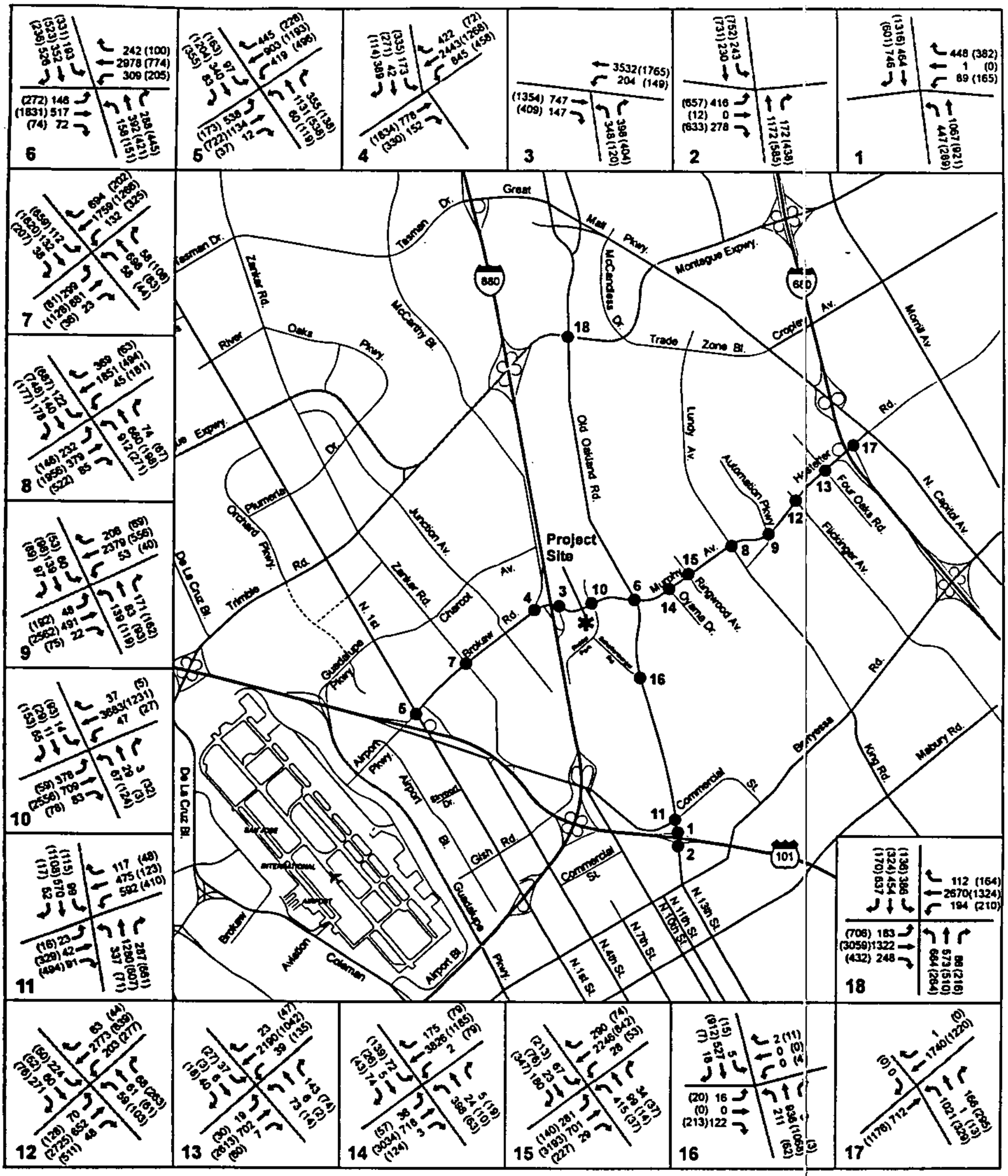


P00135

● City of San Jose Study Intersections

Figure 4
Study Intersection Existing Lane Designations
City of San Jose Traffic Impact Analysis

DKS Associates



● City of San Jose Study Intersections

000 AM Peak Hour Volume
(000) PM Peak Hour Volume

Figure 5
Existing Peak Hour Volumes
City of San Jose Traffic Impact Analysis

DKS Associates

P00135

Table 2
Existing Conditions, Intersection Operations – City of San Jose Methodology

No.	Intersection	AM Peak Hour			PM Peak Hour		
		LOS[1]	Avg. Delay[2]	V/C[3]	LOS	Avg. Delay	V/C
1	101 and Oakland (N)	D	38.6	1.057	C	17.7	0.822
2	101 and Oakland (S)	B	14.5	0.613	D	26.6	0.959
3	880 and Brokaw (E)	C	15.4	0.769	B	14.5	0.502
4	880 and Brokaw (W)	D	27.7	0.773	C	21.7	0.706
5	Brokaw and First	D	35:4	0.833	D	33.7	0.824
6	Brokaw and Oakland	D	39.6	0.936	D	32.9	0.740
7	Brokaw and Zanker	D	35.2	0.813	E	41.0	0.900
8	Lundy and Murphy	D	34.0	0.788	D	33.2	0.729
9	Automation and Hostetter	C	24.6	0.828	D	27.5	0.802
10	Brokaw and Ridder Park	C	20.2	0.878	B	10.2	0.587
11	Commercial and Oakland	D	34.6	0.821	D	37.5	0.781
12	Flickinger and Hostetter	C	18.5	0.725	C	21.5	0.757
13	Four Oaks and Hostetter	B	12.1	0.511	B	12.9	0.626
14	Murphy and Oyama	D	33.5	0.985	B	11.1	0.712
15	Murphy and Ringwood	D	29.5	0.861	C	15.5	0.783
16	Oakland and Schallenberger	B	8.3	0.293	B	7.1	0.341
17	680 and Hostetter	C	17.7	0.624	B	9.9	0.411
18	Montague and Oakland	F	118.0	1.233	F	60.1	1.027

Notes:

1. LOS = level of service (based on average delay)
2. V/C = critical volume to capacity ratio
3. Avg. Delay = average delay per vehicle (in seconds per vehicle)

Source: DKS Associates

Intersection Operations
Intersection operations were evaluated for the weekday AM and PM peak hour periods of the NJSDP intersections. The following 22 intersections are a part of the NSJDP:

- 101 and Brokaw
- 237 and First (N)
- 237 and First (S)
- 237 and Zanker (N)
- 237 and Zanker (S)
- 880 and Brokaw (E)
- 880 and Brokaw (W)
- 880 and First (N)
- 880 and First (S)
- Brokaw and First
- Brokaw and Oakland
- Brokaw and Zanker
- De La Cruz and Trimble
- First and Trimble
- Lundy and Murphy
- Trimble and Zanker
- Montague and Oakland
- Montague and Trade Zone
- First and Montague
- Montague and Trimble
- Montague and O'Toole
- Montague and Zanker

The analysis was performed using the Traffix for Windows 7.1 software. The Traffix analysis output of the intersection operations, under the existing conditions, for the NSJDP, is included in Appendix B to this report. Existing turning movement volumes at the NSJDP intersections were provided by the City of San Jose. A summary of the existing average delay for the NSJDP intersections is shown in Table 3.

2.1.4.3 Golden Triangle Methodology

The Golden Triangle in the City of San Jose is bordered by SR 237, I-880, and US 101. For any study intersections located west of I-880, an analysis according to the Golden Triangle methodology is also required by the City of San Jose. The signalized intersections that are subject to this policy are intersections that have an impact to their critical movement volume of one percent or greater (intersections with freeway ramps or county expressways are not subject to the policy). This methodology uses a weighted average LOS as determined by the v/c ratios of the selected intersections. Table 4 outlines LOS definitions for signalized intersections using the Golden Triangle methodology.

Table 3
Existing Conditions, Intersection Operations – North San Jose Deficiency Plan Methodology

No.	Intersection	AM Peak Hour		PM Peak Hour	
		LOS[1]	Avg. Delay[2]	LOS	Avg. Delay
1	101 and Brokaw	C	21.7	C	24.3
2	237 and First (N)	B	12.1	B	12.7
3	237 and First (S)	C	17.7	C	18.9
4	237 and Zanker (N)	B	6.6	B	10.1
5	237 and Zanker (S)	B	13.8	B	9.4
6	880 and Brokaw (E)	C	15.4	B	14.5
7	880 and Brokaw (W)	D	27.7	C	21.7
8	880 and First (N)	B	12.4	B	8.1
9	880 and First (S)	C	15.8	B	12.5
10	Brokaw and First	D	35.4	D	33.7
11	Brokaw and Oakland	D	39.6	D	32.9
12	Brokaw and Zanker	D	35.2	E	41.0
13	De La Cruz and Trimble	D	25.3	D	38.0
14	First and Trimble	D	33.9	D	37.8
15	Lundy and Murphy	D	34.0	D	33.2
16	Trimble and Zanker	D	26.5	E	41.1
17	Montague and Oakland	F	118.0	F	60.1
18	Montague and Trade Zone	D	33.8	F	77.8
19	First and Montague	E	50.4	F	60.8
20	Montague and Trimble	C	24.4	F	285.0[3]
21	Montague and O'Toole	D	30.9	F	123.4
22	Montague and Zanker	D	29.7	E	47.6
	Average		30.0		47.5

Notes:
1. LOS = level of service (based on average delay)
2. Avg. Delay = average delay per vehicle (in seconds per vehicle)
3. Delay limited to 1.5 times cycle length

Source: DKS Associates

Table 4
Signalized Intersection Level of Service Descriptions - Golden Triangle Methodology

Los	V/C[1]	Description of Traffic Conditions
A	0.00-0.59	Insignificant delays: No approach phase is fully utilized and no vehicle waits longer than one red indication.
B	0.60-0.69	Minimal delays: An occasional approach phase is fully utilized. Drivers begin to feel restricted.
C	0.70-0.79	Acceptable delay: Major approach phase may become fully utilized. Most drivers feel somewhat restricted.
D	0.80-0.89	Tolerable delay: Drivers may wait through more than one red indication. Queues may develop but dissipate rapidly, without excessive delays.
E	0.90-0.99	Significant delay: Volumes approaching capacity. Vehicles may wait through several signal cycles and long queues form upstream.
F	> 1.00	Excessive delay: Represents conditions at capacity, with extremely long delays. Queues may block upstream intersections.

Note:
1. V/C = volume-to-capacity ratio.

Source: City of San Jose Guidelines for Traffic Impact Analysis of Land Developments, June 1994.

Significant Impact Criteria
Traffic analysis results from the Background Condition are compared to the results from the Proposed Project Condition to determine the impacts of a proposed project. The Golden Triangle methodology defines an impact as significant if the addition of project traffic causes the weighted average LOS for the selected intersections (west of I-880) to fall from LOS D or better to LOS E or F.

Intersection Operations
Although the proposed project is located near the Golden Triangle, neither of the two study intersections located west of I-880 satisfied the policy (i.e., the impact to the critical volume was not one percent or greater).

2.2 Background Conditions

This chapter discusses the traffic operating conditions at the study intersections under the background condition. The background condition includes the traffic expected to be generated by the approved projects (as detailed in the Approved Trip Inventory (ATI) database provided by the City of San Jose) prior to completion of the proposed project. Turning movement volumes at all study intersections under the background condition are shown on Figure 6.

The background condition also includes any roadway improvements that are expected to be completed prior to completion of the proposed project.

2.2.1 Planned Roadway Improvements

The following roadway improvements were assumed to be implemented prior to the anticipated completion date of the proposed project and thus were included in this analysis:

- at the intersection of Commercial and Oakland, an eastbound through lane and right turn lane are to be replaced by one through-right turn lane
- at the intersection of Oakland and Schallenberger, the number of northbound and southbound through lanes will be reduced from two lanes to one lane; and the eastbound approach lanes will be redesignated from a through-left lane and a right turn lane to a left turn lane and a through-right lane
- at the intersection of 680 and Hostetter, the northbound through-left turn lane will be redesignated as a through-right turn lane
- at the intersection of Montague and Oakland, a third westbound through lane will be added

The Existing and Background Geometry Traffix Report is included in Appendix D.

2.2.2 Traffic Operations – Background Conditions

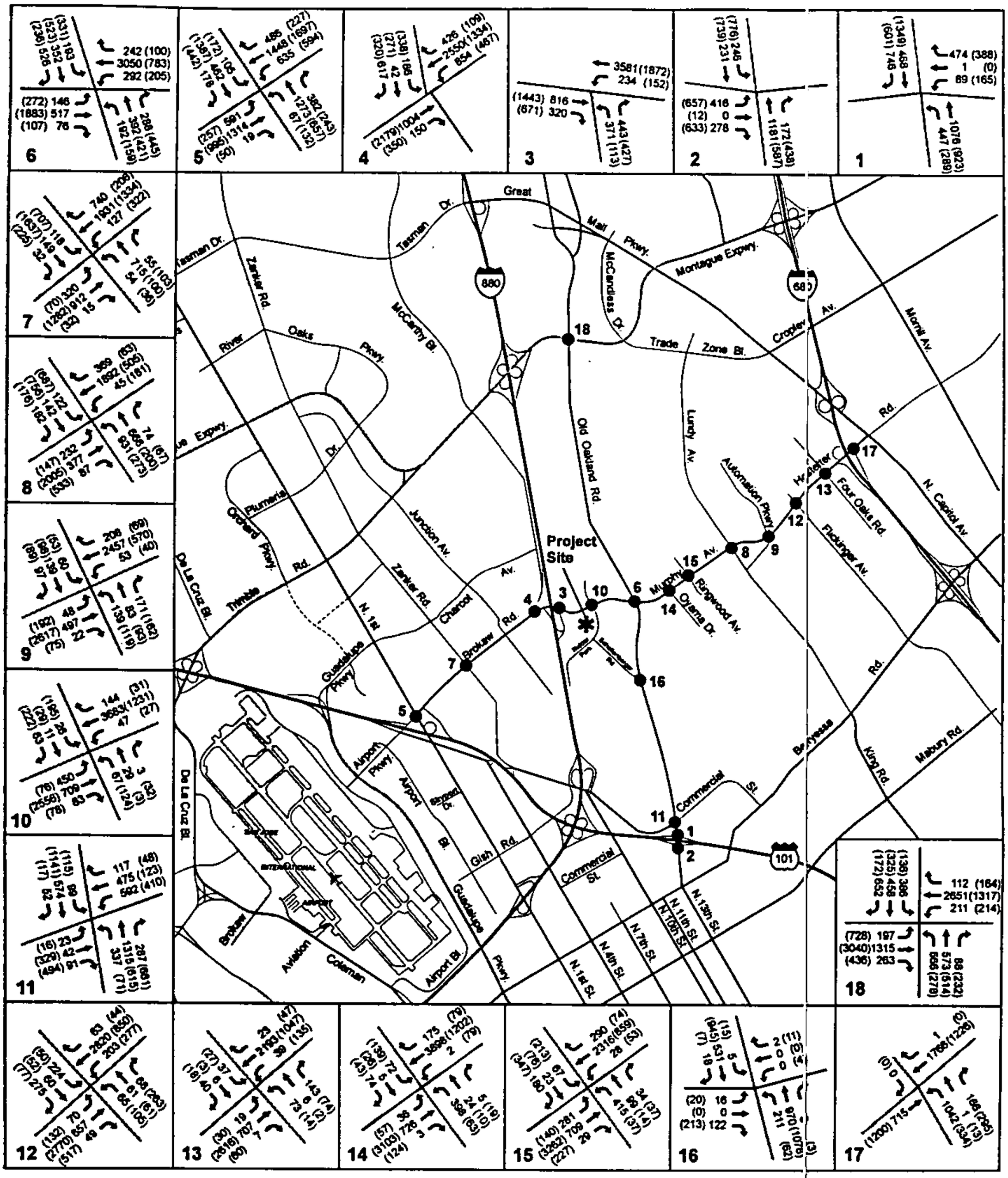
The traffic operations in the study area were evaluated for the City of San Jose using three different methodologies: the City of San Jose methodology, the North San Jose Deficiency Plan (NSJDP) methodology, and the Golden Triangle methodology.

2.2.2.1 City of San Jose Intersection Analysis Methodology

The LOS analysis was performed using the Traffix for Windows 7.1 software. The Traffix analysis output of the intersection operations under the background conditions, using the City of San Jose methodology, is included in Appendix A of this report. A summary of background levels of service from the provided City of San Jose Traffix files is shown in Table 5.

2.2.2.2 North San Jose Deficiency Plan Methodology

The analysis was performed using the Traffix for Windows 7.1 software. The Traffix analysis output of the intersection operations, under the background conditions, for the NSJDP, is included in Appendix B of this report. Background turning movement volumes at the NSJDP intersections were provided by the City of San Jose. A summary of the background average delay for the NSJDP intersections is shown in Table 6.



● City of San Jose Study Intersections

000 AM Peak Hour Volume
(000) PM Peak Hour Volume

Figure 6
Background Peak Hour Volumes
City of San Jose Traffic Impact Analysis

DKS Associates

Table 5
Background Conditions, Intersection Operations – City of San Jose Methodology

No.	Intersection	AM Peak Hour			PM Peak Hour		
		LOS[1]	Avg. Delay[2]	V/C[3]	LOS	Avg. Delay	V/C
1	101 and Oakland (N)	E	42.1	1.073	C	18.0	0.836
2	101 and Oakland (S)	B	14.5	0.617	D	27.4	0.967
3	880 and Brokaw (E)	B	14.2	0.795	B	13.2	0.411
4	880 and Brokaw (W)	D	34.5	0.941	C	22.6	0.755
5	Brokaw and First	E	53.7	1.054	E	54.2	1.059
6	Brokaw and Oakland	D	38.1	0.975	D	32.9	0.750
7	Brokaw and Zanker	E	43.8	0.845	E	46.6	0.920
8	Lundy and Murphy	D	34.4	0.803	D	33.3	0.739
9	Automation and Hostetter	D	25.1	0.839	D	27.6	0.812
10	Brokaw and Ridder Park	C	22.8	0.902	B	14.3	0.648
11	Commercial and Oakland	D	37.4	0.887	F	64.8	1.022
12	Flickinger and Hostetter	C	18.7	0.736	C	21.7	0.766
13	Four Oaks and Hostetter	B	12.0	0.512	B	12.9	0.627
14	Murphy and Oyama	D	36.9	0.999	B	11.1	0.725
15	Murphy and Ringwood	D	29.8	0.874	C	15.6	0.796
16	Oakland and Schallenberger	B	13.1	0.666	C	16.4	0.799
17	680 and Hostetter	D	35.2	0.969	B	9.9	0.412
18	Montague and Oakland	F	62.5	1.034	E	50.4	0.721

Notes:
1. LOS = level of service (based on average delay)
2. V/C = critical volume to capacity ratio
3. Avg. Delay = average delay per vehicle (in seconds per vehicle)

Source: DKS Associates

Table 6
Background Conditions, Intersection Operations – North San Jose Deficiency Plan Methodology

No.	Intersection	AM Peak Hour LOS[1]	AM Peak Hour Avg. Delay[2]	PM Peak Hour LOS	PM Peak Hour Avg. Delay
1	101 and Brokaw	D	25.1	D	25.2
2	237 and First (N)	B	12.1	F	68.0
3	237 and First (S)	F	104.3	F	93.8
4	237 and Zanker (N)	B	6.7	B	9.0
5	237 and Zanker (S)	B	13.5	B	8.7
6	880 and Brokaw (E)	B	14.2	B	13.2
7	880 and Brokaw (W)	D	34.5	C	22.6
8	880 and First (N)	C	18.8	B	9.4
9	880 and First (S)	C	17.9	B	13.7
10	Brokaw and First	E	53.7	E	54.2
11	Brokaw and Oakland	D	38.1	D	32.9
12	Brokaw and Zanker	E	43.8	E	46.6
13	De La Cruz and Trimble	D	25.3	D	38.0
14	First and Trimble	E	41.4	E	49.3
15	Lundy and Murphy	D	34.4	D	33.3
16	Trimble and Zanker	D	28.0	E	52.5
17	Montague and Oakland	F	62.5	E	50.4
18	Montague and Trade Zone	D	33.6	F	77.7
19	First and Montague	F	158.4	F	148.7
20	Montague and Trimble	C	19.6	F	74.7
21	Montague and O'Toole	D	31.8	F	122.9
22	Montague and Zanker	D	36.0	F	92.3
	Average		38.8		51.7

Notes:
1. LOS = level of service (based on average delay)
2. Avg. Delay = average delay per vehicle (in seconds per vehicle)

Source: DKS Associates

2.2.2.3 Golden Triangle Methodology

The analysis was performed using the Traffix for Windows 7.1 software. Background turning movement volumes at the selected intersections were provided by the City of San Jose. Neither of the two study intersections located west of I-880 satisfied the criteria.

2.3 Proposed Project Conditions

In this chapter, the traffic impacts of the proposed project on the roadway network are described. The analysis of the impacts of project related traffic on the roadway network is a three-step process consisting of trip generation, trip distribution, and trip assignment.

2.3.1 Trip Generation

Trip generation is a process which estimates the number of trips generated by a proposed development. The generated trips include trips into and out of a development. The trips are generated by relating the number of trips entering or exiting the project site to the type of land use and size of the proposed development. The trip generation rates are based on traffic counts and surveys at similar existing land uses.

A summary of the trip generation for the proposed project is contained in Table 7. The trip generation rates were based on the City of San Jose trip generation guidelines. The proposed project would consist of 265,000 square feet of development space.

2.3.2 Trip Distribution

After the number of trips is determined, the distribution process projects where these trips come from and go to, from a regional perspective. A majority of trips associated with this land use category are home-based work trips. Therefore, traffic distribution for the proposed research and development facility is primarily related to the employees working in the offices and traveling to and from their residences. The trip distribution for the proposed Mercury News project is based on information provided by the City of San Jose. The percentage of trips distributed along the area roadway network is summarized in Table 8.

2.3.3 Trip Assignment

Trip assignment involves determining which specific roadways a vehicle would use to travel between its origin and destination. Project-generated trips were distributed based on the data in Table 8 and were assigned to the turning movement volumes at the study intersections. Figure 7 illustrates the background traffic volumes with the addition of the project-generated trips.

The Traffix Project Trips Report and the Traffix Turning Movement Report are included in Appendix D.

Table 7
Project Trip Generation

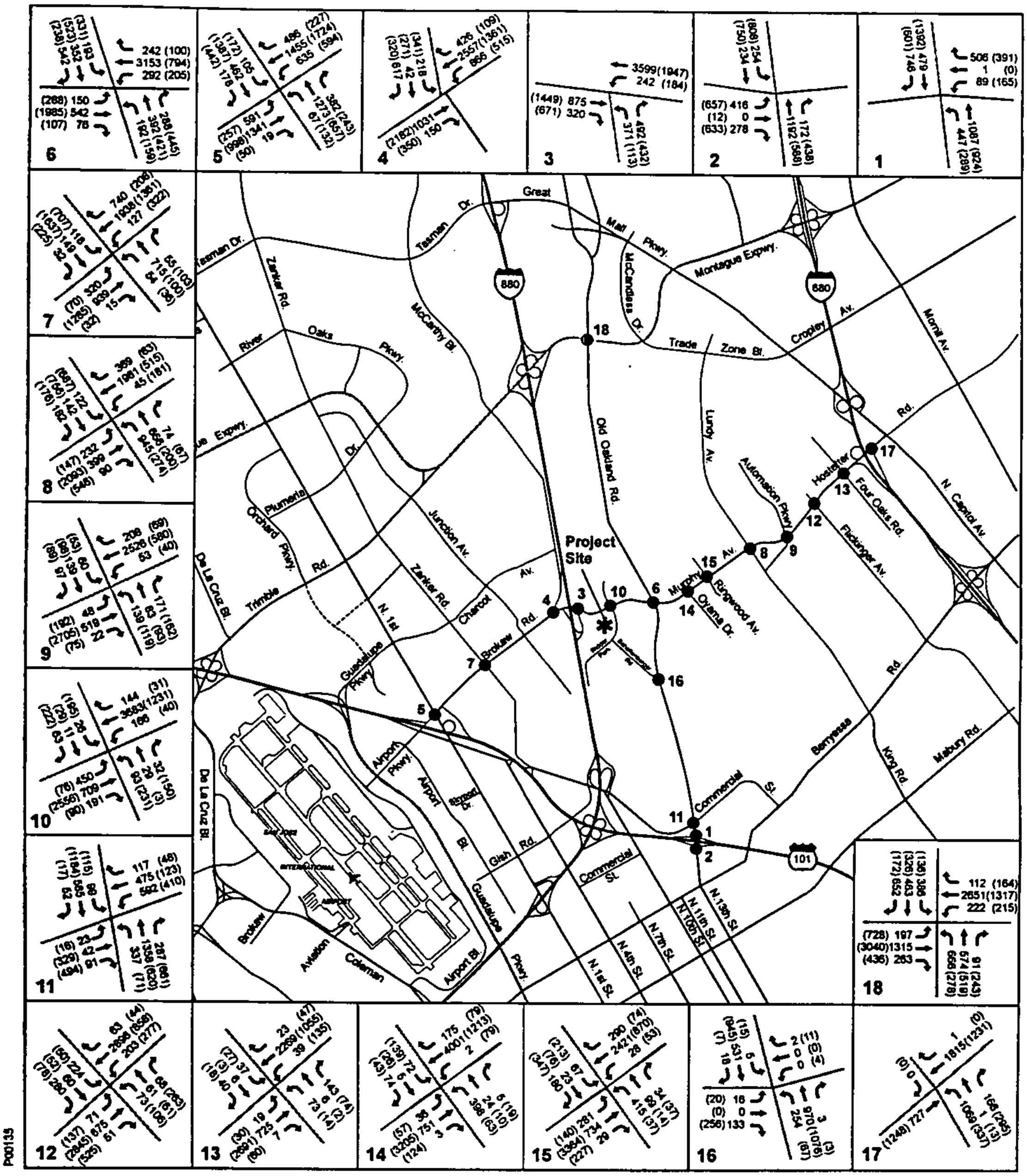
Land Use	Size	AM Peak Hour					PM Peak Hour				
		Rate In	Rate Out	Trips In	Trips Out	Total Trips	Rate In	Rate Out	Trips In	Trips Out	Total Trips
R & D	265 KSF[1]	1.02	0.25	270	66	336	0.11	1.01	29	268	297

Notes:
1. KSF = 1000 square feet
Source: DKS Associates

Table 8
Proposed Project Trip Distribution

Destination	Percentage
I-880 north of Brokaw Road	12%
I-880 south of Brokaw Road	18%
US 101 east of I-880	12%
US 101 west of I-880	10%
Old Oakland Road north of Brokaw Road	2%
Old Oakland Road south of Brokaw Road	4%
Lundy Avenue south of Murphy Avenue	5%
Flickinger Avenue north of Hostetter Road	2%
Flickinger Avenue south of Hostetter Road	3%
I-680 north of Hostetter Road	12%
I-880 south of Hostetter Toad	10%
Hostetter Road	6%
Montague Expressway	2%
Landess Avenue	2%
Total	100%

Source: City of San Jose



● City of San Jose Study Intersections

000 AM Peak Hour Volume
(000) PM Peak Hour Volume

Figure 7
Project Condition
City of San Jose Traffic Impact Analysis

DKS Associates

P00135

2.3.4 Traffic Operations – Project Conditions

Level of service analysis for the project condition was performed using the Traffix files provided by the City of San Jose along with the addition of project traffic, described above. Analysis was completed using the City of San Jose methodology, the North San Jose Deficiency Plan methodology, and the Golden Triangle methodology.

2.3.4.1 City of San Jose Methodology

The Traffix analysis results using the City of San Jose methodology are included in Appendix A of this report. Table 9 summarizes the intersection operations under the Project Condition at all 18 study intersections using the City of San Jose analysis methodology. Variations between the critical delays and volume-to-capacity ratios between the project and background conditions were also shown in Table 9 to identify the intersections with significant project impacts.

As noted in Table 9, two intersections in the AM peak period would be significantly impacted by the project. No intersections would be significantly impacted in the PM peak hour using the City of San Jose methodology. The three intersections that would be impacted in the AM peak hour are: the intersection of Old Oakland Road and US 101 northbound ramps and the intersection of Murphy and Oyama.

2.3.4.2 North San Jose Deficiency Plan Methodology

The twenty-two intersections contained in the NSJDP were examined using the Traffix for Windows 7.1 software.. Results of this analysis are contained in Tables 10 and 11. The Traffix output using the NJSDP methodology are included in Appendix B of this report. The average delay per vehicle calculated for the 22 intersections for the project condition is 39.1 seconds in the AM peak hour and 51.8 seconds in the PM peak hour. The 39.1 seconds and 51.8 seconds of delay meet the NSJDP policy requirement that the average delay be less than 88 seconds.

TABLE 9 - City of San Jose Traffic Impact Analysis Summary

													Difference Project-Backgd.		Impact Determination
			Existing		Background				Project						
Int. #	Intersection	Peak	LOS	Avg Del	LOS	Avg Del	Crit V/C	Crit Del	LOS	Avg Del	Crit V/C	Crit Del	Crit V/C Change	Crit Del Change	Significant Impact
1	101/Oakland (N)	AM	D	38.6	E	42.1	1.073	75.1	E	46.8	1.094	83.9	0.021	8.8	YES
		AM	C	20.7	C	21.5	0.938	36.4	C	22.6	0.949	38.3	0.011	1.9	
		PM	C	17.7	C	18.0	0.836	22.9	C	18.2	0.851	23.5	0.015	0.6	
2	101/Oakland (S)	AM	B	14.5	B	14.5	0.617	15.3	B	14.6	0.623	15.4	0.006	0.1	
		PM	D	26.6	D	27.4	0.967	41.4	D	28.5	0.979	43.6	0.012	2.2	
3	880/Brokaw (E)	AM	C	15.4	B	14.2	0.795	9.0	C	15.3	0.824	10.7	0.029	1.7	
		PM	B	14.5	B	13.2	0.411	15.8	B	13	0.411	16.8	0.000	1.0	
4	880/Brokaw (W)	AM	D	27.7	D	34.5	0.941	31.7	D	34.7	0.942	31.8	0.001	0.1	
		PM	C	21.7	C	22.8	0.775	27.9	C	23.3	0.794	29.1	0.019	1.2	
5	Brokaw/First	AM	D	35.4	E	53.7	1.054	76.1	E	54.1	1.056	76.9	0.002	0.8	
		PM	D	33.7	E	54.2	1.059	75.0	E	55.8	1.067	78	0.008	3.0	
6	Brokaw/Oakland	AM	D	39.6	D	38.1	0.975	42.8	E	42.0	1.004	49.0	0.029	6.2	*
		PM	D	32.9	D	32.9	0.750	34.0	D	33	0.769	34.1	0.019	0.1	
7	Brokaw/Zanker	AM	D	35.2	E	43.8	0.845	55.0	E	43.7	0.845	55.0	0.000	0.0	
		PM	E	41.0	E	46.6	0.920	54.3	E	46.6	0.92	54.4	0.000	0.1	
8	Lundy/Murphy	AM	D	34.0	D	34.4	0.803	36.6	D	34.1	0.825	37.4	0.022	0.8	
		PM	D	33.2	D	33.3	0.739	33.3	D	33.4	0.756	32.2	0.017	-1.1	
9	Automation/Hostetter	AM	C	24.6	D	25.1	0.839	27.1	D	26.1	0.857	28.5	0.018	1.4	
		PM	D	27.5	D	27.6	0.812	28.2	D	27.8	0.83	28.6	0.017	0.4	
10	Brokaw/Ridder Park	AM	C	20.2	C	22.8	0.902	25.5	D	26.9	0.92	27.8	0.016	2.3	
		PM	B	10.2	B	14.3	0.648	13.3	C	15.8	0.66	13.8	0.012	0.5	
11	Commercial/Oakland	AM	D	34.6	D	37.4	0.887	43.3	D	38.0	0.900	44.1	0.013	0.8	
		PM	D	37.5	F	64.8	1.022	73.5	F	65.9	1.031	76.2	0.009	2.7	
12	Flickinger/Hostetter	AM	C	18.5	C	18.7	0.736	16.5	C	19.1	0.754	17.0	0.018	0.5	
		PM	C	21.5	C	21.7	0.766	23.9	C	21.9	0.78	24.1	0.014	0.2	
13	Four Oaks/Hostetter	AM	B	12.1	B	12.0	0.512	10.1	B	12.0	0.527	10.0	0.015	-0.1	
		PM	B	12.9	B	12.9	0.627	14.6	B	13.0	0.641	14.7	0.014	0.1	
14	Murphy/Oyama	AM	D	33.5	D	36.9	0.999	43.2	E	42.6	1.018	50.2	0.019	7.0	YES
	with Mitigation	AM	D	31.4	D	34.5	0.991	40.2	D	39.7	1.011	46.8	0.020	6.6	
		PM	B	11.1	B	11.1	0.725	11.9	B	11.1	0.744	12	0.019	0.1	
15	Murphy/Ringwood	AM	D	29.5	D	29.8	0.874	35.8	D	30.3	0.894	36.6	0.020	0.8	
		PM	C	15.5	C	15.6	0.796	14.3	C	15.9	0.816	14.6	0.020	0.3	
16	Oakland/Schallenberger	AM	B	8.3	B	13.1	0.666	11.6	B	14.0	0.673	12.1	0.007	0.5	
		PM	B	7.1	C	16.4	0.799	19.9	C	19.2	0.83	23.4	0.028	3.5	
17	680/Hostetter	AM	C	17.7	D	35.2	0.969	39.4	D	38.9	0.995	44.1	0.026	4.7	
		PM	B	9.9	B	9.9	0.412	10.0	B	9.9	0.413	10.0	0.001	0.0	
18	Montague/Oakland	AM	F	118.0	F	62.5	1.034	77.8	F	62.6	1.034	77.8	0.000	0.0	
		PM	F	60.1	E	50.4	0.721	62.4	E	50.7	0.722	62.9	0.001	0.5	

* Included in the North San Jose Deficiency Plan

Table 10
Project Conditions, Intersection Operations – North San Jose Deficiency Plan Methodology

AM Peak Hour							
Intersection		Existing		Background		Project	
		LOS[1]	Average Delay[2]	LOS	Average Delay	LOS	Average Delay
1	101 and Brokaw	C	21.7	D	25.1	D	25.2
2	237 and First (N)	B	12.1	B	12.1	B	12.1
3	237 and First (S)	C	17.7	F	104.3	F	104.3
4	237 and Zanker (N)	B	6.6	B	6.7	B	6.7
5	237 and Zanker (S)	B	13.8	B	13.5	B	13.5
6	880 and Brokaw (E)	C	15.4	B	14.2	C	15.3
7	880 and Brokaw (W)	D	27.7	D	34.5	D	34.7
8	880 and First (N)	B	12.4	C	18.8	C	18.8
9	880 and First (S)	C	15.8	C	17.9	C	17.9
10	Brokaw and First	D	35.4	E	53.7	E	54.1
11	Brokaw and Oakland	D	39.6	D	38.1	E	42.0
12	Brokaw and Zanker	D	35.2	E	43.8	E	43.7
13	De La Cruz and Trimble	D	25.3	D	25.3	D	25.3
14	First and Trimble	D	33.9	E	41.4	E	41.4
15	Lundy and Murphy	D	34.0	D	34.4	D	34.1
16	Trimble and Zanker	D	26.5	D	28.0	D	28.0
17	Montague and Oakland	F	118.0	F	62.5	F	62.6
18	Montague and Trade Zone	D	33.8	D	33.6	D	33.7
19	First and Montague	E	50.4	F	158.4	F	158.4
20	Montague and Trimble	C	24.4	C	19.6	C	19.6
21	Montague and O'Toole	D	30.9	D	31.8	D	31.8
22	Montague and Zanker	D	29.7	D	36.0	D	36.0
	Average		30.0		38.8		39.1

Notes:
LOS = level of service
Average Delay = whole intersection average stopped delay in seconds
Source: DKS Associates

Table 11
Project Conditions, Intersection Operations – North San Jose Deficiency Plan Methodology

PM PEAK HOUR							
Intersection		Existing		Background		Project	
		LOS[1]	Average Delay[2]	LOS	Average Delay	LOS	Average Delay
1	101 and Brokaw	C	24.3	D	25.2	D	25.2
2	237 and First (N)	B	12.7	F	68.0	F	68.0
3	237 and First (S)	C	18.9	F	93.8	F	93.8
4	237 and Zanker (N)	B	10.1	B	9.0	B	9.0
5	237 and Zanker (S)	B	9.4	B	8.7	B	8.7
6	880 and Brokaw (E)	B	14.5	B	13.2	B	13.0
7	880 and Brokaw (W)	C	21.7	C	22.6	C	23.3
8	880 and First (N)	B	8.1	B	9.4	B	9.4
9	880 and First (S)	B	12.5	B	13.7	B	13.7
10	Brokaw and First	D	33.7	E	54.2	E	55.8
11	Brokaw and Oakland	D	32.9	D	32.9	D	33.0
12	Brokaw and Zanker	E	41.0	E	46.6	E	46.6
13	De La Cruz and Trimble	D	38.0	D	38.0	D	38.0
14	First and Trimble	D	37.8	E	49.3	E	49.3
15	Lundy and Murphy	D	33.2	D	33.3	D	33.4
16	Trimble and Zanker	E	41.1	E	52.5	E	52.5
17	Montague and Oakland	F	60.1	E	50.4	E	50.7
18	Montague and Trade Zone	F	77.8	F	77.7	F	77.6
19	First and Montague	F	60.8	F	148.7	F	148.7
20	Montague and Trimble	F	285.0[3]	F	74.7	F	74.7
21	Montague and O'Toole	F	123.4	F	122.9	F	122.9
22	Montague and Zanker	E	47.6	F	92.3	F	92.3
	Average		47.5		51.7		51.8

Notes:
LOS = level of service
Average Delay = whole intersection average stopped delay in seconds
Delay limited to 1.5 times the cycle length

Source: DKS Associates

2.3.4.3 Golden Triangle Methodology

The analysis was performed using the Traffix for Windows 7.1 software. The project trips were added to the background turning movement volumes that were provided by the City of San Jose.

Neither of the two study intersections located west of I-880 would satisfy the impact criteria. Therefore, proposed project traffic would not impact the study area under the Golden Triangle methodology.

2.3.5 Left-turn Queue and Storage Analysis

The 18 City of San Jose study intersections were examined to determine the potential vehicle queues for the left-turn movements and the ability of the existing left-turn bays (when present) to provide adequate storage space for those queues. Table 12 summarizes the results of the analysis.

The analysis was performed only for the left-turn movements where left-turn bays were present with two exceptions. Left-turn storage analysis was not performed for freeway off-ramps and when the left-turn bay was adjacent to a lane with shared left and through movements. The shaded areas in Table 12 represent situations in which the left-turn queues, on average, are greater than the storage capacity at each location.

The left-turn storage analysis indicates that the majority of the 18 City of San Jose study intersections currently have left-turn bays with inadequate storage space for the vehicle queues.

At no study intersection does the addition of project traffic cause the overflow of left-turn bay storage space where previously the amount of storage space was adequate.

2.3.6 Transit Analysis

Based on observations of the capacity and occupancy rates of the public transit routes servicing the project area, it was concluded that transit trips to be generated by the proposed project would not significantly impact the public transit service. With a transit mode share of one to two percent, the proposed project would generate 3 to 6 peak-hour transit trips each weekday.

2.3.7 Pedestrian and Bicycle Analysis

The study intersections are currently signalized and equipped with pedestrian crossing signals and crosswalks. The expected moderate increase in vehicular traffic volumes at these intersections would not significantly impact the pedestrian movements. Also the pedestrian movements along the roadway network adjacent to the project site would continue to be accommodated by the provided sidewalks, and therefore no adverse pedestrian impacts are anticipated.

TABLE 12 - Left-turn Design Queues Under Each Condition

					Existing				Background				Project				Cumulative			
				Storage	AM		PM		AM		PM		AM		PM		AM		PM	
Int. #	Intersection	Approach	Lanes	Length	Queue[1]	Length[2]	Queue	Length	Queue	Length	Queue	Length	Queue	Length	Queue	Length	Queue	Length	Queue	Length
1	101/Oakland (N)	NB	1	60	16	400	11	275	16	400	11	275	16	400	11	275	17	425	11	275
2	101/Oakland (S)	SB	2	120	10	250	26	650	10	250	27	675	10	250	28	700	10	250	29	725
3	880/Brokaw (E)	WB	1	100	13	325	9	225	13	325	10	250	14	350	12	300	14	350	12	300
4	880/Brokaw (W)	WB	2	590	50	1250	28	700	50	1250	29	725	51	1275	32	800	52	1300	33	825
5	Brokaw/First	NB	1	265	4	100	9	225	5	125	10	250	5	125	10	250	5	125	10	250
		SB	1	290	7	175	11	275	8	200	12	300	8	200	12	300	8	200	12	300
		EB	2	450	35	875	13	325	39	975	19	475	39	975	19	475	40	1000	19	475
		WB	2	600	27	675	30	750	39	975	36	900	39	975	36	900	39	975	36	900
6	Brokaw/Oakland	NB	2	370	15	375	11	275	15	375	12	300	15	375	12	300	16	400	12	300
		SB	2	380	17	425	24	600	14	350	24	600	14	350	24	600	15	375	25	625
		EB	2	400	14	350	18	450	12	300	18	450	12	300	19	475	12	300	20	500
		WB	2	400	22	550	16	400	17	425	16	400	18	450	16	400	18	450	16	400
7	Brokaw/Zanker	NB	1	200	4	100	4	100	5	125	4	100	5	125	4	100	5	125	4	100
		SB	1	200	9	225	37	925	12	300	45	1125	12	300	45	1125	12	300	46	1150
		EB	1	225	22	550	7	175	29	725	7	175	29	725	7	175	29	725	7	175
		WB	1	185	9	225	25	625	11	275	28	700	11	275	28	700	12	300	29	725
8	Lundy/Murphy	NB	2	850	52	1300	20	500	53	1325	21	525	54	1350	21	525	56	1400	21	525
		SB	2	650	10	250	42	1050	10	250	42	1050	10	250	43	1075	10	250	44	1100
		EB	2	420	18	450	12	300	18	450	12	300	18	450	12	300	18	450	10	250
		WB	2	520	3	75	14	350	3	75	14	350	4	100	14	350	4	100	14	350
9	Automation/Hostetter	EB	2	460	3	75	13	325	3	75	13	325	3	75	13	325	3	75	13	325
		WB	1	90	2	50	3	75	2	50	3	75	2	50	3	75	2	50	3	75
10	Brokaw/Ridder Park	EB	2	210	34	850	4	100	39	975	5	125	39	975	5	125	40	1000	6	150
		WB	1	115	5	125	2	50	5	125	2	50	11	275	3	75	11	275	3	75
11	Commercial/Oakland	NB	1	200	21	525	6	150	21	525	6	150	21	525	6	150	21	525	6	150
		SB	1	85	8	200	9	225	8	200	9	225	8	200	9	225	8	200	9	225
		EB	1	65	2	50	1	25	2	50	1	25	2	50	1	25	2	50	1	25
		WB	1	315	32	800	25	625	33	825	27	675	33	825	28	700	34	850	28	700
12	Flickinger/Hostetter	EB	1	125	4	100	8	200	4	100	8	200	4	100	8	200	4	100	9	225
		WB	1	123	8	200	19	475	8	200	19	475	8	200	19	475	8	200	20	500
13	Four Oaks/Hostetter	EB	1	125	2	50	3	75	2	50	3	75	2	50	3	75	2	50	3	75
		WB	1	110	3	75	11	275	3	75	11	275	3	75	11	275	3	75	11	275
14	Murphy/Oyama	EB	1	170	3	75	5	125	3	75	5	125	3	75	5	125	3	75	5	125
		WB	1	110	0	0	6	150	0	0	6	150	0	0	6	150	0	0	6	150
15	Murphy/Ringwood	SB	1	155	4	100	14	350	4	100	14	350	4	100	14	350	4	100	14	350
		EB	1	200	20	500	8	200	20	500	8	200	20	500	8	200	21	525	8	200
		WB	1	100	2	50	4	100	2	50	4	100	2	50	4	100	2	50	4	100
16	Oakland/Schallenberger	NB	1	300	6	150	2	50	9	225	3	75	10	250	3	75	10	250	3	75
		SB	1	120	0	0	1	25	0	0	1	25	0	0	1	25	0	0	1	25
18	Montague/Oakland	NB	2	540	58	1450	25	625	56	1400	27	675	56	1400	27	675	57	1425	27	675
		SB	1	175	31	775	14	350	29	725	14	350	29	725	14	350	29	725	14	350
		EB	2	1066	18	450	60	1500	19	475	63	1575	19	475	63	1575	19	475	64	1600
		WB	2	470	18	450	21	525	20	500	21	525	21	525	21	525	21	525	22	550

Notes: 1. Queue = Design queue based on intersection level of service analysis
2. Length = Design queue x 25 feet per vehicle

2.3.8 Internal Circulation and Parking Analysis

As noted earlier in this report, the proposed San Jose Mercury News Project has a total floor area of 265,000 square feet. The project site plan is illustrated on Figure 2. From evaluating the site plan, it was concluded that the planned internal circulation roadways are adequate and have sufficient pavement widths to accommodate two-way traffic operations and safe vehicle maneuvers.

The proposed project would have a total of 1,062 on-site parking spaces. The City of San Jose parking requirement for a research and design facility is one space per 350 square feet. Therefore, for the project's 265,000 square feet, 758 parking spaces would be required. Since the proposed project would provide 1,062 on-site parking spaces, the City's parking requirements would be met.

At least two percent of the minimum number of spaces required by the City (758 in this case) must be designated as accessible spaces. Therefore, a minimum of 16 accessible spaces need to be included in the site plan. In addition, one of every eight accessible spaces are required to be van accessible. Therefore, 2 of the 16 accessible spaces need to be designated as van accessible spaces.

2.3.9 Project Driveway Analysis

Access to the project site will be provided by three driveways (see Figure 2). All three driveways are on Ridder Park Drive south of the intersection with Schallenberger Road. There are no other connecting roads Ridder Park Drive (Ridder Park terminates south of Schallenberger Road).

All three driveways would be unsignalized. Adequate storage space exists on-site to prevent vehicle queues at the driveways from restricting on-site circulation. Vehicle queues are not expected on Ridder Park Drive at the driveway locations because all entering movements would be uncontrolled (i.e., free) right turns. Furthermore, little through traffic is expected on Ridder Park Drive adjacent to the project because there are no connecting roads south of the proposed driveway locations. Therefore, the project driveways are expected to operate safely and efficiently.

Sight distance is expected to be adequate at all proposed driveway locations. There are no roadway configurations, natural hills, or sharp horizontal curves in the roadway that could interfere with sight distance. Parallel parking is not permitted on any roadway bordering the project, and so parked vehicles will not interfere with sight distance. Care should be given to the final design of the entrance to the project so that adequate sight distance is maintained.

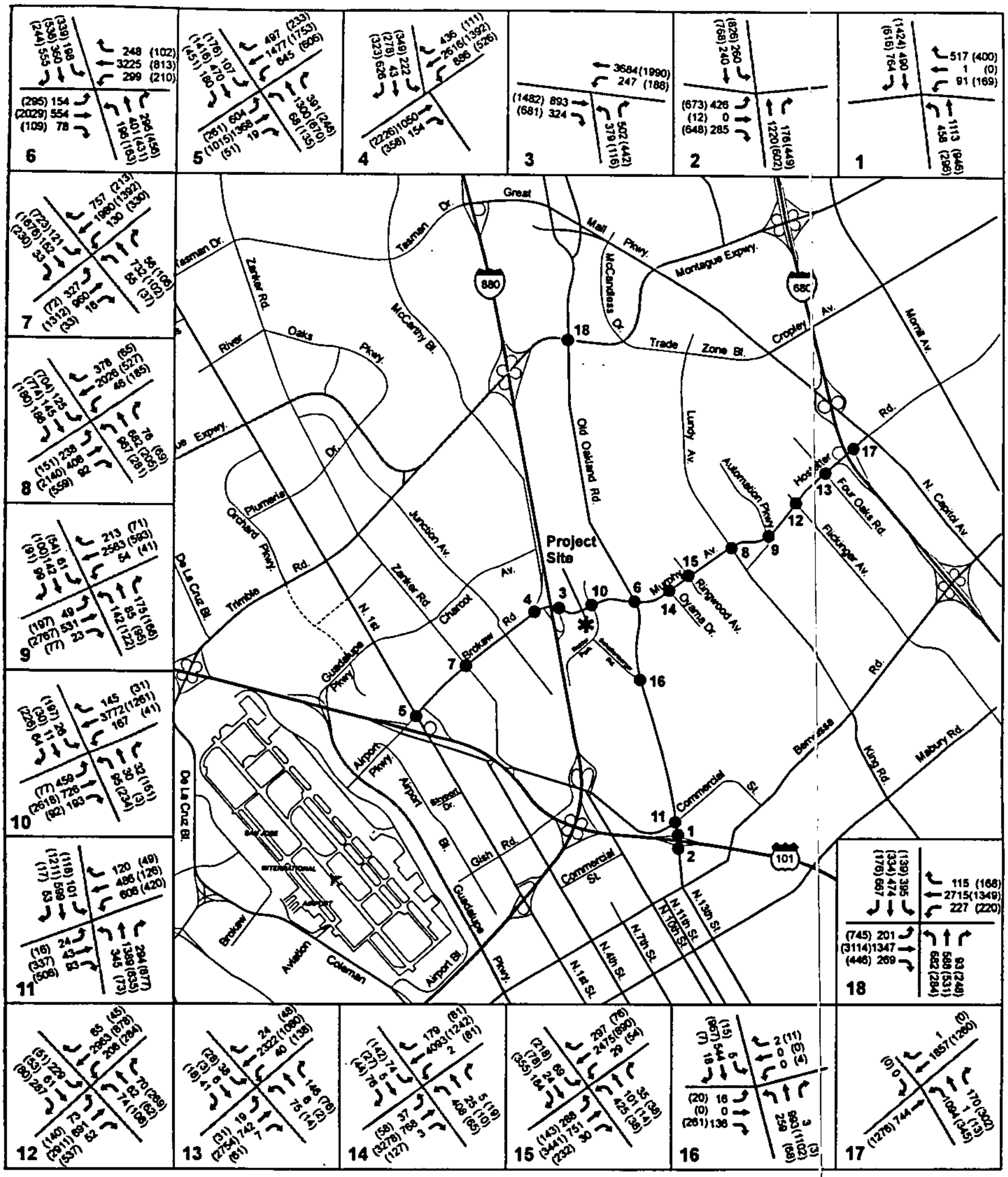
All landscaping and signs associated with the proposed development should be carefully placed to allow for proper sight distance.

2.4 Cumulative Conditions

Evaluation of the cumulative condition scenario is based on increasing the existing condition traffic volumes by a growth rate of 1.2 % per each year of the period starting at the existing condition and ending at the opening of the proposed project (a period of two years). The resulting peak hour traffic volumes are then added to the traffic generated by the approved projects and the proposed project.

2.4.1 City of San Jose Methodology

Cumulative condition operational analysis at all study intersections was performed using the City of San Jose methodology. Figure 8 illustrates the resulting AM and PM peak hour turning movement volumes at the 18 study intersections. Results of the City of San Jose analysis are included as Appendix A of this report. In addition, a summary of the estimated levels of service and average intersection delays are included in Table 13.



● City of San Jose Study Intersections

000 AM Peak Hour Volume
(000) PM Peak Hour Volume

Figure 8
Cumulative Peak Hour Volumes
City of San Jose Traffic Impact Analysis

DKS Associates

P00133

Table 13
Cumulative Conditions, Intersection Operations - City of San Jose Methodology

No.	Intersection	AM Peak Hour			PM Peak Hour		
		LOS[1]	Avg. Delay[2]	V/C[3]	LOS	Avg. Delay	V/C
1	101 and Oakland (N)	E	52.9	1.120	C	19.1	0.870
2	101 and Oakland (S)	B	14.7	0.638	D	31.2	1.002
3	880 and Brokaw (E)	C	15.7	0.843	B	13.2	0.417
4	880 and Brokaw (W)	D	36.2	0.960	C	23.7	0.811
5	Brokaw and First	E	58.1	1.076	F	60.3	1.087
6	Brokaw and Oakland	E	46.3	1.027	D	33.5	0.787
7	Brokaw and Zanker	E	44.6	0.865	E	48.6	0.942
8	Lundy and Murphy	D	34.9	0.844	D	32.7	0.773
9	Automation and Hostetter	D	27.8	0.876	D	28.6	0.848
10	Brokaw and Ridder Park	D	28.4	0.940	C	15.9	0.674
11	Commercial and Oakland	D	39.3	0.920	F	72.5	1.056
12	Flickinger and Hostetter	C	19.7	0.771	C	22.3	0.798
13	Four Oaks and Hostetter	B	12.1	0.539	B	13.3	0.656
14	Murphy and Oyama	E	51.1	1.042	B	11.4	0.761
15	Murphy and Ringwood	D	31.5	0.915	C	16.3	0.834
16	Oakland and Schallenberger	B	14.3	0.689	C	20.5	0.846
17	680 and Hostetter	E	43.0	1.018	B	10.0	0.423
18	Montague and Oakland	F	67.5	1.059	E	54.1	0.739

Notes:

1. LOS = level of service (based on average delay)
2. V/C = critical volume to capacity ratio
3. Avg. Delay = average delay per vehicle (in seconds per vehicle)

Source: DKS Associates

2.4.2 North San Jose Deficiency Plan Methodology

Cumulative condition operational analysis at the NSJDP intersections was performed using the NSJDP methodology. Results of the NSJDP analysis are included in Appendix B of this report. In addition, a summary of the analysis results using the NSJDP are included in Table 14.

Table 14
Cumulative Conditions, Intersection Operations North San Jose Deficiency Plan Methodology

No.	Intersection	AM Peak Hour		PM Peak Hour	
		LOS[1]	Avg. Delay[2]	LOS	Avg. Delay
1	101 and Brokaw	D	25.3	D	25.4
2	237 and First (N)	B	12.3	F	72.3
3	237 and First (S)	F	106.5	F	101.1
4	237 and Zanker (N)	B	6.8	B	9.1
5	237 and Zanker (S)	B	13.6	B	8.8
6	880 and Brokaw (E)	C	15.7	B	13.2
7	880 and Brokaw (W)	D	36.2	C	23.7
8	880 and First (N)	C	19.8	B	9.5
9	880 and First (S)	C	18.2	B	13.8
10	Brokaw and First	E	58.1	F	60.3
11	Brokaw and Oakland	E	46.3	D	33.5
12	Brokaw and Zanker	E	44.6	E	48.6
13	De La Cruz and Trimble	D	25.7	D	38.9
14	First and Trimble	E	43.3	E	52.6
15	Lundy and Murphy	D	34.9	D	32.7
16	Trimble and Zanker	D	28.3	E	59.0
17	Montague and Oakland	F	67.5	E	54.1
18	Montague and Trade Zone	D	35.0	F	84.3
19	First and Montague	F	172.1	F	162.8
20	Montague and Trimble	C	19.7	F	82.3
21	Montague and O'Toole	D	33.1	F	133.7
22	Montague and Zanker	D	37.0	F	98.3
	Average		**40.9**		**55.4**

Notes:
1. LOS = level of service (based on average delay)
2. Avg. Delay = average delay per vehicle (in seconds per vehicle)

Source: DKS Associates

2.4.3 Golden Triangle Methodology

Cumulative condition operational analysis at selected intersections was performed using the Golden Triangle methodology. Neither of the two study intersections located west of I-880 would satisfy the impact criteria.

2.5 Mitigation Measures

In this chapter, mitigation measures are identified to address the traffic impacts for the proposed project. The mitigation measures that are described are based on the need to address project-specific impacts.

Using the City of San Jose traffic impact analysis methodology, two intersections would be significantly impacted by the proposed project: the US 101 Northbound ramps and Oakland Road intersection and the Murphy Avenue and Oyama Drive intersection. See Table 9 for the LOS analysis summary.

No mitigation measures are necessary under the NSJDP analysis methodology or the Golden Triangle analysis methodology.

The Oakland/US 101 NB ramps intersection is under the jurisdiction of Caltrans. The intersection with the US 101 northbound ramps is part of a diamond interchange. Oakland Road passes over US 101 at this location. The northbound approach has three lanes (one left turn lane and two through lanes) and is adjacent to four southbound departure lanes (making the overpass seven lanes wide). The southbound approach has three lanes, including two through lanes and one right turn lane.

There are there are several mitigation measures that would reduce the project's impact to a less than significant level. These measures include the following:

(a) the addition of a second northbound left turn lane

(b) the addition of a southbound right turn lane

(c) converting one of the northbound through lanes into a left turn lane

(d) the addition of second westbound right turn lane

However, because of right-of-way constraints, location of utility poles, property lines, and construction feasibility, it would be not be feasible to implement items (a), (b) or (c). To implement the suggested mitigation measure (d), the following would have to occur:

- remove landscaping between the US 101 northbound off-ramp and Mabury Road
- remove a portion of the sidewalk on the east side of Oakland Road to create room for the new lane and move the associated signal pole
- add a second westbound right turn lane to the exit ramp
- restripe the intersection as required

See Figure 9 for a conceptual drawing of the proposed mitigation. With this mitigation, the intersection would operate at LOS D, with a critical average delay of 38.3 seconds and a critical V/C ratio of 0.949 during the AM peak hour. After mitigation, the project's impact would be reduced to a less-than-significant level.

Because this is a Caltrans controlled intersection, this mitigation would have to be approved by Caltrans prior to implementation. The City of San Jose has already begun coordination efforts with Caltrans with respect to this proposed mitigation measure.

At the intersection of Murphy Avenue and Oyama Drive, there are several mitigation measures that would reduce the project's impact to a less than significant level. These measures include the following:

(a) the addition of a fourth westbound through lane

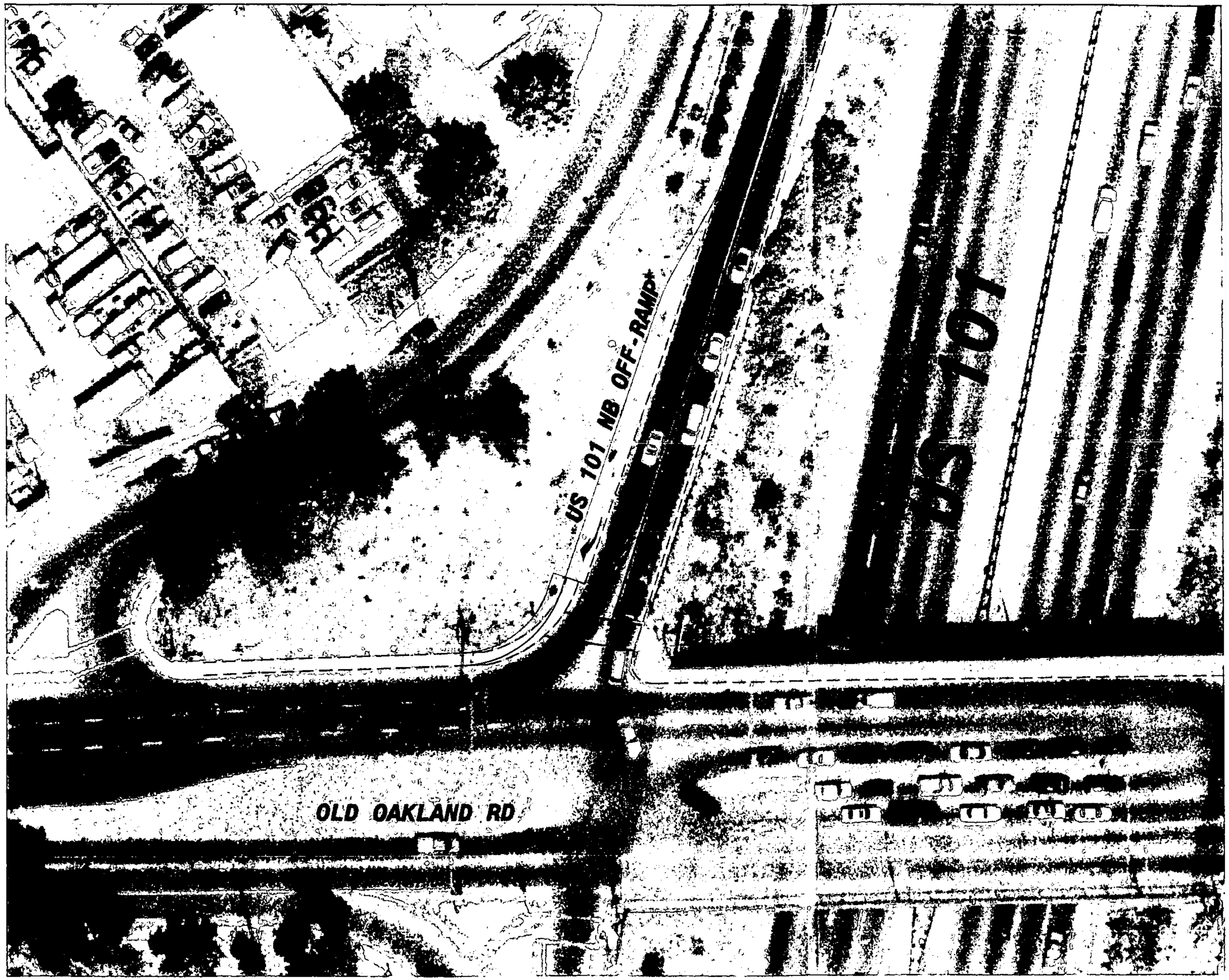
(b) the addition of a westbound through-right turn lane

(c) striping the northbound approach to designate a left turn only lane and a shared through-right turn lane (instead of allowing the approach to function as a shared through-left turn lane and right turn only lane)

However, because of right-of-way constraints, location of utility poles, and bicycle lanes, it would be not be feasible to implement items (a) or (b). To implement the suggested mitigation measure (c), the following would have to occur:

- move the double-yellow striping to the west to reduce the southbound departure lane to twelve feet
- add striping to the northbound approach lane to designate a left turn only lane and shared through-right turn lane

See Figure 10 for a conceptual drawing of the proposed mitigation. With this mitigation, the intersection would operate at LOS D, with an average delay of 39.7 seconds during the AM peak hour. After mitigation, the project's impact would be reduced to a less-than-significant level.



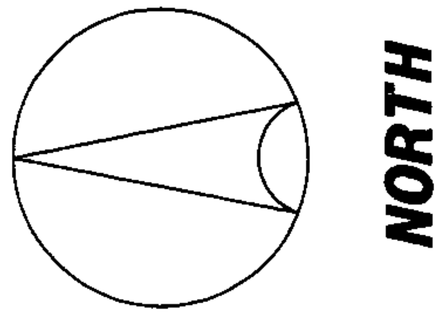
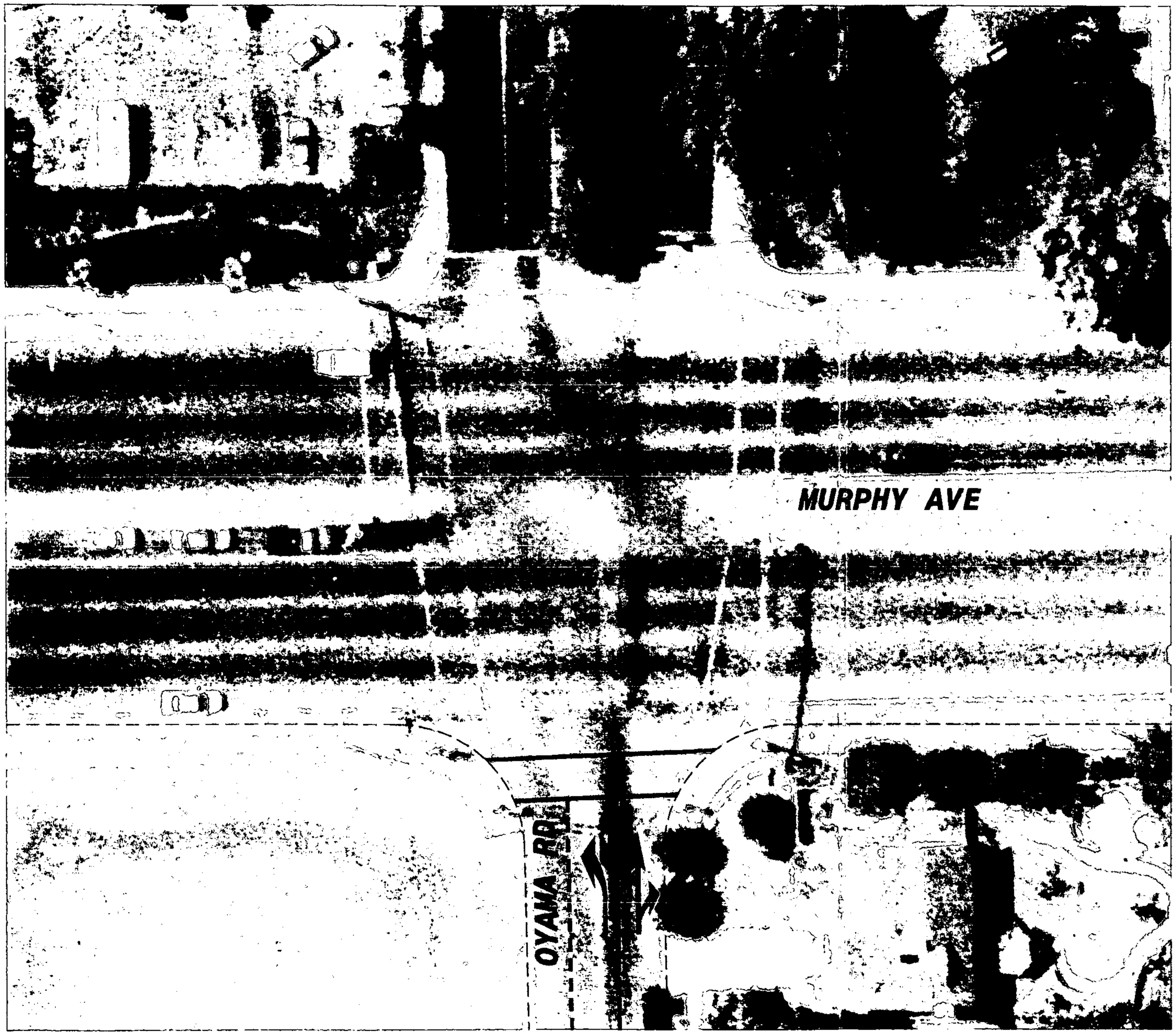


FIGURE 9
PROPOSED MITIGATION

101 NB/OAKLAND INTERSECTION

LEGEND :

- NEW STRIPING
- NEW CURBS
- NEW PAVEMENT MARKING
- EXISTING PAVEMENT MARKING
- EXISTING STRIPING
- EXISTING CURBS



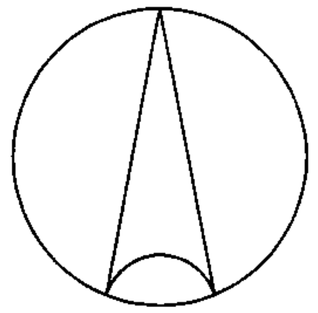


FIGURE 10
PROPOSED MITIGATION

MURPHY/OYAMA INTERSECTION

LEGEND :

- NEW STRIPING
- NEW CURBS
- NEW PAVEMENT MARKING
- EXISTING PAVEMENT MARKING
- EXISTING STRIPING
- EXISTING CURBS

3.0 SANTA CLARA COUNTY CONGESTION MANAGEMENT PROGRAM, TRAFFIC IMPACT ANALYSIS

This section provides an evaluation of traffic and transportation issues related to the proposed Mercury News project according to CMP traffic analysis guidelines. See section 2.0 of this report for a description of the proposed project and its location.

The CMP traffic impact analysis methodology is similar to the City of San Jose methodology, but the intersections that are studied differ and the significant impact criteria is different.

This report analyzes the following traffic scenarios:

Scenario 1- Existing Condition – Level of service based on existing traffic counts.

Scenario 2- Background Condition – Level of service based on existing traffic plus any approved changes to the transportation network that would occur prior to the completed construction of the proposed project, including approved trips from other developments and planned roadway or intersection improvements.

Scenario 3- Proposed Project Condition – Level of service with the anticipated impacts of the proposed project added to the background conditions.

Scenario 4- Cumulative Condition – Level of service with traffic growth that occurs between the existing condition and the opening of the proposed project added to the traffic generated by the approved projects and the proposed project.

Quantitative analyses were performed for the weekday AM and PM peak hours for each of these analysis scenarios.

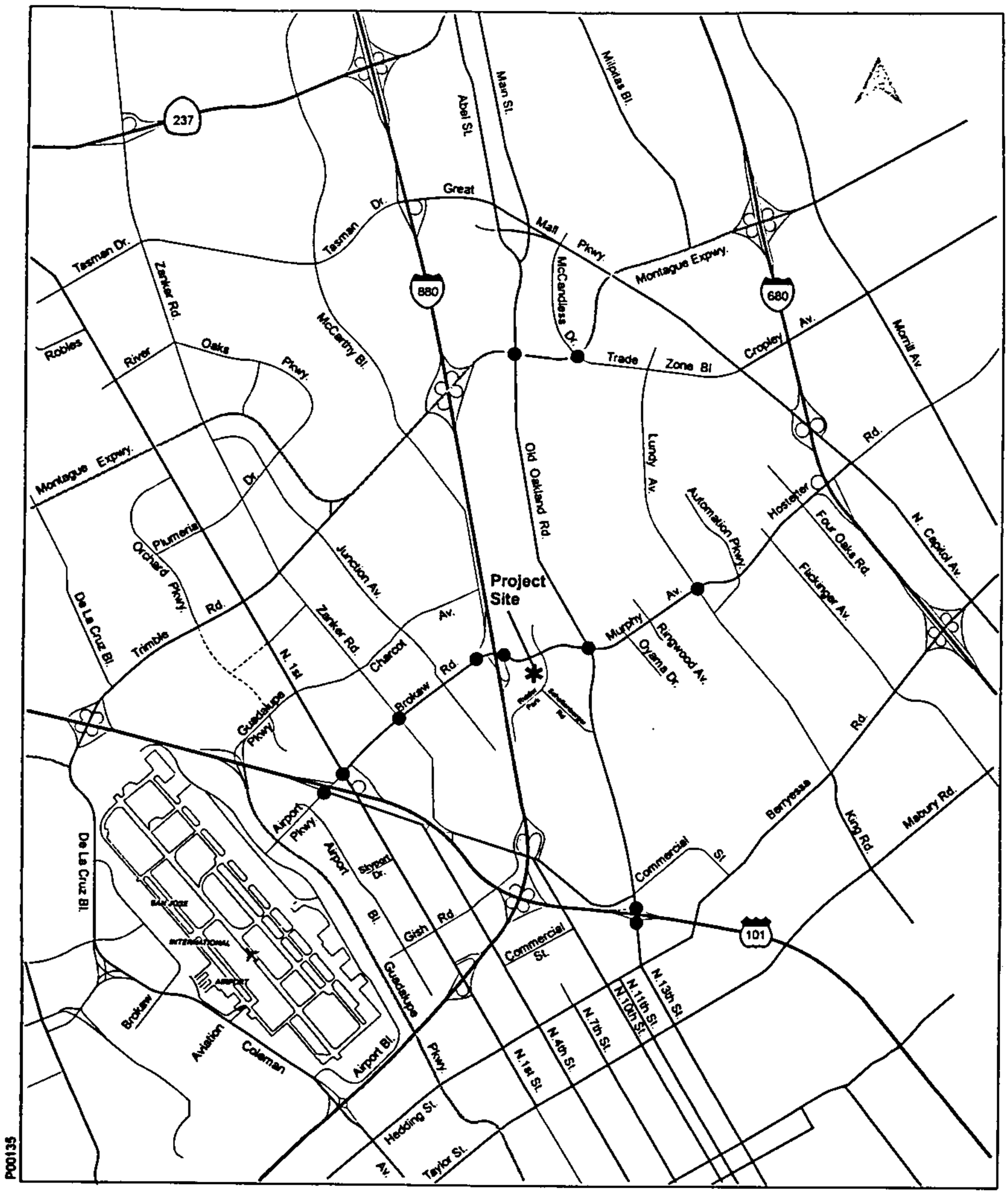
The following chapters of this section present the analysis of the four level of service scenarios and the project impacts and mitigation measures, if necessary.

3.1 Existing Conditions

In this chapter, a summary of the existing traffic conditions in the study area is provided. Figure 9 shows the location of the proposed project within the study area, and Figure 2 shows the site plan of the proposed project. A description of the existing roadway network (including freeways and county expressways), transit facilities, and pedestrian and bike facilities can be found in section 2.1 of this report. The remainder of the chapter discusses existing traffic operations for study area intersections.

3.1.1 Traffic Operations – Existing Conditions

The traffic operations in the study area were evaluated using the CMP methodology. The analysis uses procedures from the *Highway Capacity Manual* for evaluation of signalized intersection operations. This methodology uses the average delay per vehicle to determine the level of service (LOS) for each intersection. (For a description of level of service, see section 2.1 of this report.)



● CMP Study Intersections

Figure 11
Study Area
CMP Traffic Impact Analysis

***DKS** Associates*

Significant Impact Criteria

Traffic analysis results from the Background Condition are compared to the results from the Proposed Project Condition to determine the impacts of a proposed project. The CMP guidelines define an impact as significant if:

- The addition of the project traffic causes an intersection operating at LOS E or better under the background condition to operate at LOS F, or
- For intersections already operating at unacceptable LOS F under the background condition, the proposed project causes an increase in critical delay by 4.0 or more seconds.

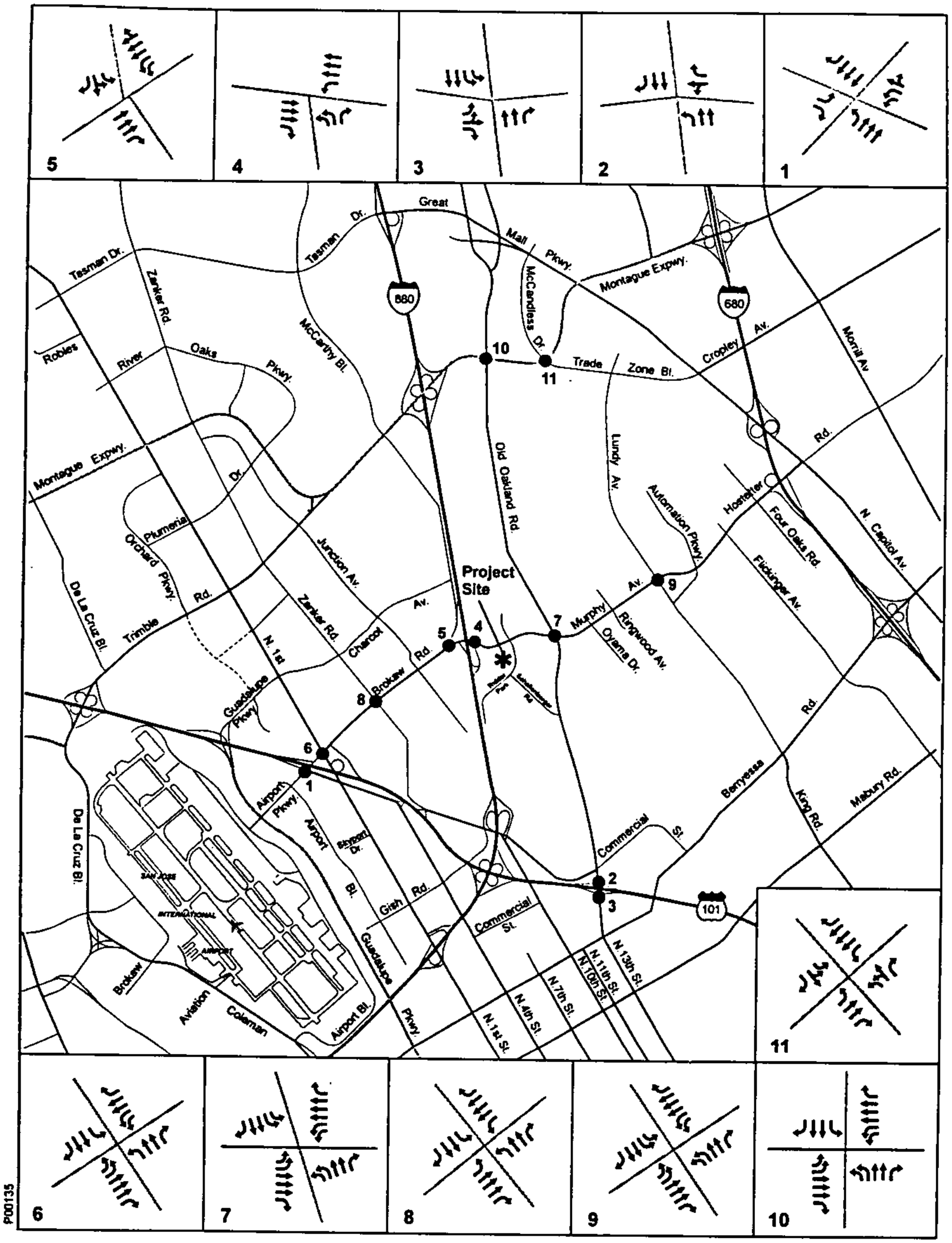
Intersection Operations

Intersection operations were evaluated for the weekday AM and PM peak hour period of the CMP intersections. The following 11 CMP intersections were chosen for analysis based on the projected addition of traffic from the proposed project:

1. 101 and Brokaw
2. 101 and Oakland (N)
3. 101 and Oakland (S)
4. 880 and Brokaw (E)
5. 880 and Brokaw (W)
6. Brokaw and First
7. Brokaw and Oakland
8. Brokaw and Zanker
9. Lundy and Murphy
10. Montague and Oakland
11. Montague and Trade Zone

All study intersections for the CMP analysis are shown in Figure 12, as well as the existing lane designations at these intersections.

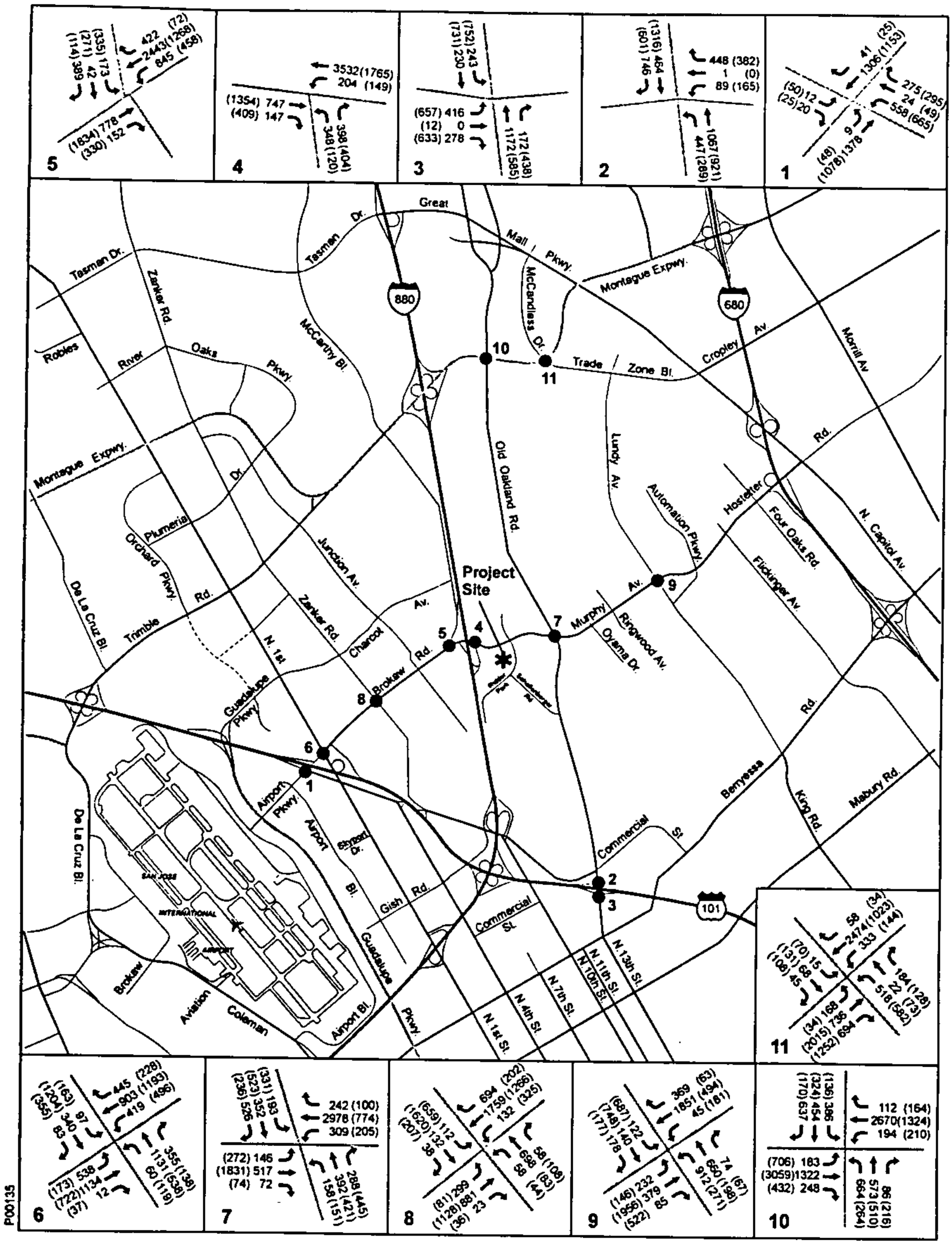
Existing turning movement volumes at the study intersections were obtained from the City of San Jose. The existing turning movement volumes at all CMP intersections studied are shown in Figure 13. The LOS analysis was performed using the Traffix for Windows 7.1 software. The Traffix analysis output of the intersection operations under the existing conditions, using the CMP methodology, is included in Appendix C of this report. A summary of existing levels of service from the Traffix files provided by the City of San Jose is shown in Table 15.



● CMP Study Intersections

Figure 12
Study Intersection
Existing Lane Designations
CMP Traffic Impact Analysis

DKS Associates



● CMP Study Intersections

000 AM Peak Hour Volume

(000) PM Peak Hour Volume

DKS Associates

Figure 13

Existing Peak Hour Volumes

CMP Traffic Impact Analysis

Table 15
Existing Conditions, Intersection Operations - CMP Methodology

No.	Intersection	AM Peak Hour LOS[1]	AM Peak Hour Avg. Delay[2]	AM Peak Hour V/C[3]	PM Peak Hour LOS	PM Peak Hour Avg. Delay	PM Peak Hour V/C
1	101 and Brokaw	C	21.7	0.457	C	24.3	0.513
2	101 and Oakland (N)	D	38.6	1.057	C	17.7	0.822
3	101 and Oakland (S)	B	14.5	0.613	D	26.6	0.959
4	880 and Brokaw (E)	C	15.4	0.769	B	14.5	0.502
5	880 and Brokaw (W)	D	27.7	0.773	C	21.7	0.706
6	Brokaw and First	D	35.4	0.833	D	33.7	0.824
7	Brokaw and Oakland	D	39.6	0.936	D	32.9	0.740
8	Brokaw and Zanker	D	35.2	0.813	E	41.0	0.900
9	Lundy and Murphy	D	34.0	0.788	D	33.2	0.729
10	Montague and Oakland	F	118	1.233	F	60.1	1.027
11	Montague and Trade Zone	D	33.8	0.876	F	77.8	0.606

Notes:
1. LOS = level of service (based on average delay)
2. Avg. Delay = average delay per vehicle (in seconds per vehicle)
3. V/C = critical volume to capacity ratio

Source: DKS Associates

3.2 Background Conditions

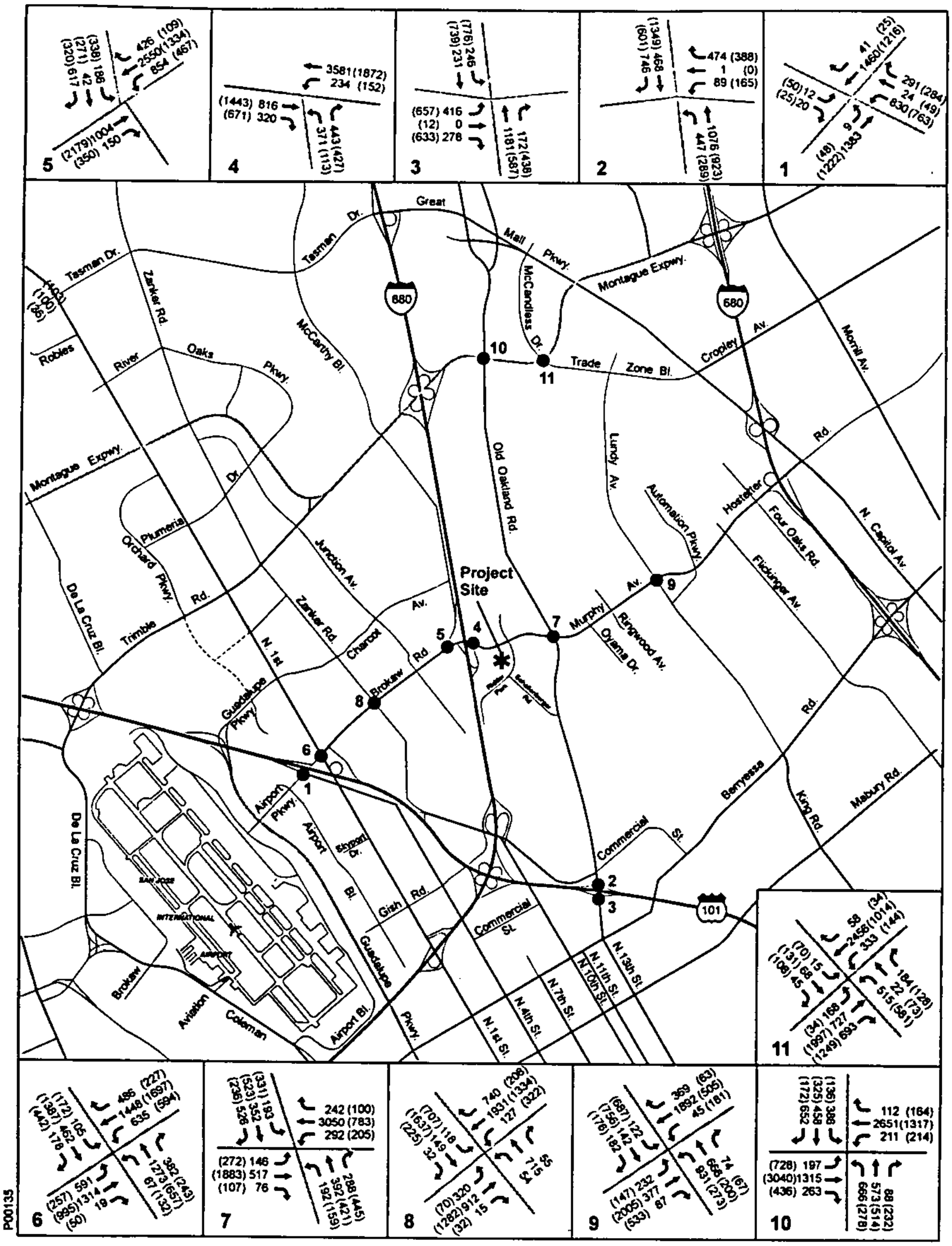
This chapter discusses the traffic operating conditions at the CMP intersections under the background condition. The background condition includes the traffic expected to be generated by the approved projects in the area (as detailed in the Approved Trip Inventory (ATI) database provided by the City of San Jose) prior to completion of the proposed project. Turning movement volumes at all study intersections under the background condition are shown on Figure 14.

The background condition also includes any roadway improvements that are expected to be completed prior to completion of the proposed project.

3.2.1 Planned Roadway Improvements

The following roadway improvements were assumed to be implemented prior to the anticipated completion date of the proposed project and thus were included in this analysis:

- at the intersection of Montague and Oakland, a third westbound through lane will be added



● CMP Study Intersections

000 AM Peak Hour Volume

(000) PM Peak Hour Volume

DKS Associates

Figure 14

Background Peak Hour Volumes

CMP Traffic Impact Analysis

3.2.2 Traffic Operations – Background Conditions

The traffic operations in the study area were evaluated using the CMP guidelines for traffic impact analysis. The LOS analysis was performed using the Traffix for Windows 7.1 software. The Traffix analysis output of the intersection operations under the background conditions, using the CMP methodology, is included in Appendix C of this report. A summary of background levels of service from the Traffix files provided by the City of San Jose is shown in Table 16.

Table 16
Background Conditions, Intersection Operations, - CMP Methodology

No.	Intersection	AM Peak Hour			PM Peak Hour		
		LOS[1]	Avg. Delay[2]	V/C[3]	LOS	Avg. Delay	V/C
1	101 and Brokaw	D	25.1	0.581	D	25.2	0.560
2	101 and Oakland (N)	E	42.1	1.073	C	18	0.836
3	101 and Oakland (S)	B	14.5	0.617	D	27.4	0.967
4	880 and Brokaw (E)	B	14.2	0.795	B	13.2	0.411
5	880 and Brokaw (W)	D	34.5	0.941	C	22.6	0.775
6	Brokaw and First	E	53.7	1.054	E	54.2	1.059
7	Brokaw and Oakland	D	38.1	0.975	D	32.9	0.750
8	Brokaw and Zanker	E	43.8	0.845	E	46.6	0.920
9	Lundy and Murphy	D	34.4	0.803	D	33.3	0.739
10	Montague and Oakland	F	62.5	1.034	E	50.4	0.721
11	Montague and Trade Zone	D	33.6	0.871	F	77.7	0.604

Notes:

1. LOS = level of service (based on average delay)
2. Avg. Delay = average delay per vehicle (in seconds per vehicle)
3. V/C = critical volume to capacity ratio

Source: DKS Associates

3.3 Project Conditions

In this chapter, the traffic impacts of the proposed project on the roadway network are described. The analysis of the impacts of project related traffic on the roadway network is a three-step process consisting of trip generation, trip distribution, and trip assignment.

3.3.1 Trip Generation

Trip generation is a process which estimates the number of trips generated by a proposed development. The generated trips include trips into and out of a development. The trips are generated by relating the number of trips entering or exiting the project site to the type of land use and size of the proposed development. The trip generation rates are based on traffic counts and surveys at similar existing land uses.

A summary of the trip generation for the proposed project is contained in Table 17. The trip generation rates were based on the City of San Jose trip generation guidelines. The proposed project would consist of 265,000 square feet of development space.

Table 17
Project Trip Generation

Land Use	Size	AM Peak Hour					PM Peak Hour				
		Rate In	Rate Out	Trips In	Trips Out	Total Trips	Rate In	Rate Out	Trips In	Trips Out	Total Trips
R & D	265 KSF[1]	1.02	0.25	270	66	336	0.11	1.01	29	268	297

Notes:
1. KSF = 1000 square feet

Source: DKS Associates

3.3.2 Trip Distribution

After the number of trips is determined, the distribution process projects where these trips come from and go to, from a regional perspective. A majority of trips associated with this land use category are home-based work trips. Therefore, traffic distribution for the proposed research and development facility is primarily related to the employees working in the offices and traveling to and from their residences. The trip distribution for the proposed Mercury News project is based on information provided by the City of San Jose. The percentage of trips distributed along the area roadway network is summarized in Table 18.

Table 18
Proposed Project Trip Distribution

Destination	Percentage
I-880 north of Brokaw Road	12%
I-880 south of Brokaw Road	18%
US 101 east of I-880	12%
US 101 west of I-880	10%
Old Oakland Road north of Brokaw Road	2%
Old Oakland Road south of Brokaw Road	4%
Lundy Avenue south of Murphy Avenue	5%
Flickinger Avenue north of Hostetter Road	2%
Flickinger Avenue south of Hostetter Road	3%
I-680 north of Hostetter Road	12%
I-880 south of Hostetter Toad	10%
Hostetter Road	6%
Montague Expressway	2%
Landess Avenue	2%
Total	**100%**

Source: City of San Jose

3.3.3 Trip Assignment

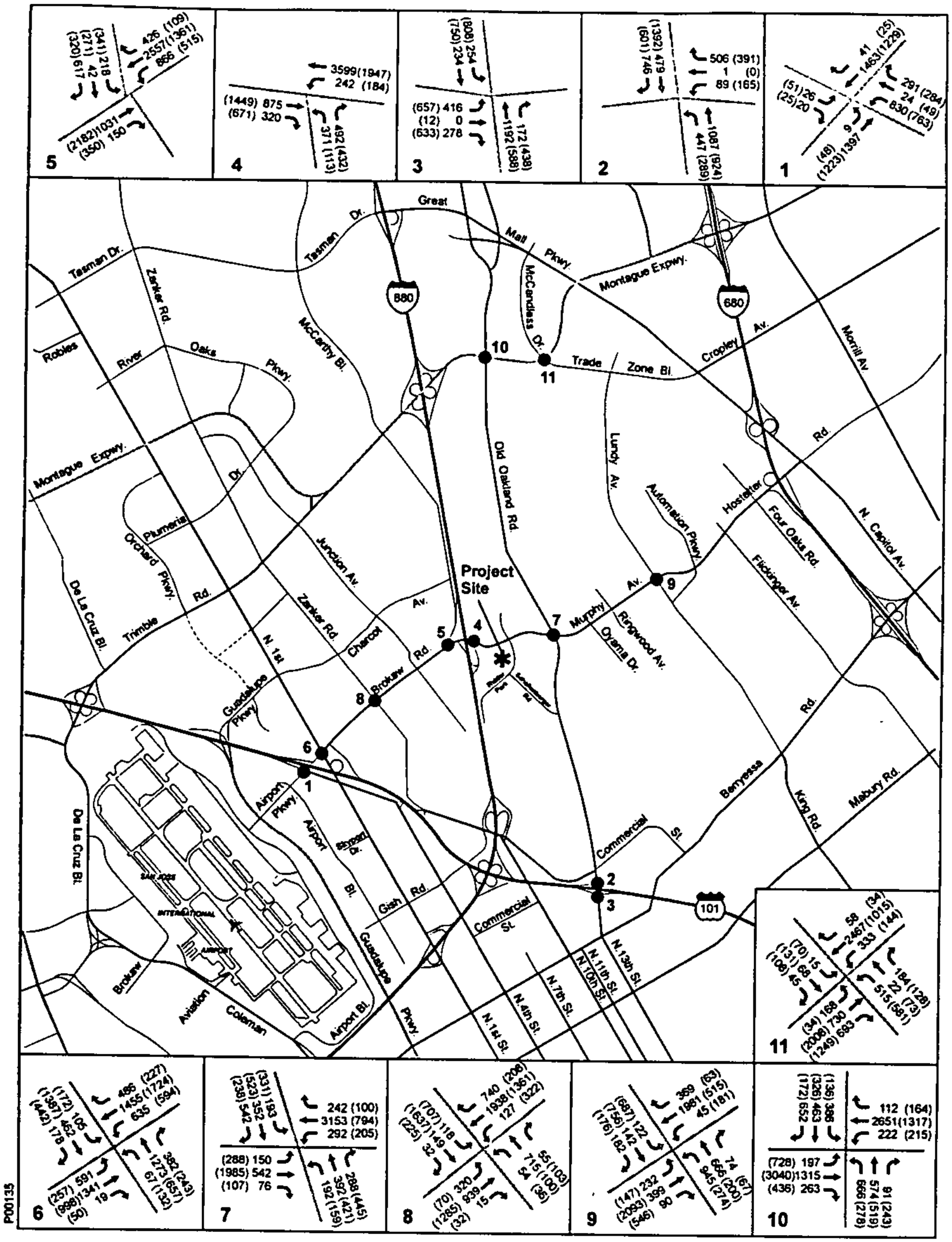
Trip assignment involves determining which specific roadways a vehicle would use to travel between its origin and destination. Project-generated trips were distributed based on the data in Table 8 and were assigned to the turning movement volumes at the study intersections. Figure 15 illustrates the background traffic volumes with the addition of the project-generated trips.

3.3.4 Traffic Operations – Project Conditions

Level of service analysis for the project condition was performed using the Traffix files provided by the City of San Jose along with the addition of project traffic, described above. Analysis was completed using the CMP analysis guidelines.

The Traffix analysis results using the CMP methodology are included in Appendix C of this report. Table 19 summarizes the intersection operations under the Project Condition at all 11 study intersections using the CMP analysis methodology. Variations between the critical delays and volume-to-capacity ratios between the project and background conditions were also shown in Table 19 to identify the intersections with significant project impacts.

No intersections would be significantly impacted in either the AM peak hour or the PM peak hour using the CMP methodology.



● CMP Study Intersections

000 AM Peak Hour Volume

(000) PM Peak Hour Volume

DKS Associates

Figure 15
Project Condition
CMP Traffic Impact Analysis

TABLE 19 - CMP Traffic Impact Analysis Summary

													Change		Impact Determination		
			Existing		Background				Project				Crit V/C	Crit Del		Cumulative	
Node #	Intersection	Peak	LOS	Avg Del	LOS	Avg Del	Crit V/C	Crit Del	LOS	Avg Del	Crit V/C	Crit Del	Change	Change	Impact?	LOS	Avg Del
3020	101/Brokaw	AM	C	21.7	D	25.1	0.581	27.1	D	25.2	0.591	27.2	0.010	0.1		D	25.3
		PM	C	24.3	D	25.2	0.560	27	D	25.2	0.563	27.1	0.003	0.1		D	25.4
3021	101/Oakland (N)	AM	D	38.6	E	42.1	1.073	75.1	E	46.8	1.094	83.9	0.021	8.8		E	52.9
		PM	C	17.7	C	18.0	0.836	22.9	C	18.2	0.851	23.5	0.015	0.6		C	19.1
3022	101/Oakland (S)	AM	B	14.5	B	14.5	0.617	15.3	B	14.6	0.623	15.4	0.006	0.1		B	14.7
		PM	D	26.6	D	27.4	0.967	41.4	D	28.5	0.979	43.6	0.012	2.2		D	31.2
3050	880/Brokaw (E)	AM	C	15.4	B	14.2	0.795	9	C	15.3	0.824	10.7	0.029	1.7		C	15.7
		PM	B	14.5	B	13.2	0.411	15.8	B	13.0	0.411	16.8	0.000	1.0		B	13.2
3051	880/Brokaw (W)	AM	D	27.7	D	34.5	0.941	31.7	D	34.7	0.942	31.8	0.001	0.1		D	36.2
		PM	C	21.7	C	22.6	0.775	27.9	C	23.3	0.794	29.1	0.019	1.2		C	23.7
3083	Brokaw/First	AM	D	35.4	E	53.7	1.054	76.1	E	54.1	1.056	76.9	0.002	0.8		E	58.1
		PM	D	33.7	E	54.2	1.059	75	E	55.8	1.067	78.0	0.008	3.0		F	60.3
3084	Brokaw/Oakland	AM	D	39.6	D	38.1	0.975	42.8	E	42.0	1.004	49.0	0.029	6.2		E	46.3
		PM	D	32.9	D	32.9	0.750	34	D	33.0	0.769	34.1	0.019	0.1		D	33.5
3085	Brokaw/Zanker	AM	D	35.2	E	43.8	0.845	55	E	43.7	0.845	55.0	0.000	0.0		E	44.6
		PM	E	41.0	E	46.6	0.920	54.3	E	46.6	0.920	54.4	0.000	0.1		E	48.6
3106	Lundy/Murphy	AM	D	34.0	D	34.4	0.803	36.6	D	34.1	0.825	37.4	0.022	0.8		D	34.9
		PM	D	33.2	D	33.3	0.739	32.2	D	33.4	0.756	32.2	0.017	0.0		D	32.7
5801	Montague/Oakland	AM	F	118.0	F	62.5	1.034	77.8	F	62.6	1.034	77.8	0.000	0.0		F	67.5
		PM	F	60.1	E	50.4	0.721	62.4	E	50.7	0.722	62.9	0.001	0.5		E	54.1
5802	Montague/Trade Zone	AM	D	33.8	D	33.6	0.871	39.0	D	33.7	0.874	39.2	0.003	0.2		D	35.0
		PM	F	77.8	F	77.7	0.604	140.4	F	77.6	0.604	140.3	0.000	-0.1		F	84.3

3.3.5 Freeway Analysis

The analysis of freeway segments for the purpose of the CMP is based on the procedures of the 1994 Highway Capacity Manual (1994 HCM). As described in the 1994 HCM, the determination of LOS for freeway segments is based on density, with density calculated as:

$$d = \frac{V}{N * S}.$$

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

Table 20 provides summary criteria of the density-based freeway level of service as adopted by the CMP.

Table 20
Density-Based Freeway Level of Service Criteria

LOS	Density (vehicles/mile/lane)
A	density ≤ 10.0
B	10.0 < density ≤ 16.0
C	16.0 < density ≤ 24.0
D	24.0 < density ≤ 46.0
E	46.0 < density ≤ 55.0
F	55.0 < density

The CMP considers an impact to a freeway significant if:

- the addition of the project traffic causes a reduction in LOS from LOS E or better to LOS F; or
- for freeway segments already operating at LOS F, the number of new trips added by the project is more than one percent of the freeway capacity.

Table 21 provides a summary evaluation of operational conditions, including density and level and level of service, at the freeway segments in the vicinity of the project site. As shown in Table 21, the proposed project would result in mostly minor increases in traffic volume on the studied freeway segments.

In two cases project traffic causes an impact of more than 1% of freeway segment capacity: the northbound segment of I-880 between US 101 and Brokaw in the AM peak hour, and the southbound segment of I-880 between US 101 and Brokaw in the PM peak hour. This segment of I-880, however, is among the freeway segments which operated at LOS F under the 1991 baseline conditions and are exempt from CMP conformance requirements (see *1998 Monitoring & Conformance Report*, Santa Clara County Congestion Management Program). Therefore, no action is necessary. The addition of the project traffic to these freeway segments would remain a significant and unavoidable impact.

Table 21
Freeway Segment Level of Service Analysis Summary

Freeway	Segment	Direction	Peak Hour	EXISTING					PROJECT			
				Lanes	Average Speed	Volume	Density	LOS	Project Trips	Density	LOS	% Impact of Capacity
101	McKee to Old Oakland	SB	AM	3	65	3870	19.8	C	8	19.9	C	–
101	McKee to Old Oakland	SB	PM	3	35	5430	51.7	E	25	52.0	E	–
101	McKee to Old Oakland	NB	AM	3	15	4680	104.0	F	22	104.5	F	0.32%
101	McKee to Old Oakland	NB	PM	3	65	2800	14.3	B	3	14.4	B	–
101	McKee to Old Oakland	SB HOV	AM	1	65	160	2.5	A	–	–	–	–
101	McKee to Old Oakland	SB HOV	PM	1	60	1480	24.7	D	7	24.8	D	–
101	McKee to Old Oakland	NB HOV	AM	1	50	2180	43.7	D	10	43.8	D	–
101	McKee to Old Oakland	NB HOV	PM	1	65	210	3.2	A	–	–	–	–
101	Old Oakland to I-880	SB	AM	3	65	2740	14.0	B	–	–	–	–
101	Old Oakland to I-880	SB	PM	3	10	4810	160.2	F	–	–	–	–
101	Old Oakland to I-880	NB	AM	3	20	4390	73.1	F	–	–	–	–
101	Old Oakland to I-880	NB	PM	3	65	3880	19.9	C	–	–	–	–
101	Old Oakland to I-880	SB HOV	AM	1	65	570	8.8	A	–	–	–	–
101	Old Oakland to I-880	SB HOV	PM	1	50	2190	43.9	D	–	–	–	–
101	Old Oakland to I-880	NB HOV	AM	1	55	2120	38.6	D	–	–	–	–
101	Old Oakland to I-880	NB HOV	PM	1	65	230	3.5	A	–	–	–	–
680	Berryessa to Hostetter	SB	AM	4	60	5430	22.6	C	6	22.7	C	–
680	Berryessa to Hostetter	SB	PM	4	10	4290	107.2	F	27	107.9	F	0.29%
680	Berryessa to Hostetter	NB	AM	4	60	7660	31.9	D	27	32.0	D	–
680	Berryessa to Hostetter	NB	PM	4	60	5230	21.8	C	3	21.8	C	–
680	Hostetter to Capitol	SB	AM	4	65	4170	16.0	B	33	16.2	C	–
680	Hostetter to Capitol	SB	PM	4	20	6310	78.8	F	3	78.9	F	0.03%
680	Hostetter to Capitol	NB	AM	4	65	4000	15.4	B	8	15.4	B	–
680	Hostetter to Capitol	NB	PM	4	65	4330	16.7	C	32	16.8	C	–
880	US 101 to Brokaw	SB	AM	2	60	3770	31.4	D	12	31.5	D	–
880	US 101 to Brokaw	SB	PM	2	10	2310	115.5	F	48	117.9	F	1.09%
880	US 101 to Brokaw	NB	AM	2	25	2830	56.6	F	49	57.6	F	1.11%
880	US 101 to Brokaw	NB	PM	2	15	3050	101.6	F	5	101.8	F	0.11%
880	Brokaw to Montague	SB	AM	2	55	4030	36.7	D	32	36.9	D	–
880	Brokaw to Montague	SB	PM	2	10	4100	205.2	F	3	205.2	F	0.07%
880	Brokaw to Montague	NB	AM	2	60	3240	27.0	D	8	27.1	D	–
880	Brokaw to Montague	NB	PM	2	50	4560	45.6	D	32	45.9	D	–

3.3.6 Transit Analysis

Based on observations of the capacity and occupancy rates of the public transit routes servicing the project area, it was concluded that transit trips to be generated by the proposed project would not significantly impact the public transit service. With a transit mode share of one to two percent, the proposed project would generate 3 to 6 peak-hour transit trips each weekday.

3.3.7 Pedestrian and Bicycle Analysis

The study intersections are currently signalized and equipped with pedestrian crossing signals and crosswalks. The expected moderate increase in vehicular traffic volumes at these intersections would not significantly impact the pedestrian movements. Also the pedestrian movements along the roadway network adjacent to the project site would continue to be accommodated by the provided sidewalks, and therefore no adverse pedestrian impacts are anticipated.

3.3.8 Site Plan and Parking Analysis

As noted earlier in this report, the proposed San Jose Mercury News Project has a total floor area of 265,000 square feet. The project site plan is illustrated on Figure 2. From evaluating the full-scale site plan, it was concluded that the planned internal circulation roadways are adequate and have sufficient pavement widths to accommodate two-way traffic operations and safe vehicle maneuvers. Vehicular accesses to the project are planned to be provided off of Ridder Park Drive.

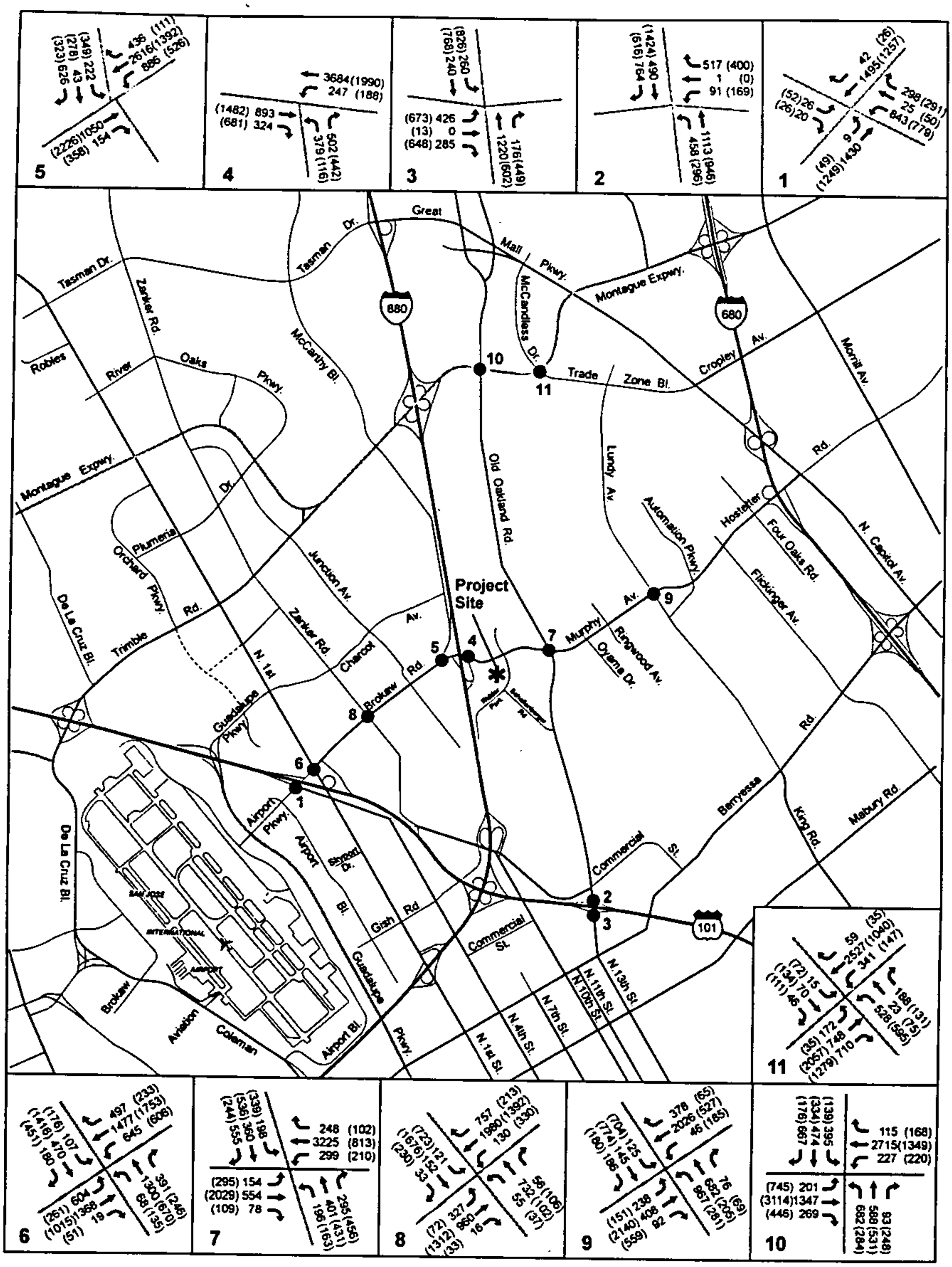
The proposed project would have a total of 1,062 on-site parking spaces. The City of San Jose parking requirement for a research and design facility is one space per 350 square feet. Therefore, for the project's 265,000 square feet, 758 parking spaces would be required. Since the proposed project would provide 1,062 on-site parking spaces, the City's parking requirements would be met.

At least two percent of the minimum number of spaces required by the City (758 in this case) must be designated as accessible spaces. Therefore, a minimum of 16 accessible spaces need to be included in the site plan. In addition, one of every eight accessible spaces are required to be van accessible. Therefore, 2 of the 16 accessible spaces need to be designated as van accessible spaces.

3.4 Cumulative Conditions

Evaluation of the cumulative condition scenario is based on increasing the existing condition traffic volumes by a growth rate of 1.2 % per each year of the period starting at the existing condition and ending at the opening of the proposed project (a period of two years). The resulting peak hour traffic volumes are then added to the traffic generated by the approved projects and the proposed project.

Cumulative condition operational analysis at all study intersections was performed using the CMP analysis methodology. Figure 14 illustrates the resulting AM and PM peak hour turning movement volumes at the 18 study intersections. Results of the CMP analysis are included as Appendix C of this report. In addition, a summary of the estimated levels of service and average intersection delays are included in Table 22.



● CMP Study Intersections

000 AM Peak Hour Volume

(000) PM Peak Hour Volume

P00135

DKS Associates

Figure 16

Cumulative Peak Hour Volumes

CMP Traffic Impact Analysis

Table 22
Cumulative Conditions, Intersection Operations - CMP Methodology

No.	Intersection	AM Peak Hour			PM Peak Hour		
		LOS[1]	Avg. Delay[2]	V/C[3]	LOS	Avg. Delay	V/C
1	101 and Brokaw	D	25.3	0.601	D	25.4	0.575
2	101 and Oakland (N)	E	52.9	1.120	C	19.1	0.870
3	101 and Oakland (S)	B	14.7	0.638	D	31.2	1.002
4	880 and Brokaw (E)	C	15.7	0.843	B	13.2	0.417
5	880 and Brokaw (W)	D	36.2	0.960	C	23.7	0.811
6	Brokaw and First	E	58.1	1.076	F	60.3	1.087
7	Brokaw and Oakland	E	46.3	1.027	D	33.5	0.787
8	Brokaw and Zanker	E	44.6	0.865	E	48.6	0.942
9	Lundy and Murphy	D	34.9	0.844	D	32.7	0.773
10	Montague and Oakland	F	67.5	1.059	E	54.1	0.739
11	Montague and Trade Zone	D	35.0	0.895	F	84.3	0.619

Notes:
1. LOS = level of service (based on average delay)
2. Avg. Delay = average delay per vehicle (in seconds per vehicle)
3. V/C = critical volume to capacity ratio

Source: DKS Associates

3.5 Mitigation Measures

No mitigation measures are necessary for either the CMP study intersections or freeway segments under the CMP analysis methodology.

4.0 CONCLUSIONS

This section describes the traffic impacts identified in the previous sections and presents recommended mitigation measures.

4.1 City of San Jose Traffic Impact Analysis

4.1.1 Project Impacts

The proposed 265,000 square foot office project would increase traffic by 336 trips in the AM peak hour and 297 trips in the PM peak hour.

Using the City of San Jose traffic impact analysis methodology, two intersections would be significantly impacted by the proposed project: the US 101 Northbound ramps and Oakland Road intersection and the Murphy Avenue and Oyama Drive intersection. See Table 9 for the LOS analysis summary.

There are no significant impacts according to the NSJDP analysis methodology or the Golden Triangle analysis methodology. See Tables 10 and 11 for a summary using the NSJDP methodology.

4.1.2 Mitigations

The Oakland/US 101 NB ramps intersection is under the jurisdiction of Caltrans. The intersection with the US 101 northbound ramps is part of a diamond interchange. The proposed mitigation at this location is the addition of second westbound right turn lane.

See Figure 9 for a conceptual drawing of the proposed mitigation. With this mitigation, the intersection would operate at LOS D, with a critical average delay of 38.3 seconds and a critical V/C ratio of 0.949 during the AM peak hour. After mitigation, the project's impact would be reduced to a less-than-significant level.

At the intersection of Murphy Avenue and Oyama Drive, the proposed mitigation is striping the northbound approach to designate a left turn only lane and a shared through-right turn lane (instead of allowing the approach to function as a shared through-left turn lane and right turn only lane).

See Figure 10 for a conceptual drawing of the proposed mitigation. With this mitigation, the intersection would operate at LOS D, with an average delay of 39.7 seconds during the AM peak hour. After mitigation, the project's impact would be reduced to a less-than-significant level.

4.2 CMP Traffic Impact Analysis

4.2.1 Project Impacts

The proposed 265,000 square foot office project would increase traffic by 336 trips in the AM peak hour and 297 trips in the PM peak hour.

The proposed project would not have a significant impact on any of the CMP study intersections in the AM or the PM peak hours. See Table 19 for the level of service summary.

The proposed project would have a significant impact on two freeway segments: the northbound segment of I-880 between US 101 and Brokaw in the AM peak hour, and the southbound segment of I-880 between US 101 and Brokaw in the PM peak hour. This segment of I-880, however, is among the freeway segments which operated at LOS F under the 1991 baseline conditions and are exempt from CMP conformance requirements (see *1998 Monitoring & Conformance Report*, Santa Clara County Congestion Management Program). Therefore, no action is necessary.

4.2.2 Mitigations

No mitigations are required of the project sponsor according to CMP traffic impact analysis methodology.

Traffic Impact Analysis Technical Appendices A-D
(Calculation Sheets) will be on file with
the Department of Planning, Building, and Code Enforcement
and the Department of Public Works

APPENDIX C

AIR QUALITY ANALYSIS

AIR QUALITY IMPACT ANALYSIS FOR THE SAN JOSE MERCURY NEWS PARCEL SPIEKER PROPERTIES PROJECT

Prepared for:
David J. Powers & Associates
1885 The Alameda, Suite 204
San Jose, CA. 95126

July 2000

Donald Ballanti *Certified Consulting Meteorologist*

1424 Scott Street / El Cerrito, California 94530 / (510) 234-6087 / Fax: (510) 232-7752

EXISTING CONDITIONS

Air Pollution Climatology

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

Northwest winds and northerly winds are most common in the project area, reflecting the orientation of the Bay and the San Francisco Peninsula. Winds from these directions carry pollutants released by autos and factories from upwind areas of the Peninsula toward San Jose, particularly during the summer months. Winds are lightest on the average in fall and winter. Every year in fall and winter there are periods of several days when winds are very light and local pollutants can build up.

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

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

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

Ambient Air Quality Standards

Both the U. S. Environmental Protection Agency and the California Air Resources Board have established ambient air quality standards for common pollutants. These ambient air quality standards are levels of contaminants which represent safe levels that avoid specific adverse health effects associated with each pollutant. The ambient air quality standards cover what are called "criteria" pollutants because the health and other effects of each pollutant are described in criteria documents. Table 1 identifies the major criteria

Table 1: Major Criteria Pollutants

Pollutant	Characteristics	Health Effects	Major Sources
Ozone	A highly reactive photochemical pollutant created by the action of sunshine on ozone precursors (primarily reactive hydrocarbons and oxides of nitrogen. Often called photochemical smog.	•Eye Irritation •Respiratory function impairment.	The major sources ozone precursors are combustion sources such as factories and automobiles, and evaporation of solvents and fuels.
Carbon Monoxide	Carbon monoxide is an odorless, colorless gas that is highly toxic. It is formed by the incomplete combustion of fuels.	•Impairment of oxygen transport in the bloodstream. •Aggravation of cardiovascular disease. •Fatigue, headache, confusion, dizziness. •Can be fatal in the case of very high concentrations.	Automobile exhaust, combustion of fuels, combustion of wood in woodstoves and fireplaces.
Nitrogen Dioxide	Reddish-brown gas that discolors the air, formed during combustion.	•Increased risk of acute and chronic respiratory disease.	Automobile and diesel truck exhaust, industrial processes, fossil-fueled power plants.
Sulfur Dioxide	Sulfur dioxide is a colorless gas with a pungent, irritating odor.	•Aggravation of chronic obstruction lung disease. •Increased risk of acute and chronic respiratory disease.	Diesel vehicle exhaust, oil-powered power plants, industrial processes.
Particulate Matter	Solid and liquid particles of dust, soot, aerosols and other matter which are small enough to remain suspended in the air for a long period of time.	•Aggravation of chronic disease and heart/lung disease symptoms.	Combustion, automobiles, field burning, factories and unpaved roads. Also a result of photochemical processes.

pollutants, characteristics, health effects and typical sources.

The federal and California state ambient air quality standards are summarized in Table 2 for important pollutants. The federal and state ambient standards were developed independently with differing purposes and methods, although both processes attempted to avoid health-related effects. As a result, the federal and state standards differ in some cases. In general, the California state standards are more stringent. This is particularly true for ozone and PM_{10}.

The U.S. Environmental Protection Agency in 1997 adopted new national air quality standards for ground-level ozone and for fine Particulate Matter. The existing 1-hour ozone standard of 0.12 PPM will be phased out and replaced by an 8-hour standard of 0.08 PPM. New national standards for fine Particulate Matter (diameter 2.5 microns or less) have also been established for 24-hour and annual averaging periods. The current PM_{10} standards were retained, but the method and form for determining compliance with the standards were revised.

Implementation of the new ozone and Particulate Matter standards was further complicated by a recent lawsuit. On May 14, 1999 the Court of Appeals for the District of Columbia Circuit issued a decision ruled that the Clean Air Act as applied in setting the new public health standards for ozone and particulate matter, was unconstitutional as an improper delegation of legislative authority to the Environmental Protection Agency. The decision has been appealed, but the legal status of the new standards will probably remain uncertain for some time.

Ambient Air Quality

The Bay Area Air Quality Management District (BAAQMD) monitors air quality at several locations within the San Francisco Bay Air Basin. The monitoring site closest to the project site is in downtown San Jose. Table 3 summarizes exceedances of State and Federal standards at the downtown San Jose monitoring site during the period 1996-1998. Table 3 shows that ozone and PM_{10} exceed the state standards in the project area. Violations of the carbon monoxide standards had been recorded at the downtown San Jose site prior to 1992.

Of the three pollutants known to at times exceed the state and federal standards in the project area, two are regional pollutants. Both ozone and PM_{10} are considered regional pollutants in that concentrations are not determined by proximity to individual sources, but show a relative uniformity over a region. Thus, the data shown in Table 3 for ozone and PM_{10} provide a good characterization of levels of these pollutants on the project site.

Carbon monoxide is a local pollutant, i.e., high concentrations are normally only found very near sources. The major source of carbon monoxide, a colorless, odorless,

Table 2: Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	Federal Primary Standard	State Standard
Ozone	1-Hour 8-Hour	0.12 PPM 0.08 PPM	0.09 PPM --
Carbon Monoxide	8-Hour 1-Hour	9.0 PPM 35.0 PPM	9.0 PPM 20.0 PPM
Nitrogen Dioxide	Annual Average 1-Hour	0.05 PPM --	-- 0.25 PPM
Sulfur Dioxide	Annual Average 24-Hour 1-Hour	0.03 PPM 0.14 PPM --	-- 0.05 PPM 0.25 PPM
PM_{10}	Annual Average 24-Hour	50 $\mu g/m^3$ 150 $\mu g/m^3$	30 $\mu g/m^3$ 50 $\mu g/m^3$
$PM_{2.5}$	Annual 24-Hour	15 $\mu g/m^3$ 65 $\mu g/m^3$	-- --

PPM = Parts per Million
$\mu g/m^3$ = Micrograms per Cubic Meter

Table 3: Summary of Air Quality Data for Downtown San Jose[1]

Pollutant	Standard	Days Exceeding Standard in:		
		1996	1997	1998
Ozone	Federal 1-Hour	0	0	1
Ozone	State 1-Hour	5	0	4
Carbon Monoxide	State/Federal 8-Hour	0	0	0
PM_{10}	Federal 24-Hour	0	0	0
PM_{10}	State 24-Hour	2	3	3

[1] California Air Resources Board, California Air Quality Data, Annual Summaries, 1997-1998; Bay Area Air Quality Management District, Air Currents, July/August 1999.

poisonous gas, is automobile traffic. Elevated concentrations, therefore, are usually only found near areas of high traffic volumes.

Attainment Status and Regional Air Quality Plans

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

The Bay Area currently had until recently attained all federal standards. In June of 1998 the U.S. Environmental Protection Agency reclassified the Bay Area from "maintenance area" to nonattainment for ozone based on violations of the federal standards at several locations in the air basin. This reversed the air basin's reclassification to "maintenance area" for ozone in 1995. Reclassification required an update to the region's federal air quality plan.

Recent revisions to the national ambient standards for ozone and Particulate Matter have no immediate effect on federal nonattainment planning. Existing ozone and Particulate Matter designations will remain in effect until U.S.E.P.A establishes new designations based on data from 1997, 1998 and 1999. No new controls will be required with respect to the new standards until after the year 2002.

Under the California Clean Air Act Santa Clara County is a nonattainment area for ozone and PM_{10}. The county is either attainment or unclassified for other pollutants. The California Clean Air Act requires local air pollution control districts to prepare air quality attainment plans. These plans must provide for district-wide emission reductions of five percent per year averaged over consecutive three-year periods or if not, provide for adoption of "all feasible measures on an expeditious schedule".

Sensitive Receptors

The Bay Area Air Quality Management District defines sensitive receptors as facilities where sensitive receptor population groups (children, the elderly, the acutely ill and the chronically ill) are likely to located. These land uses include residences, schools playgrounds, child care centers, retirement homes, convalescent homes, hospitals and medical clinics. There are no such sensitive receptors near the project site.

Significance Criteria

BAAQMD CEQA Guidelines[2] provide the following definitions of a significant air quality impact:

- A project contributing to carbon monoxide (CO) concentrations exceeding the State Ambient Air Quality Standard of 9 parts per million (ppm) averaged over 8 hours or 20 ppm for 1 hour would be considered to have a significant impact.

- A project that generates criteria air pollutant emissions in excess of the BAAQMD annual or daily thresholds would be considered to have a significant air quality impact. The current thresholds are 15 tons/year or 80 pounds/day for Reactive Organic Gases (ROG), Nitrogen Oxides (NOx) or PM_{10}. Any proposed project that would individually have a significant air quality impact would also be considered to have a significant cumulative air quality impact.

- Any project with the potential to frequently expose members of the public to objectionable odors would be deemed to have a significant impact.

- Any project with the potential to expose sensitive receptors or the general public to substantial levels of toxic air contaminants would be deemed to have a significant impact.

The BAAQMD significance thresholds for construction dust impacts is based on the appropriateness of construction dust controls. The BAAQMD guidelines provide feasible control measures for construction emission of PM_{10}. If the appropriate construction controls are to be implemented, then air pollutant emissions for construction activities would be considered less-than-significant.

---

[2] Bay Area Air Quality Management District, BAAQMD CEQA Guidelines, 1996 (Revised December 1999).

II. IMPACTS

Construction-Related Impacts

Construction activities such as earthmoving, excavation and grading operations, construction vehicle traffic and wind blowing over exposed earth would generate exhaust emissions and fugitive particulate matter emissions that would affect local and regional air quality. Construction activities are also a source of organic gas emissions. Solvents in adhesives, non-waterbase paints, thinners, some insulating materials and caulking materials would evaporate into the atmosphere and would participate in the photochemical reaction that creates urban ozone. Asphalt used in paving is also a source of organic gases for a short time after its application.

Construction dust could affect local air quality during implementation of the project. The dry, windy climate of the area during the summer months creates a high potential for dust generation when and if underlying soils are exposed to the atmosphere.

The effects of construction activities would be increased dustfall and locally elevated levels of PM_{10} downwind of construction activity. Construction dust has the potential for creating a nuisance at nearby properties. This impact is considered potentially significant.

Local Impacts

On the local scale, the project would change traffic on the local street network, changing carbon monoxide levels along roadways used by project traffic. Carbon monoxide is an odorless, colorless poisonous gas whose primary source in the Bay Area is automobiles. Concentrations of this gas are highest near intersections of major roads.

A screening form of the CALINE-4 computer simulation model was applied to six signalized intersections near the project site. These intersections were selected because they woulr operate at Level-of-Service D, E or F with the project and would be affected by traffic generated by the project. The model results were used to predict the maximum 1-and 8-hour concentrations, corresponding to the 1- and 8-hour averaging times specified in the state and federal ambient air quality standards for carbon monoxide. The screening model and the assumptions made in its use for this project are described in Attachment 1.

Table 4 shows the results of the CALINE-4 analysis for the peak 1-hour and 8-hour traffic periods in parts per million (PPM). The 1-hour values are to be compared to the federal 1-hour standard of 35 PPM and the state standard of 20 PPM. The 8-hour values in Table 4 are to be compared to the state and federal standard of 9 PPM.

Table 4 shows that existing predicted concentrations near the intersections meet the 1-hour and 8-hour standards. Traffic from approved projects and the proposed project would

increase concentrations by up to 0.1 PPM. Since project traffic would not cause any new violations of the 8-hour standards for carbon monoxide, nor contribute substantially to an existing or projected violation, project impacts on local carbon monoxide concentrations are considered to be less-than-significant.

Permanent Regional Impacts

Vehicle trips generated by the project would result in air pollutant emissions affecting the entire San Francisco Bay Air Basin. Regional emissions associated with project vehicle use has been calculated using the URBEMIS7G emission model. The methodology used in estimating vehicular emissions is described in Attachment 2.

The incremental daily emission increase associated with the project is identified in Table 5 for reactive organic gases and oxides of nitrogen (two precursors of ozone) and PM_{10}.

The Bay Area Air Quality Management District has established threshold of significance for ozone precursors and PM_{10} of 80 pounds per day. Proposed project emissions shown in Table 5 would not exceed this criterion for any pollutants, so the proposed project would have a less-than-significant effect on regional air quality.

Table 4: Worst Case Carbon Monoxide Concentrations Near Selected Intersections, in PPM

Intersection	Existing (2000)		Background (2000)		Background+ Project (2000)		Cumulative + Project (2010)	
	1-Hr	8-Hr	1-Hr	8-Hr	1-Hr	8-Hr	1-Hr	8-Hr
U.S. 101 Ramps/ Oakland (S)	10.7	7.2	10.7	7.2	10.7	7.2	7.9	5.2
I-880 Ramps/Brokaw (W)	11.1	7.5	11.5	7.7	11.5	7.7	8.4	5.6
Brokaw/ First	11.2	7.5	12.0	8.1	12.0	8.1	8.4	5.6
Brokaw/ Oakland	11.3	7.6	11.3	7.6	11.4	7.7	8.3	5.5
Commercial/ Oakland	10.7	7.2	10.7	7.2	10.7	7.2	7.9	5.2
Montegue/ Oakland	12.4	8.4	12.4	8.4	12.4	8.4	8.7	5.8
Most Stringent Standard	20.0	9.0	20.0	9.0	20.0	9.0	20.0	9.0

Table 5: Project Regional Emissions in Pounds Per Day

	Reactive Organic Gases	Nitrogen Oxides	PM_{10}
Project Emissions	48.5	77.8	25.0
BAAQMD Significance Threshold	80.0	80.0	80.0

III. MITIGATION MEASURES

Construction Impacts

For all project-facilitated construction activity, require implementation of the following dust control measures by construction contractors during all construction phases:

- Water all active construction areas at least twice daily.
- Watering or covering of stockpiles of debris, soil, sand or other materials that can be blown by the wind.
- Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard.
- Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites.
- Sweep daily (preferably with water sweepers) all paved access road, parking areas and staging areas at construction sites.
- Sweep streets daily (preferably with water sweepers) if visible soil material is carried onto adjacent public streets.
- Hydroseed or apply non-toxic soil stabilizers to inactive construction areas.
- Enclose, cover, water twice daily or apply non-toxic soil binders to exposed stockpiles (dirt, sand, etc.).
- Limit traffic speeds on unpaved roads to 15 mph.
- Install sandbags or other erosion control measures to prevent silt runoff to public roadways.
- Replant vegetation in disturbed areas as quickly as possible.

Implementation of the measures would reduce the impact of the project to a less than significant level.

ATTACHMENT 1: CALINE-4 MODELING

A screening procedure for estimating carbon monoxide concentrations was applied to a selected worst-case intersections under four traffic scenarios. The screening procedure contained in Transportation Project-Level Carbon Monoxide Protocol[3] was utilized. The screening procedure is intended to allow the prediction of conservative estimates of carbon monoxide concentrations without having to run computational models such as EMFAC and CALINE4. The methodology uses estimates of the contributions to carbon monoxide concentrations for a "base case" characterized by a specific intersection configuration, meteorology, traffic volume and indicators of intersection performance. A series of correction factors are then applied to adjust the initial estimates of carbon monoxide concentrations for the specific conditions of the intersection under study. Correction factors are provided by a series of tables.

The following assumptions were made as input to the screening procedure as appropriate for a project in the Bay Area Air Basin and based on project surroundings:

Geographical Location: Coastal/ Coastal Valley
Average Cruise Speed: 40 MPH (away from intersections).
Analysis Year: 2000 and 2010
Percentage of Vehicle Operating in Cold Start Mode: 30 percent
Distance to Closet Receptor: 7 meters
Percentage Red Time: Proportional to Approach Volume.

The screening procedure provides a worst-case estimate of 1-hour concentrations of carbon monoxide. These 1-hour concentrations were converted to estimates of 8-hour averaged concentrations using a "persistence factor" (multiplier) of 0.7.

The CALINE-4 model calculates the local contribution of nearby roads to the total concentration. The other contribution is the background level attributed to more distant traffic. The 1-hour background level was calculated as 9.0 PPM in 2000 and 7.0 in 2010. The 8-hour background level was calculated as 6.0 PPM in 2000 and 4.6 PPM in 2010. These background concentrations were calculated using base year 1992 isopleths of carbon monoxide concentration and correction factors prepared by the Bay Area Air Quality Management District.

---

[3]Garza, Vincente J.; Peter Granly; Daniel Sperling, Transportation Project-Level Carbon Monoxide Protocol, Institute of Transportation Studies, University of California, Davis; Report UCD-ITS-RR-97-21, December 1997.

ATTACHMENT 2: NEW VEHICLE TRAVEL EMISSIONS

Estimates of regional emissions generated by project traffic were made using a program called URBEMIS-7G.[4] URBEMIS-7G is a program that estimates the emissions that result from various land use development projects. Land use project can include residential uses such as single-family dwelling units, apartments and condominiums, and nonresidential uses such as shopping centers, office buildings, and industrial parks. URBEMIS-7G contains default values for much of the information needed to calculate emissions. However, project-specific, user-supplied information can also be used when it is available.

Inputs to the URBEMIS-7G program include trip generation rates, vehicle mix, average trip length by trip type and average speed. Trip generation rates for project land uses were provided by the project transportation consultant. Average trip lengths and vehicle mixes for the Bay Area were used. Average speed for all types of trips was assumed to be 30 MPH.

The URBEMIS-7G runs assumed summertime conditions with an ambient temperature of 85 degrees F.

---

[4] San Joaquin Valley Unified Air Pollution Control District, URBEMIS-7G User's Guide, May 1998.

APPENDIX D

NOISE ANALYSIS

SPEIKER PROPERTIES
RIDDER PARK DRIVE SITE
EIR NOISE SECTION
SAN JOSE, CALIFORNIA

June 27, 2000

◆ ◆ ◆

Prepared for:

Nora Monette
David J. Powers & Associates
1885 The Alameda, Suite 204
San Jose, California 95126

Prepared by:

Michael S. Thill
Richard R. Illingworth, PE

ILLINGWORTH & RODKIN, INC.
Acoustics · Air Quality
505 Petaluma Boulevard South
Petaluma, CA 94952
(707) 766-7700

Job No.: 00-092

SETTING

Fundamental Concepts of Environmental Acoustics

Noise may be defined as unwanted sound. Noise is usually objectionable because it is disturbing or annoying. The objectionable nature of sound could be caused by its *pitch* or its loudness. *Pitch* is the height or depth of a tone or sound, depending on the relative rapidity (frequency) of the vibrations by which it is produced. Higher pitched signals sound louder to humans than sounds with a lower pitch. *Loudness* is intensity of sound waves combined with the reception characteristics of the ear. Intensity may be compared with the height of an ocean wave in that it is a measure of the amplitude of the sound wave.

In addition to the concepts of pitch and loudness, there are several noise measurement scales which are used to describe noise in a particular location. *A decibel (dB)* is a unit of measurement which indicates the relative amplitude of a sound. The zero on the decibel scale is based on the lowest sound level that the healthy, unimpaired human ear can detect. Sound levels in decibels are calculated on a logarithmic basis. An increase of 10 decibels represents a ten-fold increase in acoustic energy, while 20 decibels is 100 times more intense, 30 decibels is 1,000 times more intense, etc. There is a relationship between the subjective noisiness or loudness of a sound and its intensity. Each 10 decibel increase in sound level is perceived as approximately a doubling of loudness over a fairly wide range of intensities. Technical terms are defined in Table 1.

There are several methods of characterizing sound. The most common in California is the *A-weighted sound level or dBA*. This scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. Representative outdoor and indoor noise levels in units of dBA are shown in Table 2. Because sound levels can vary markedly over a short period of time, a method for describing either the average character of the sound or the statistical behavior of the variations must be utilized. Most commonly, environmental sounds are described in terms of an average level that has the same acoustical energy as the summation of all the time-varying events. This energy-equivalent sound/noise descriptor is called L_{eq}. The most common averaging period is hourly, but L_{eq} can describe any series of noise events of arbitrary duration.

The scientific instrument used to measure noise is the sound level meter. Sound level meters can accurately measure environmental noise levels to within about plus or minus 1 dBA. Various computer models are used to predict environmental noise levels from sources, such as roadways and airports. The accuracy of the predicted models depends upon the distance the receptor is from the noise source. Close to the noise source, the models are accurate to within about plus or minus 1 to 2 dBA.

Since the sensitivity to noise increases during the evening and at night -- because excessive noise interferes with the ability to sleep -- 24-hour descriptors have been developed that incorporate artificial noise penalties added to quiet-time noise events. The *Community Noise Equivalent Level, CNEL*, is a measure of the cumulative noise exposure in a community, with a 5 dB penalty added

TERM	DEFINITIONS
Decibel, dB	A unit describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micropascals (20 micronewtons per square meter).
Frequency, Hz	The number of complete pressure fluctuations per second above and below atmospheric pressure.
A-Weighted Sound Level, dBA	The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise. All sound levels in this report are A-weighted, unless reported otherwise.
L_{01}, L_{10}, L_{50}, L_{90}	The A-weighted noise levels that are exceeded 1%, 10%, 50%, and 90% of the time during the measurement period.
Equivalent Noise Level, L_{eq}	The average A-weighted noise level during the measurement period.
Community Noise Equivalent Level, CNEL	The average A-weighted noise level during a 24-hour day, obtained after addition of 5 decibels in the evening from 7:00 pm to 10:00 pm and after addition of 10 decibels to sound levels measured in the night between 10:00 pm and 7:00 am.
Day/Night Noise Level, L_{dn}	The average A-weighted noise level during a 24-hour day, obtained after addition of 10 decibels to levels measured in the night between 10:00 pm and 7:00 am.
L_{max}, L_{min}	The maximum and minimum A-weighted noise level during the measurement period.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
Intrusive	That noise which intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, and time of occurrence and tonal or informational content as well as the prevailing ambient noise level.

Definitions Of Acoustical Terms — **Table 1**

At a Given Distance From Noise Source	A-Weighted Sound Level in Decibels	Noise Environments	Subjective Impression
	140		
Civil Defense Siren (100')	130		
Jet Takeoff (200')	120		Pain Threshold
	110	Rock Music Concert	
Diesel Pile Driver (100')	100		Very Loud
	90	Boiler Room Printing Press Plant	
Freight Cars (50') Pneumatic Drill (50') Freeway (100')	80		
Vacuum Cleaner (10')	70	In Kitchen With Garbage Disposal Running	Moderately Loud
	60	Data Processing Center	
Light Traffic (100') Large Transformer (200')	50	Department Store	
	40	Private Business Office	Quiet
Soft Whisper (5')	30	Quiet Bedroom	
	20	Recording Studio	
	10		Threshold of Hearing
	0		

Typical Sound Levels Measured In The Environment And Industry — **Table 2**

ILLINGWORTH & RODKIN, INC./Acoustical Engineers

to evening (7:00 pm - 10:00 pm) and a 10 dB addition to nocturnal (10:00 pm - 7:00 am) noise levels. The *Day/Night Average Sound Level*, L_{dn}, is essentially the same as CNEL, with the exception that the evening time period is dropped and all occurrences during this three-hour period are grouped into the daytime period.

Effects of Noise

Hearing Loss

While physical damage to the ear from an intense noise impulse is rare, a degradation of auditory acuity can occur even within a community noise environment. Hearing loss occurs mainly due to chronic exposure to excessive noise, but may be due to a single event such as an explosion. Natural hearing loss associated with aging may also be accelerated from chronic exposure to loud noise.

The Occupational Safety and Health Administration (OSHA) has a noise exposure standard which is set at the noise threshold where hearing loss may occur from long-term exposures. The allowable level is 85 dBA averaged over eight hours. If the noise is above 85 dBA, the allowable exposure time is correspondingly shorter.

Sleep and Speech Interference

The thresholds for speech interference indoors are about 45 dBA if the noise is steady and above 55 dBA if the noise is fluctuating. Outdoors the thresholds are about 15 dBA higher. Steady noise of sufficient intensity (above 35 dBA) and fluctuating noise levels above about 45 dBA have been shown to affect sleep. Interior residential standards for multi-family dwellings are set by the State of California at 45 dBA L_{dn}. Typically, the highest steady traffic noise level during the daytime is about equal to the L_{dn} and nighttime levels are 10 dBA lower. The standard is designed for sleep and speech protection and most jurisdictions apply the same criterion for all residential uses. Typical structural attenuation is 12-17 dBA with open windows. With closed windows in good condition, the noise attenuation factor is around 20 dBA for an older structure and 25 dBA for a newer dwelling. Sleep and speech interference is therefore possible when exterior noise levels are about 57-62 dBA L_{dn} with open windows and 65-70 dBA L_{dn} if the windows are closed. Levels of 55-60 dBA are common along collector streets and secondary arterials, while 65-70 dBA is a typical value for a primary/major arterial. Levels of 75-80 dBA are normal noise levels at the first row of development outside a freeway right-of-way. In order to achieve an acceptable interior noise environment, bedrooms facing secondary roadways need to be able to have their windows closed, those facing major roadways and freeways typically need special glass windows.

Annoyance

Attitude surveys are used for measuring the annoyance felt in a community for noises intruding into homes or affecting outdoor activity areas. In these surveys, it was determined that the causes for annoyance include interference with speech, radio and television, house vibrations, and interference with sleep and rest. The L_{dn} as a measure of noise has been found to provide a valid correlation of noise level and the percentage of people annoyed. People have been asked to judge the annoyance caused by aircraft noise and ground transportation noise. There continues to be disagreement about the relative annoyance of these different sources. When measuring the percentage of the population highly annoyed, the threshold for ground vehicle noise is about 55 dBA L_{dn}. At an L_{dn} of about 60 dBA, approximately 2 percent of the population is highly annoyed. When the L_{dn} increases to 70 dBA, the percentage of the population highly annoyed increases to about 12 percent of the population. There is, therefore, an increase of about 1 percent per dBA between an L_{dn} of 60-70 dBA. Between an L_{dn} of 70-80 dBA, each decibel increase increases by about 2 percent the percentage of the population highly annoyed. People appear to respond more adversely to aircraft noise. When the L_{dn} is 60 dBA, approximately 10 percent of the population is believed to be highly annoyed. Each decibel increase to 70 dBA adds about 2 percentage points to the number of people highly annoyed. Above 70 dBA, each decibel increase results in about a 3 percent increase in the percentage of the population highly annoyed.

Regulatory Background

The State of California and the City of San Jose have established plans and policies which are designed to limit noise exposure at noise sensitive land uses. These plans and policies include: (1) the State CEQA Guidelines, Appendix G, and (2) the City of San Jose Noise Element of the General Plan.

State CEQA Guidelines

The State of California has not adopted quantitative regulations applicable to the proposed project. The California Environmental Quality Act (CEQA) has established guidelines to evaluate the significance of effects of environmental noise attributable to a proposed project. CEQA asks the following questions:

Would the project result in:

- Exposure of persons to or generation of noise levels in excess of standards established in the local General Plan or Noise Ordinance, or applicable standards of other agencies?

- Exposure of persons to or generation of excessive groundbourne vibration or groundbourne noise levels?
- A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?
- A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?
- 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 expose people residing or working in the project area to excessive noise levels?
- For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

CEQA does not define what noise level increase would be considered substantial. Typically, in high noise environments, if the DNL resulting from the project would increase by more than 3 dBA at noise-sensitive receptors, the impact would be considered significant.

City of San Jose Noise Element

The Noise Element of the City of San Jose's 2020 Plan identifies noise and land use compatibility standards for various land uses. The City's goal is to "minimize the impact of noise on people through noise reduction and suppression techniques, and through appropriate land use policies." Commercial land uses are considered "satisfactory" up to 60 DNL. When noise levels are between 60 and 76 DNL, and the project requires a full EIR, an acoustical analysis should be made indicating the amount of attenuation necessary to maintain an indoor level of a DNL less than or equal to 45 dBA. Noise levels exceeding 76 DNL require that new development would only be permitted if uses are entirely indoors and building design limits interior levels to less than or equal to 45 DNL.

Policy 9 of the 2020 Plan applies to the construction of the proposed project:

> Construction operations should use available noise suppression devices and techniques.

Existing Noise Environment

The project site is located in the City of San Jose just east of Interstate 880 and south of Brokaw Road. The project area is bounded to the northeast by Coyote Creek and to the south by Ridder Park Drive. The noise environment in the vicinity of the project site is dominated by traffic along I-880, and to a lesser extent by Brokaw Road and Ridder Park Drive. There are no noise sensitive receptors in the immediate vicinity of the project.

A noise monitoring survey was conducted in May 1999 for the *Lands of Northwest Publications General Plan Amendment EIR* and included one long-term noise measurement (24-hour duration)

and three short-term noise measurements (10-minute durations) on and adjacent to the project site (Figure 1). Data gathered during this survey is used in this analysis to represent the existing noise environment.

The long-term measurement was located along the northbound I-880 right-of-way, approximately 50 feet from the centerline of the interstate, to quantify noise levels generated by vehicular traffic. At this location, the measured DNL during the measurement period was 79 dBA. Typical maximum noise levels ranged from 84 dBA to 89 dBA while minimum noise levels fell to 48 dBA. Hourly average noise levels (L_{eq}) ranged from 69 dBA to 76 dBA. This data is summarized in Figure 2.

Short-term noise measurements were conducted at various location on the project site to quantify noise levels at distance from Interstate 880 and noise levels generated by other sources (e.g., local traffic, aircraft). The first short-term noise measurement was located approximately 750 feet east of the centerline of I-880 and approximately 540 feet south of Brokaw Road. At this location, noise levels resulted predominantly from traffic along I-880. Truck traffic along Brokaw Road also contributed to the ambient noise level. The average noise level over a ten-minute period (L_{eq}) at this location was 60 dBA. A maximum noise level of 65 dBA was produced by a jet aircraft in the vicinity of San Jose International Airport. The estimated L_{dn} at this location is less than 70 dBA.

The second short-term noise measurement was conducted approximately 75 feet from the centerline of Ridder Park Drive. Noise sources at this location included traffic along Ridder Park Drive, distant traffic along I-880 and Brokaw Road, aircraft, and industrial activity to the southeast. Noise levels generated by traffic on Ridder Park Drive ranged from 60 dBA to 65 dBA while traffic along I-880 produced noise levels of about 58 dBA. A maximum noise level of 71 dBA was generated by a car horn along Ridder Park Drive. Jet aircraft generated noise levels ranging from 59 dBA to 66 dBA. Industrial activity produced noise levels ranging from 58 dBA to 62 dBA. The average noise level during the short-term measurement period was 60 dBA. The L_{dn} at this location is less than 70 dBA.

The third short-term noise measurement was conducted approximately 140 feet from the centerline of I-880. Automobile and truck traffic generated noise levels ranging from 68 dBA to 73 dBA. A maximum noise level of 79 dBA was generated by a motorcycle. The average noise level during the ten-minute measurement period was 69 dBA. The L_{dn} at this location is approximately 75 dBA.

IMPACTS AND MITIGATION MEASURES

Significance Criteria

A significant impact would be identified for a proposed land use if it would be exposed to noise levels exceeding the City's established guidelines for noise and land use compatibility. According to CEQA, a significant noise impact would result if noise levels increase substantially at noise-sensitive land uses (e.g., residences). A substantial increase to noise levels would occur if the project resulted in an increase of 3 dBA or greater at noise-sensitive land uses where noise levels already exceed 60 dBA DNL, or an increase in noise levels of 5 dBA or greater where future noise levels would remain below 60 dBA DNL. Construction noise levels would be treated somewhat differently because they are temporary. Significant noise impacts would result from construction if noise levels are sufficiently high enough to interfere with speech, sleep, or normal residential activities. Construction-related hourly average noise levels received at noise-sensitive land uses above 60 dBA during the daytime and 55 dBA at night would be considered significant.

Project Impacts

Impact 1 **Noise and Land Use Compatibility**

The nearest facades of the proposed office buildings to Interstate 880 would be exposed to noise levels exceeding the City of San Jose's "satisfactory" guideline for noise and land use compatibility. Typical office construction would reduce interior noise levels below 45 dBA DNL. This is a *less-than-significant* impact.

The nearest facades of the proposed office buildings would be located at a distance of about 300 feet from the centerline of Interstate 880. Noise levels generated by vehicular traffic would yield a day-night average noise level of about 70 dBA at the proposed setback. This noise level would exceed the City of San Jose guideline for "satisfactory" exterior noise levels, but the project does not propose any noise-sensitive outdoor use areas. This is a less-than-significant impact.

New office building construction typically reduces traffic noise audible indoors by about 30 dBA. The interior noise level, even for the upper stories of the proposed buildings exposed to the highest noise levels, would be expected to be about 40 dBA DNL. Projected interior noise levels would be expected to be sufficiently low enough for general office space, but private offices, conference rooms, and other noise sensitive spaces may need to be designed to reduce interior noise levels further. Interior noise levels would meet the requirements established by the City of San Jose when projects are proposed in noise environments exceeding the "satisfactory" noise level guideline. This is a less-than-significant impact.

Impact 2 **Operational Noise Impacts**

The operation of the proposed project would facilitate a slight increase in vehicular

traffic on roadways serving the project site. This increase in traffic would not substantially increase noise levels in surrounding areas. This is a *less-than-significant impact.*

The proposed project would generate traffic on Interstate 880 and the local roadway network which would increase noise levels slightly at noise-sensitive receptors. The majority of sound energy emanates from Interstate 880 and arterial roadways as a result of the high volume of vehicular traffic. The project would add approximately 0 to 2 decibels (dBA) to existing traffic noise levels in the vicinity of the project site. Due to the high volume of traffic on Interstate 880 and on arterial roadways, and the resulting high existing noise levels, the addition of project-generated traffic would not substantially increase noise levels at noise-sensitive receptors. This would be a less-than-significant impact. Future cumulative traffic noise levels are predicted to increase by about 0 to 2 over existing noise levels. This increase is below the significance criterion used by this EIR (a three-decibel (3 dBA) increase) and generally would not be noticed by noise-sensitive receptors. This impact is less-than-significant.

Impact 3 **Construction Noise Impacts**

Construction of the proposed project will temporarily increase noise levels in the immediate vicinity of the project site. This is a *less-than-significant* impact, given the existing high noise environment and the distance at which construction would occur from noise-sensitive receptors.

Construction activities generate considerable noise. The construction of the proposed project would temporarily increase noise levels in the vicinity of the project site. Noise levels during construction would occur in phases, including grading and excavation, foundations, erection of the new buildings, and paving and finishing. Typical hourly average construction noise levels are 75 dBA to 80 dBA measured at a distance of 100 feet from the construction site during busy construction periods. These noise levels drop off at a rate of about 6 dBA per doubling of distance between the noise source and the receptor. There are no noise sensitive receptors in the immediate vicinity of the project site. Construction activities would be temporary, and the impact is less-than-significant provided that standard construction noise controls are implemented.

Impact 4 **Aircraft Generated Noise Impacts**

The proposed project is located within two miles of San Jose International Airport but is not adversely affected by aircraft generated noise. This is a *less-than-significant* impact.

Noise generated by aircraft associated with San Jose International Airport contributes to the existing noise environment of the project site, but is typically below noise levels generated by Interstate 880 when measured near the interstate. Measurements of maximum noise levels generated by aircraft away from I-880 typically ranged from 58 to 66 dBA. The site lies outside of the existing 60 dBA

CNEL noise contour established by the Santa Clara County Airport Land Use Commission and lies outside of the projected 2010 60 dBA CNEL noise contour. Noise generated by aircraft is not anticipated to adversely affect interior noise levels within the proposed office buildings. This is a less-than-significant impact.

PROJECT MITIGATION MEASURES

Mitigation Measure 1 **Noise and Land Use Compatibility**

No significant impacts were identified therefore no mitigation is required.

Mitigation Measure 2 **Operational Noise Impacts**

The impact is less-than-significant and no mitigation is required.

Mitigation Measure 3 **Construction Noise Impacts**

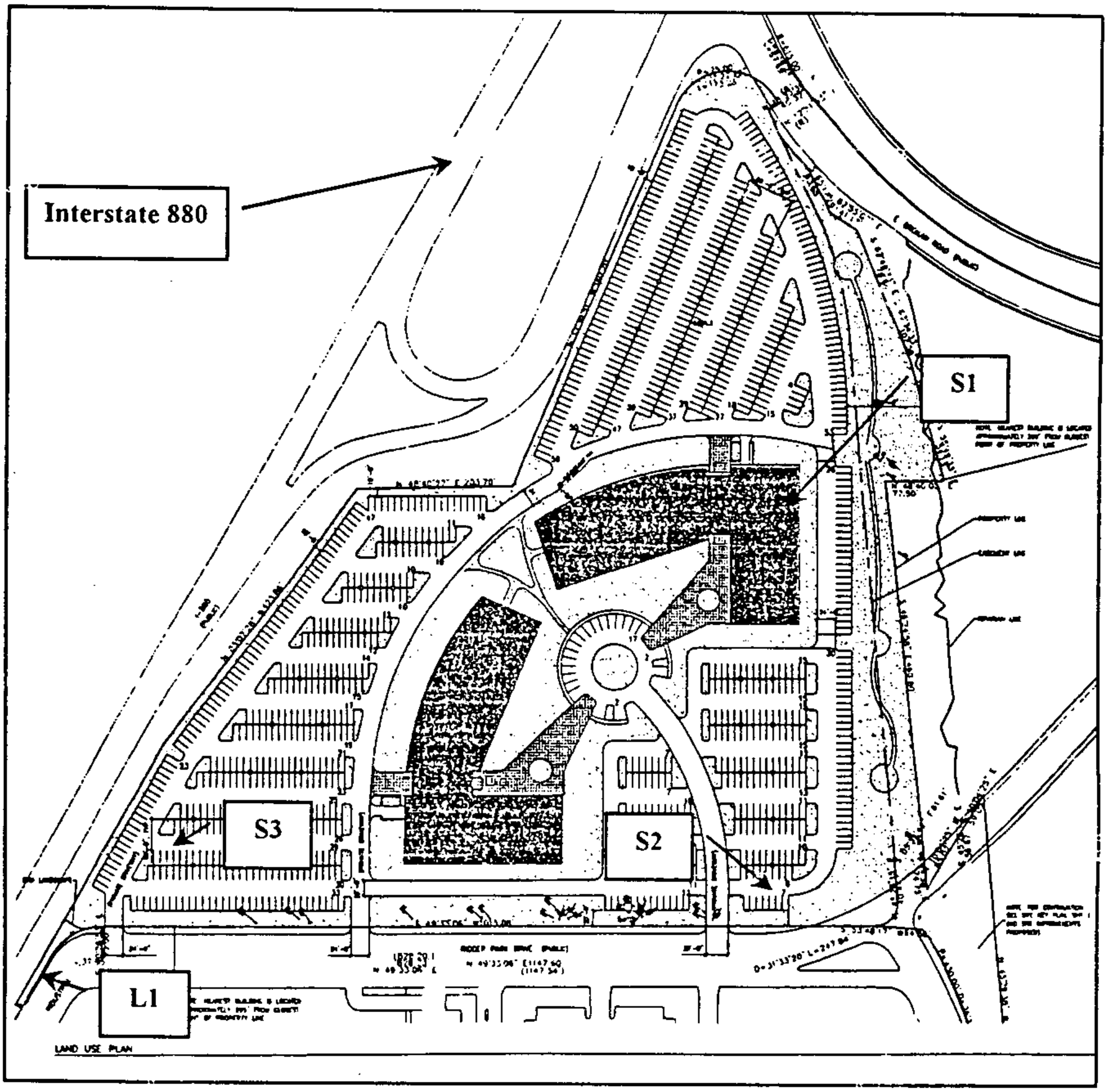
The following mitigation measure is recommended to reduce construction noise:

- Use available noise suppression devices and properly maintain and muffle loud construction equipment.

Mitigation Measure 4 **Aircraft Generated Noise Impacts**

No significant impacts were identified therefore no mitigation is required.

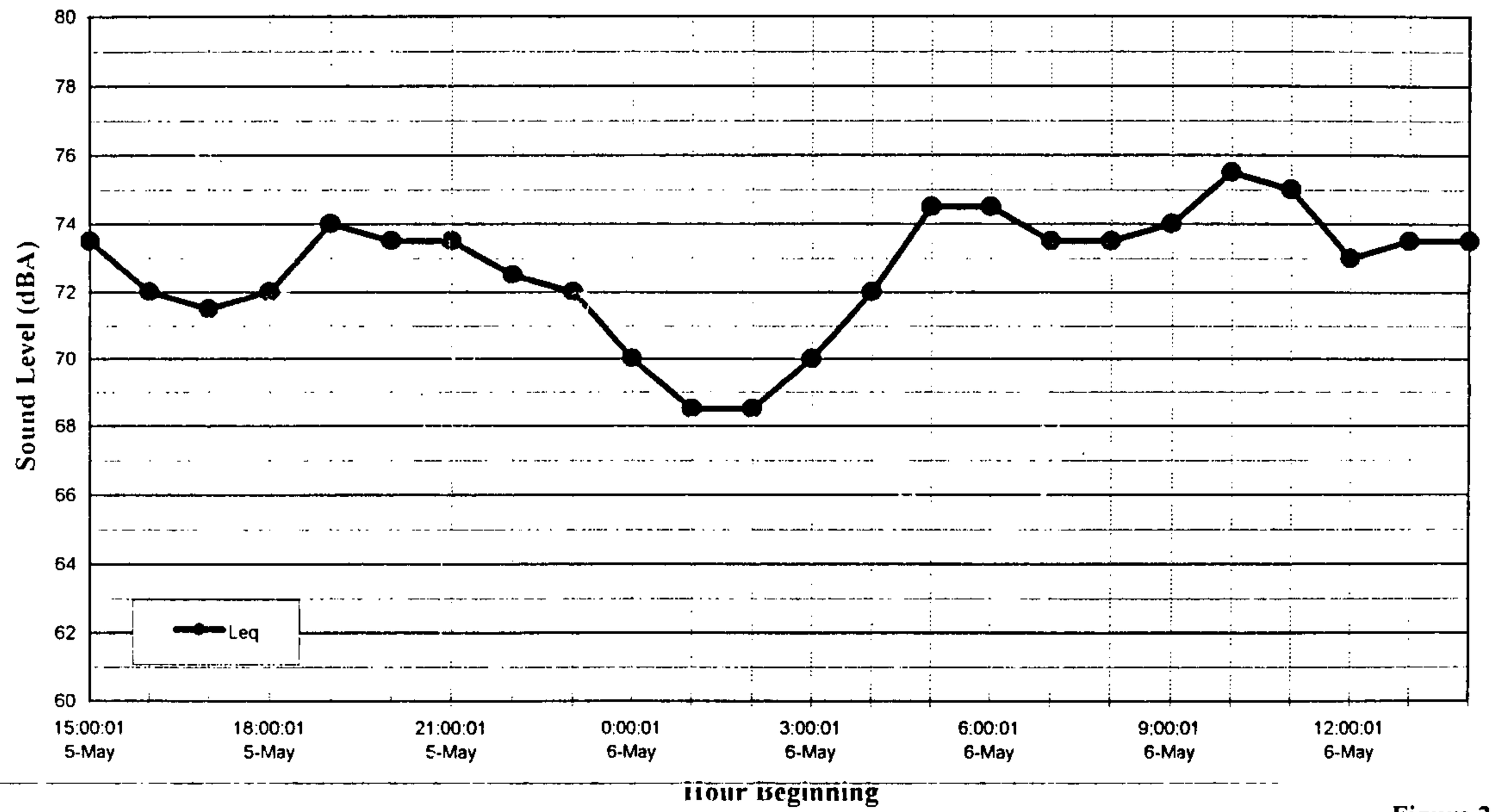
Noise Measurement Locations
Speiker Properties Ridder Park Drive Site
May 5-6, 1999



ILLINGWORTH & RODKIN, INC.
Acoustics / Air Quality

Figure 1

Hourly Noise Levels at Long Term Measurement Site
~50 feet from the Centerline of Interstate 880
May 5-6, 1999



ILLINGWORTH & RODKIN, INC.
Acoustics / Air Quality

Figure 2

APPENDIX E

FOUNDATION INVESTIGATION

Donald E. Banta & Associates, Inc.
Consulting Geotechnical Engineers

415 Meridian Avenue • San Jose, California 95126-3420 • 408/287-7800 • Fax 408/275-9019

October 3, 2000
441-41A, C8271

RECEIVED
OCT 04 2000
DAVID J. POWERS & ASSOC., INC.

Spieker Properties
2180 Sand Hill Road
Menlo Park, California 94025-6935

Attention: Mr. Bruce Burkard

RE: RESPONSE TO SOIL EXPANSION, LIQUEFACTION, AND LATERAL SPREADING COMMENTS BY DAVID J. POWERS & ASSOCIATES, INC. CREEKSIDE PLAZA RIDDER PARK DRIVE SAN JOSE, CALIFORNIA

Gentlemen:

As per your request, we are addressing the September 19, 2000 e-mail liquefaction comments of Ms. Nora Monette concerning the above project with respect to pavements and underground utilities. Our original recommendations discussing liquefaction and lateral spreading were presented in our report dated November 24, 1999. Based on our review of our previous findings, it is our opinion that significant building damage caused by liquefaction of the underlying soils is very low.

Other potential ground failure caused by liquefaction at this site includes slope failure and lateral spreading. Slope failure could occur along the creek channel which is approximately 20 to 25 feet high. During a strong earthquake, the lateral movement could extend approximately 50 feet inboard of the top of slope. If this were to occur:

1. Portions of the pavement may need to be repaired or replaced due to both lateral and vertical movements.

2. Any utilities located within a 50-foot wide strip parallel to the top of creek slope could be affected by possible lateral and vertical ground movements of up to 15 feet. Beyond 50 feet, the probability of ground failure is considered very low.

If you have any further questions, please notify us.

Very truly yours,

DONALD E. BANTA & ASSOCIATES, INC.

Donald E. Banta
Geotechnical Engineer 113

DEB:rr
Copies: Addressee (2)
David J. Powers & Associates, Inc. (1)
Attention: Ms. Nora Monette

FOUNDATION INVESTIGATION
THREE OFFICE BUILDINGS
RIDDER PARK DRIVE
SAN JOSE, CALIFORNIA

Donald E. Banta & Associates, Inc.
Consulting Geotechnical Engineers

Donald E. Banta & Associates, Inc.
Consulting Geotechnical Engineers

415 Meridian Avenue • San Jose, California 95126 • 408/287-7800 • Fax 408/275-9019

November 24, 1999
441-41, C7977

Spieker Properties
2180 Sand Hill Road, Suite 200
Menlo Park, California 94025-6935

Attention: Mr. Mark Payne

RE: FOUNDATION INVESTIGATION
THREE OFFICE BUILDINGS
RIDDER PARK DRIVE
SAN JOSE, CALIFORNIA

Gentlemen:

In accordance with your request, we have performed a foundation investigation for the above project. The accompanying report presents the results of our field investigation, laboratory tests, and engineering analyses. The soil and foundation conditions are discussed, and recommendations for the earthwork and foundation engineering aspects of the project are presented.

Detailed recommendations are presented in the text of this report. If you have any questions concerning our findings, please call.

Very truly yours,

DONALD E. BANTA & ASSOCIATES, INC.

Donald E. Banta
Geotechnical Engineer 113

DEB/GCC:rr
Copies: Addressee (2)
Kenneth Rodrigues & Partners, Inc. (4)
Attention: Mr. Kenneth Rodrigues
Kier & Wright (1)
Attention: Mr. Barry Schmitt

FOUNDATION INVESTIGATION

For

THREE OFFICE BUILDINGS
RIDDER PARK DRIVE
SAN JOSE, CALIFORNIA

To

Spieker Properties
2180 Sand Hill Road, Suite 200
Menlo Park, California 94025-6935

November 24, 1999

TABLE OF CONTENTS

	Page No.
Transmittal Letter	
Title Page	
Table of Contents	
INTRODUCTION	1
SCOPE OF WORK	1
SITE INVESTIGATION	1
A. Surface Features	2
B. Subsurface	2
C. Groundwater	3
D. Seismicity	3
E. 1997 UBC Site Characterization Parameters	4
F. Liquefaction Potential	5
CONCLUSIONS AND RECOMMENDATIONS	5
A. SITE PREPARATION, EARTHWORK OPERATIONS, AND SURFACE DRAINAGE	6
1. Clearing and Site Preparation	6
2. General Subgrade Preparation Requirements	7
3. Special Subgrade Preparation Requirements (Building Areas)	7
4. Subgrade Preparation in Pavement and Exterior Slab Areas	8
5. Material for Fill	8
6. Subgrade Conditions	8
7. Compaction	9
8. Trench Backfill	9
9. Surface Drainage	9
10. Seepage Control	10
11. Construction Observation	10
B. FOUNDATIONS	11
1. Footings	11
2. Interior Slabs-on-Grade	12
3. Retaining Walls	12
4. Lateral Load Resistance	13
C. PAVEMENT DESIGN	13
FIGURE 1 - SITE PLAN	
FIGURE 2 - RECOMPACTION REQUIREMENTS	

TABLE OF CONTENTS
(continued)

	Page No.
APPENDIX A - FIELD INVESTIGATION	A-1
Figure A-1, Key to Exploratory Boring Logs	
Exploratory Boring Logs	
Figure A-2, Key to Cone Penetrometer Soundings	
Cone Penetrometer Logs	
APPENDIX B - LABORATORY TESTING	B-1
APPENDIX C - CORROSION TEST DATA AND ANALYSIS	C-1
CERCO Letter Report	

FOUNDATION INVESTIGATION
FOR
THREE OFFICE BUILDINGS
RIDDER PARK DRIVE
SAN JOSE, CALIFORNIA

INTRODUCTION

In this report, we present the results of our foundation investigation for the three proposed office buildings to be located on Ridder Park Drive south of Brokaw Road in San Jose, California. The purpose of this investigation was to evaluate the foundation conditions and to provide recommendations pertaining to the earthwork and foundation aspects of this project.

It is our understanding that the project will consist of either one, three-story and two, two-story structures or three, three-story buildings with a footprint of approximately 112,000 square feet. Maximum dead plus live column loads for three-story structures are expected to be on the order of 300 kips. Appurtenant facilities will include asphalt paved parking/driveway areas.

SCOPE OF WORK

The scope of work performed for this investigation included a site reconnaissance, subsurface exploration, laboratory testing, engineering analyses of the field and laboratory data, and the preparation of this report. The data obtained and the analyses performed were for the purpose of providing design and construction criteria for site earthwork, building foundations, slab-on-grade floors, lateral earth pressures, and asphalt pavements. The scope of our services did not include an environmental assessment of the property or the testing of soil or groundwater samples for hazardous substances.

SITE INVESTIGATION

A subsurface investigation was performed during the period of October 27 through 30,

1999, using truck-mounted cone penetration testing and continuous flight auger equipment to investigate and sample the subsurface soils. Six cone penetration soundings (CPT's) and three exploratory borings were advanced to depths of between 5.5 to 37.5 feet at the approximate locations shown on the attached Site Plan, Figure 1. Logs of our borings/CPT's and details regarding our field investigation are included in Appendix A; the results of our laboratory tests are discussed in Appendix B.

A. Surface Features

The proposed buildings will be constructed on a 17.2-acre, irregular-shaped parcel with frontage on Ridder Park Drive. The property is bounded on the north by Brokaw Road and Coyote Creek and on the west by the Interstate 880 right-of-way (see Figure 1).

Topography at the site slopes gradually downward to the north and northeast toward the Coyote Creek channel. Total elevation change across the portions of the property is about two feet. A utility easement with sewer, water, gas, and electric is present along the northern portion of the property.

At the time of our field investigation, the site was vacant with scattered fill containing a variety of debris (asphalt, concrete, etc.). Although the site is currently vacant, surface vegetation at the time of our field work consisted of landscaping along the Ridder Park Drive frontage, scattered weed growth (the site had been recently disced), and a few trees. The riparian corridor along Coyote Creek is heavily vegetated.

B. Subsurface

Our CPT's and exploratory borings encountered two to five feet of loose to stiff sandy clays and clayey sands containing scattered debris. These surface soils were followed by low density sandy silts and silty sands which extended to depths of 5 to 16 feet. These low density silty/sandy soils have a low bearing capacity and a moderately high compressibility. Underlying the low density silts, we encountered stiff to very stiff silty clays with some medium-dense to dense sands. These stiff, predominantly clayey soils have a moderate bearing capacity and a relatively low compressibility under the expected

building loadings. These relatively competent soils extended to the maximum depth explored of 37.5 feet.

More detailed subsurface information is shown on the individual boring/CPT logs, and related information is presented in Appendix A. It should be noted, however, that this information depicts subsurface conditions only at the approximate locations shown on the Site Plan and on the dates designated on the logs. Subsurface conditions at other locations may differ from conditions occurring at these boring/CPT locations. Also, the passage of time may result in a variation in the subsurface conditions due to environmental changes.

C. Groundwater

Free groundwater was not encountered in our borings at the time of drilling. Our excavations were backfilled immediately after completion of our subsurface exploration and may not have been open long enough to detect groundwater entering the hole. However, it is likely that the groundwater elevation at the site is controlled by the water level in nearby Coyote Creek. Borings drilled on a nearby site just north of Coyote Creek in May 1995 encountered free groundwater at Elevation +34 feet (about 16 feet below site grade). Although seasonal groundwater studies were beyond the scope of this investigation, fluctuations in the groundwater table at the site will probably occur due to variations in rainfall, temperature, the level of Coyote Creek, and possibly other factors that were not evident at the time our measurements were made.

D. Seismicity

The San Francisco Bay Area is considered by geologists and seismologists as one of the most seismically active regions in the United States. The significant earthquakes which occur in the Bay Area are associated with crustal movement generally along well-defined, active fault zones. The California Division of Mines and Geology (CDMG) has recently issued maps locating "Active Fault Near-Source Zones" to be used with the 1997 Uniform Building Code ("Maps of Known Active Fault Near-Source Zones in California and Adjacent Portions of Nevada," CDMG/ICBO February 1998). Faults are classified as either "A," "B," or "C," as shown below. Only faults classified as "A" or "B" are mapped since faults classified as "C" do not increase the near-source factor.

SEISMIC SOURCE TYPE	SEISMIC SOURCE DESCRIPTION	SEISMIC SOURCE DEFINITION	
		Maximum Moment Magnitude, M	Slip Rate, SR (mm/year)
A	Faults that are capable of producing large magnitude events and that have a high rate of seismic activity.	$M \geq 7.0$	$SR \geq 5$
B	All faults other than Types A and C.	$M \geq 7.0$ $M < 7.0$ $M \geq 6.5$	$SR < 5$ $SR > 2$ $SR < 2$
C	Faults that are not capable of producing large magnitude earthquakes and that have a relatively low rate of seismic activity.	$M < 6.5$	$SR \leq 2$

The following table lists Type A and Type B faults within 25 kilometers of the site:

Fault	Seismic Source Type	Closest Distance (kilometers)
**Hayward (Southeast Extension)	B	6.7
*Hayward (Total Length)	A	11.2
Calaveras	B	11.2
Monte Vista-Shannon	B	15.3
San Andreas (1906)	A	21.8

*Nearest Type A fault
**Nearest Type B fault

Although research on earthquake prediction has greatly increased in recent years, seismologists cannot predict when and where an earthquake will occur. However, a study by the U.S. Geological Survey (Working Group on Earthquake Probabilities, 1990) indicates that there is a 67 percent chance of an earthquake of Richter Magnitude 7 or higher occurring in the San Francisco Bay Area during the next 30 years. During such an earthquake, very strong ground shaking of the site could occur.

E. 1997 UBC Site Characterization Parameters

Based on the above fault data and the subsurface profile disclosed by our borings/ CPT's, we recommend the following parameters for use with the 1997 edition of the Uniform Building Code:

Soil Profile Type	S_D
Near Source Factor N_a	1.0
Near Source Factor N_v	1.1

F. Liquefaction Potential

Soil liquefaction is a phenomenon in which a saturated cohesionless soil located near the ground surface loses strength during cyclic loading such as imposed by earthquakes. Soils most susceptible to liquefaction are clean, loose, saturated, fine-grained sands located below the groundwater table. Clays are not considered to be susceptible to liquefaction. In addition, the presence of clay and silt particles in a loose sandy soil will increase its resistance to liquefaction.

Liquefaction is manifested at the ground surface by the formation of sand boils, ground cracking, lateral spreading, and in some cases by the development of quicksand-like conditions which result in tilting or sinking of structures into the ground.

Our studies estimate a probable groundwater table at a depth of approximately 16 feet. Soils encountered below 16 feet in our borings are clays and not considered susceptible to liquefaction.

The groundwater table in this area appears to be controlled by the level of Coyote Creek. However, in the unlikely event that there was a significant rise in the groundwater table coupled with very strong earthquake shaking, liquefaction would be possible in the lower density sandy zones. Even if liquefaction were to occur, it is our opinion that it is unlikely to cause major movement of the proposed buildings since overlying recompacted (densified) silts (recommended in subsequent sections of this report) would tend to form a "cap" over any underlying liquefiable sandy layers. Based on our studies, it is our opinion that the potential for significant building damage due to liquefaction of the soils underlying the site is very low.

CONCLUSIONS AND RECOMMENDATIONS

From a soil and foundation engineering standpoint, it is our opinion that the site is

suitable for the proposed construction provided that the conclusions and recommendations presented in this report are incorporated in the design and construction of the project.

The primary geotechnical concern in development of this site is the low density of the native upper silty soils which blanket the site to depths of 5 to 16 feet.

Based on our CPT's and borings, the upper silty soils have a low relative density. As a result, these silty soils have a low bearing capacity and a moderately high compressibility and are not considered suitable for foundation or slab support without recompaction. In order to provide adequate support for a conventional spread footing/slab-on-grade foundation system, we recommend that the low density silty soils within the building areas be over-excavated and recompacted. Minimum over-excavation depths of three and four feet below the bottom of footings for two and three-story structures, respectively, is recommended. The limits of the over-excavation should cover each building pad in its entirety and should extend for a minimum horizontal distance of seven feet horizontally beyond the outside edge of the perimeter foundation.

The following opinions, conclusions, and recommendations are based on the properties of the materials encountered in our borings/CPT's. Since the proposed improvements occupy a much larger area than could be explored in detail during the design phase of the project, we suggest that we be retained to provide observation and testing services during the mass grading and installation of foundations. This would allow us the opportunity to substantiate the recommendations presented herein or to expedite supplemental recommendations if the exposed subsurface conditions warrant.

We also suggest that we be retained to review your final foundation and earthwork plans/specifications. It has been our experience that this review provides an opportunity to detect misinterpretations or misunderstandings prior to the start of construction.

A. SITE PREPARATION, EARTHWORK OPERATIONS, AND SURFACE DRAINAGE

1. Clearing and Site Preparation

The site should be cleared of all obstructions including trees, debris piles, and buried

utility lines. Holes resulting from the removal of underground obstructions that extend below the planned finished site grades should be cleared and backfilled with suitable material compacted to the requirements given below under Item A. 7, "Compaction." Any old wells should be abandoned in accordance with water district regulations.

After clearing, the site should be stripped to sufficient depth to remove all surface vegetation and organic-laden topsoil. The cleared and stripped materials should be removed from the site.

2. General Subgrade Preparation Requirements

After the site has been properly cleared and stripped, excavation and filling operations required for the building pads and associated parking and driveway areas can be performed. The exposed surface soils in those areas to receive structural fill, slabs-on-grade, or pavements should be scarified to a depth of eight inches, moisture conditioned, and compacted in accordance with the requirements given below under Item A. 7, "Compaction."

3. Special Subgrade Preparation Requirements (Building Areas)

As discussed above (Conclusions and Recommendations), the native surficial soils have a low relative density, low bearing capacity, and moderate compressibility under the loadings of the proposed two and three-story structures. In order to found the new structures on conventional spread footings, the upper native soils must be improved (densified) to support the design building loadings. Adequate support can be attained by excavating the native soil to a minimum depth of three feet (four feet for three-story structures) below the footing bearing level. The exposed subgrade at the excavated level should be compacted to 90 percent relative compaction ASTM D 1557. The over-excavated soil can then be placed and compacted in thin lifts to the requirements for structural fill given below under Item A. 7, "Compaction."

The limits of the required structural fill should cover each building pad in its entirety and should extend for a minimum horizontal distance of seven feet beyond the outside edge of the exterior foundation. For example, if all building footings extend three feet

below the finished floor slab, the excavation operations would extend to a minimum depth of six feet (seven feet for three-story structures) below finished floor over the entire building pad plus seven feet. Earthwork requirements in building pad areas are shown schematically on Figure 2.

4. Subgrade Preparation in Pavement and Exterior Slab Areas

In pavement and exterior slab areas, we recommend a minimum over-excavation/ recompaction of 18 inches below the proposed pavement/slab subgrade. In general, the over-excavation and recompaction operations in exterior slab and pavement areas should extend at least three feet beyond the limits of these improvements. Prior to replacing over-excavated soils, the exposed subgrade should be scarified to a depth of eight inches, moisture conditioned, and compacted. All compaction should be performed in accordance with the requirements given below under Item A. 7, "Compaction."

As discussed above (Conclusions and Recommendations), over-excavation/recompaction of loose silty soils could be eliminated in pavement and exterior slab areas. This would reduce initial costs but could require earlier than normal pavement/slab repair and/or maintenance.

5. Material for Fill

All on-site soils below the stripped layer and free of organics and debris (as determined by our field representative) are suitable for use as fill. In general, fill material should not contain rocks or lumps larger than six inches in greatest dimension with no more than 15 percent larger than 2.5 inches. Imported fill materials should be predominantly granular with a plasticity index of 15 or less.

6. Subgrade Conditions

The silty native soils are sensitive to excess water, and unstable conditions or "pumping" may be encountered during the grading/excavation operations, particularly

if they are performed during or following the wet winter months. We suggest that most of the grading operations be performed during the summer months to allow for drying of wet/unstable soils. If earthwork proceeds during the wet winter/spring months, or if wet/unstable subgrade conditions are encountered, special subgrade stabilization measures, such as lime or cement treatment, may be required.

7. Compaction

All structural fill placed at the site should be compacted to at least 90 percent relative compaction by mechanical means only as determined by ASTM Test Designation D 1557. Fill should be placed in lifts not exceeding eight inches in uncompacted thickness. The upper six inches of subgrade in pavement areas should be compacted to 95 percent relative compaction.

8. Trench Backfill

Pipeline trenches under the building pads and in exterior slab and pavement areas should be backfilled with compacted structural fill. If on-site soil is used, the material should be placed in lifts not exceeding eight inches in uncompacted thickness and compacted to at least 85 percent relative compaction by mechanical means only. Imported sand may also be used for backfilling trenches provided it is compacted to at least 90 percent relative compaction and is "capped" with at least one foot of compacted native soil and provided that cut-offs are constructed as discussed below under Item A. 10, "Seepage Control." Water jetting to attain the minimum required degree of compaction should not be permitted. In all pavement, exterior slab, and building pad areas, the upper three feet of trench backfill should be compacted to at least 90 percent relative compaction for on-site soils and 95 percent where imported sand backfill is used. In addition, the upper six inches of all trench backfill in pavement areas should be compacted to at least 95 percent relative compaction.

9. Surface Drainage

Positive surface gradients of at least 2 percent should be provided adjacent to the

structures so as to direct surface water runoff away from foundations and slabs toward suitable discharge facilities. Ponding of surface water should not be allowed on pavements or adjacent to the buildings. Rainwater collected on the roofs of the buildings should be transported through gutters, downspouts, and closed pipes which discharge on pavements or lead directly to the storm sewer.

10. Seepage Control

Where slabs or pavements abut against landscaped areas, there should be some method used to protect the base rock layer and subgrade soils against saturation from water in the landscaped areas. The most positive approach would be to extend the curb to the base rock/subgrade contact and to install a subdrain on the planter side of the curb. Typically, subdrains would consist of three to four-inch diameter perforated pipes installed in one-foot wide trenches and surrounded by Class 2 permeable material (Caltrans specification). An alternative (but less effective) approach would be to use a vertical cut-off extending at least four inches below the native subgrade/base rock interface, i.e., a deepened curb section or equivalent. This will reduce the amount of lateral seepage under pavements or slabs from adjacent landscaped areas.

Where utility lines extend through or beneath exterior footings or curbs, any "sand or gravel" backfill should be terminated at least one foot from the footing or curb; concrete should be used around the pipe in this area and beneath the footing or curb to act as a seepage cut-off. The pipe should be "sleeved" through the concrete cut-off, and the annular space between the pipe and "sleeve" should be filled with a waterproof caulk. This will reduce the amount of water seeping through the pervious trench backfill and collecting under building slabs or pavements.

11. Construction Observation

All grading and earthwork should be performed under the observation of our representative. Sufficient notification prior to the start of earthwork operations is essential to make certain that the work will be properly observed. All earthwork should be performed in accordance with the recommendations presented in this report.

Variations in soil conditions are possible between borings/CPT's and may be encountered during construction. In order to permit correlation between the preliminary soil data obtained for this report and the actual soil conditions encountered during construction, we should be retained to perform continuous or intermittent review as required during earthwork, excavation, and foundation phases of construction.

FOUNDATIONS

1. Footings

We recommend that the proposed two and three-story buildings be supported on conventional continuous and/or isolated spread footings bearing on compacted structural fill. For two-story buildings, we recommend a minimum of three feet of compacted structural fill below the base of footings. For three-story buildings, four feet of compacted structural fill is recommended (see Figure 2). All footings should be founded at least 18 inches below the lowest adjacent finished grade. At the above depth, the footings may be designed for an allowable bearing pressure of 3,000 pounds per square foot due to dead plus live loads, with a one-third increase for all loads including either wind or seismic. All footings should have a minimum width of 18 inches.

Grade beams should be used around the perimeters of the buildings in any areas where continuous footings are not incorporated. These grade beams will serve as a cut-off and reduce lateral seepage. Grade beams should be reinforced with top and bottom steel and be extended to the same depths as the footings. A six-inch minimum width is recommended for grade beams serving only as a seepage cut-off.

In order to maintain adequate support, any footings located adjacent to utility trenches or other footings should be deepened as necessary so that their bearing surfaces are below an imaginary plane having an inclination of 1.5 horizontal to 1.0 vertical projected upward from the bottom edge of the adjacent trench or footing.

All continuous perimeter footings should be reinforced with top and bottom steel to provide structural continuity and to permit spanning of local irregularities. It is

essential that our representative observe the bearing soils exposed in all footing excavations prior to placing reinforcing steel or concrete.

Settlements under building loads are expected to be within tolerable limits for the proposed structures. We estimate that post construction differential settlement between heavily and lightly loaded columns should be less than 3/4-inch over the 30 years following construction.

2. Interior Slabs-on-Grade

Interior slabs-on-grade will be supported on compacted structural fill. The upper five inches of structural fill should consist of well-graded gravel/base rock approved by our office. Slab reinforcement should be provided in accordance with the anticipated use and loading of the slab.

In slab areas where it is desired to reduce floor wetness (such as in retail areas or areas that will have moisture sensitive floor coverings), we recommend that four inches of free draining gravel (such as clean ½-inch crushed rock) be placed beneath the floor slab to serve as a capillary break between the subgrade soil and the slab. To reduce vapor transmission, an impermeable membrane should be placed over the crushed rock and covered with one inch of sand to protect it during construction; the sand should be lightly moistened just prior to placing concrete.

3. Retaining Walls

Any low retaining walls constructed at the site should be designed to resist lateral earth pressures from the backfill and any surcharge loads. We recommend that unrestrained walls be designed to resist an equivalent fluid pressure of 40 pounds per cubic foot. Walls restrained from movement at the top should be designed for an additional uniform pressure of 6H pounds per square foot where "H" equals the height of backfill above the top of wall footing in feet. Walls subjected to surcharge loads should be designed for an additional uniform lateral pressure equal to one-third or one-half of the anticipated surcharge load for unrestrained and restrained walls, respectively.

The preceding pressures assume sufficient drainage behind the walls to prevent the buildup of hydrostatic pressures from surface water infiltration. Adequate drainage may be provided by a subdrain or weep hole system behind the walls.

4. Lateral Load Resistance

Lateral loads may be resisted by friction between the floor slabs or foundations and the supporting subgrade. A friction coefficient of 0.35 can be used. Additional lateral resistance may be provided by passive pressures acting against foundations poured neat against undisturbed soil. We recommend that an equivalent fluid pressure of 300 pounds per cubic foot be used in design. This passive pressure can be assumed to act starting at the top of the adjacent grade in paved areas and at a depth of one foot below grade in unpaved areas.

C. PAVEMENT DESIGN

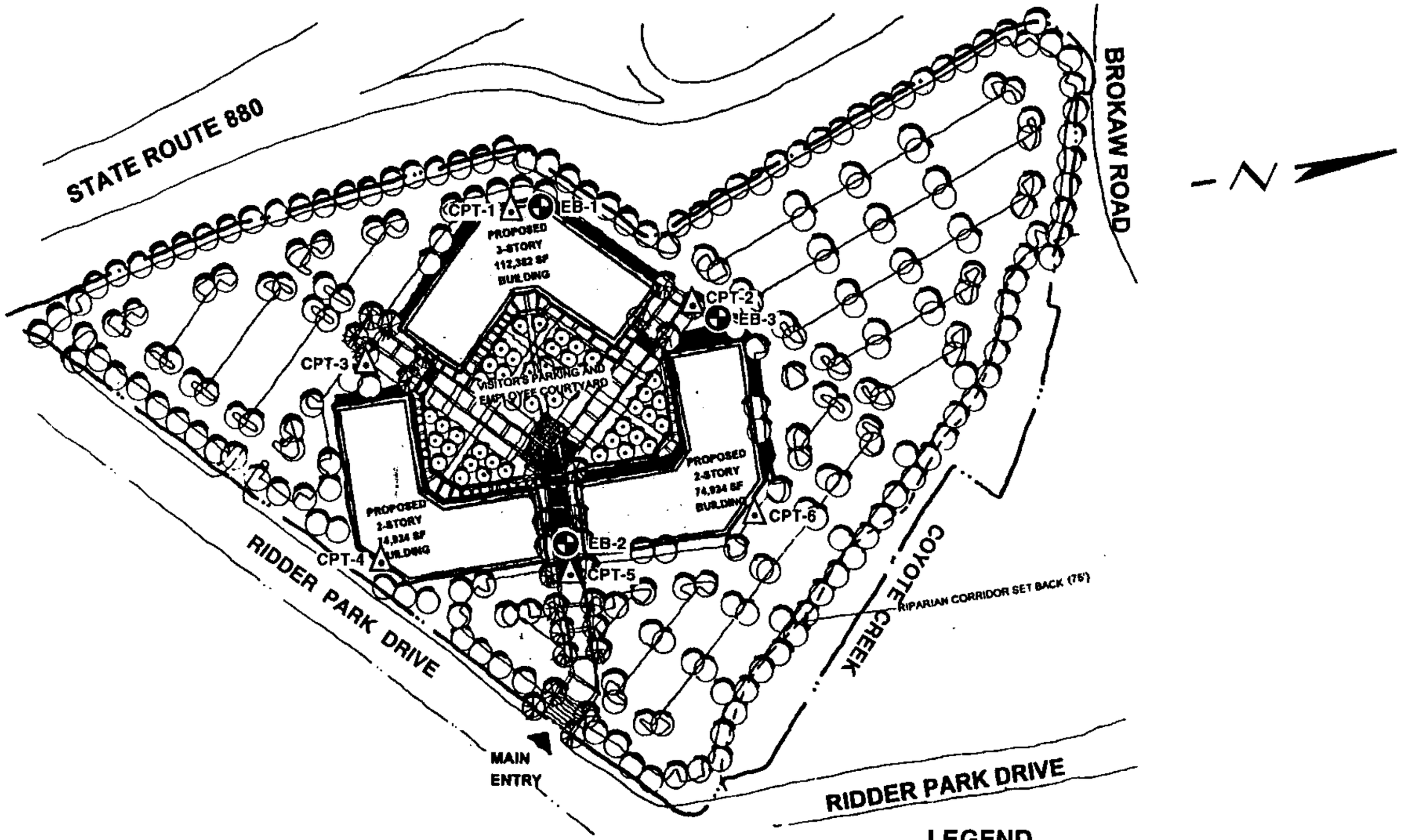
Based on the results of our laboratory tests and our experience with similar soils in the area of the site, we have used an "R" value of 18 in our pavement design. Utilizing the "R" value and State of California Department of Transportation design procedures (Highway Design Manual), the following recommended pavement sections were developed for various traffic indices:

TABLE 1 - PAVEMENT DESIGN ALTERNATIVES

	Flexible Pavement Components		
Traffic Index	Asphaltic Concrete (Inches)	Aggregate Base Class 2 (Inches)	Total Thickness (Inches)
4.5	2.5	7.0	9.5
5.0	2.5	8.5	11.0
5.5	3.0	9.5	12.5
6.0	3.0	11.0	14.0
6.5	3.5	12.0	15.5
7.0	4.0	12.0	16.0

Asphalt concrete, aggregate base, and preparation of the subgrade should conform to and be placed in accordance with the California Division of Highways Standard Specifications, latest revision, except that ASTM Test Designation D 1557 should be used to determine the percent compaction.

* * * * * * * * * * * *



0 200 400

APPROXIMATE SCALE (Feet)

LEGEND

EB-1 — Approximate location of exploratory boring

CPT-1 — Approximate location of cone penetrometer sounding

Base by Kenneth Rodrigues & Partners, Inc., from print entitled "Site Plan and Elevation Study, Ridder Park Drive/880, San Jose, California," dated September 24, 1999.

DONALD E. BANTA & ASSOCIATES, INC.
Consulting Geotechnical Engineers

SITE PLAN

THREE OFFICE BUILDINGS - RIDDER PARK DR.
San Jose, California

441-41 November 1999 Figure 1

Drill Rig Hollow Flight Auger	Surface Elevation ---	Logged By DEB
Groundwater Not Encountered	Boring Diameter 8 inches	Date Drilled 10/30/99

DESCRIPTION AND CLASSIFICATION				Depth (Feet)	SAMPLER	SAMPLE DATA					
DESCRIPTION AND REMARKS	COLOR	CONSISTENCY	SOIL TYPE			Blows Per Foot	Percent Moisture	Dry Density (Pcf)	Plasticity Index / Liquid Limit (%)	Percent Passing #200 Sieve	Shear Strength (Ksf)
SILTY CLAY, upper 6 inches recently disced (very sandy below 1.5 feet)	light brown	loose / very stiff	CL	1 2		29	13 12	93 102		66 59	
SILTY SAND	light brown	loose	SM	3 4 5	X X	9 9	9			40	
Bottom of Boring = 5.5 feet				6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30							

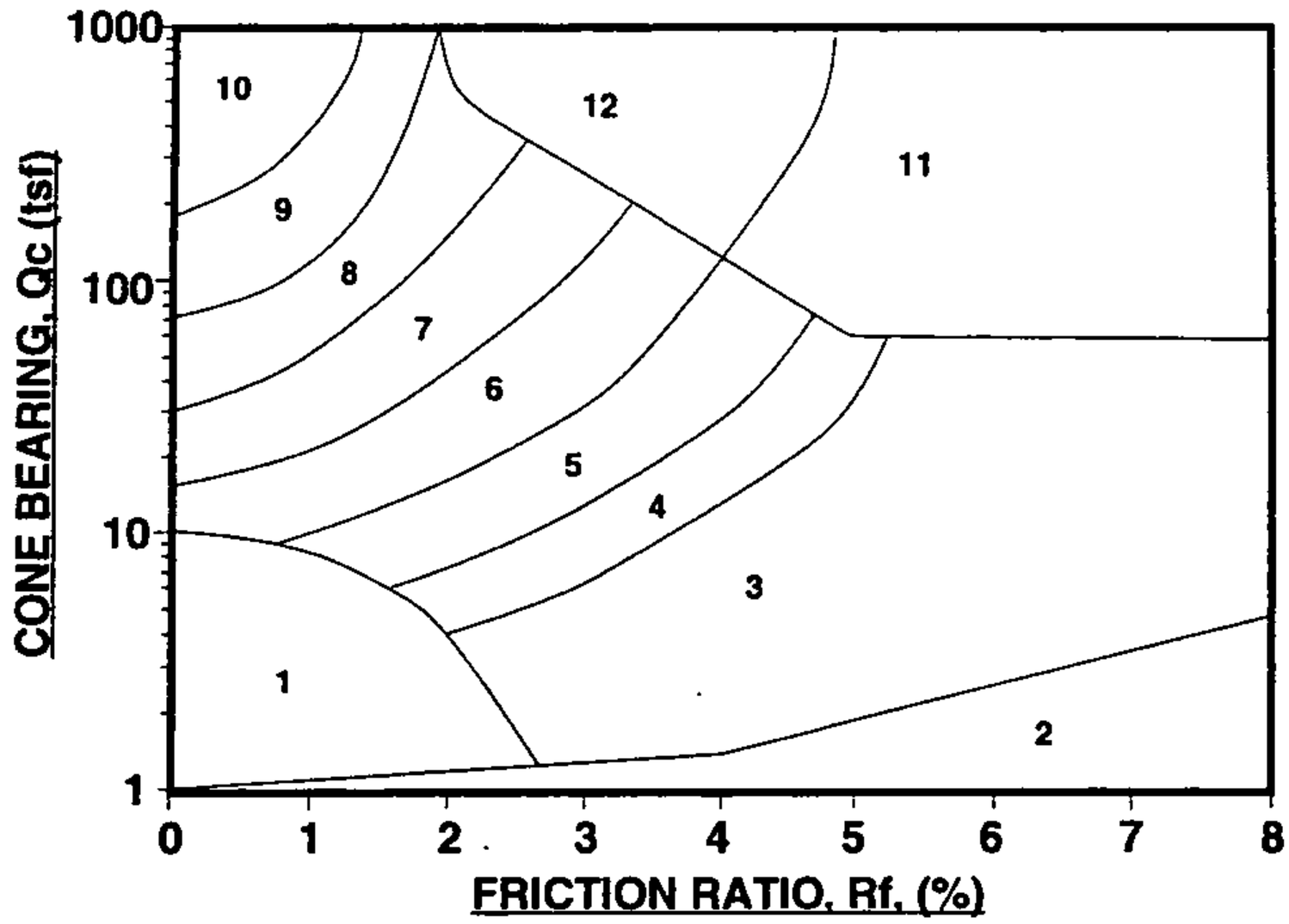
DONALD E. BANTA & ASSOCIATES, INC.
Consulting Geotechnical Engineers

EXPLORATORY BORING LOG 3

THREE OFFICE BUILDINGS - RIDDER PARK DR.
San Jose, California

441-41 November 1999 Sheet 1 of 1

SIMPLIFIED SOIL BEHAVIOR TYPE CLASSIFICATION FOR STANDARD ELECTRONIC CONE PENETROMETER



ZONE	Qc/N [1]	Su Factor (Nk) [2]	SOIL BEHAVIOR TYPE[1]
1	2	15(10 for Qc <= 9 tsf)	Sensitive Fine Grained
2	1	15(10 for Qc <= 9 tsf)	Organic Material
3	1	15(10 for Qc <= 9 tsf)	CLAY
4	1.5	15	Silty CLAY to CLAY
5	2	15	Clayey SILT to Silty CLAY
6	2.5	15	Sandy SILT to Clayey SILT
7	3	—	Silty SAND to Sandy SILT
8	4	—	SAND to Silty SAND
9	5	—	SAND
10	6	—	Gravelly SAND to SAND
11	1	15	Very Stiff Fine Grained (*)
12	2	—	SAND to Clayey SAND (*)

(*) Overconsolidated or Cemented

Qc = Tip Bearing
Fs = Sleeve Friction
Rf = Fs/Qc*100 = Friction Ratio

References: [1] Robertson, 1986, Olsen, 1988
[2] Bonaparte & Mitchell, 1979 (young bay mud Qc <= 9)
[2] Estimated from local experience (fine grained soils Qc > 9)

Note: Testing performed in accordance with ASTM D3441

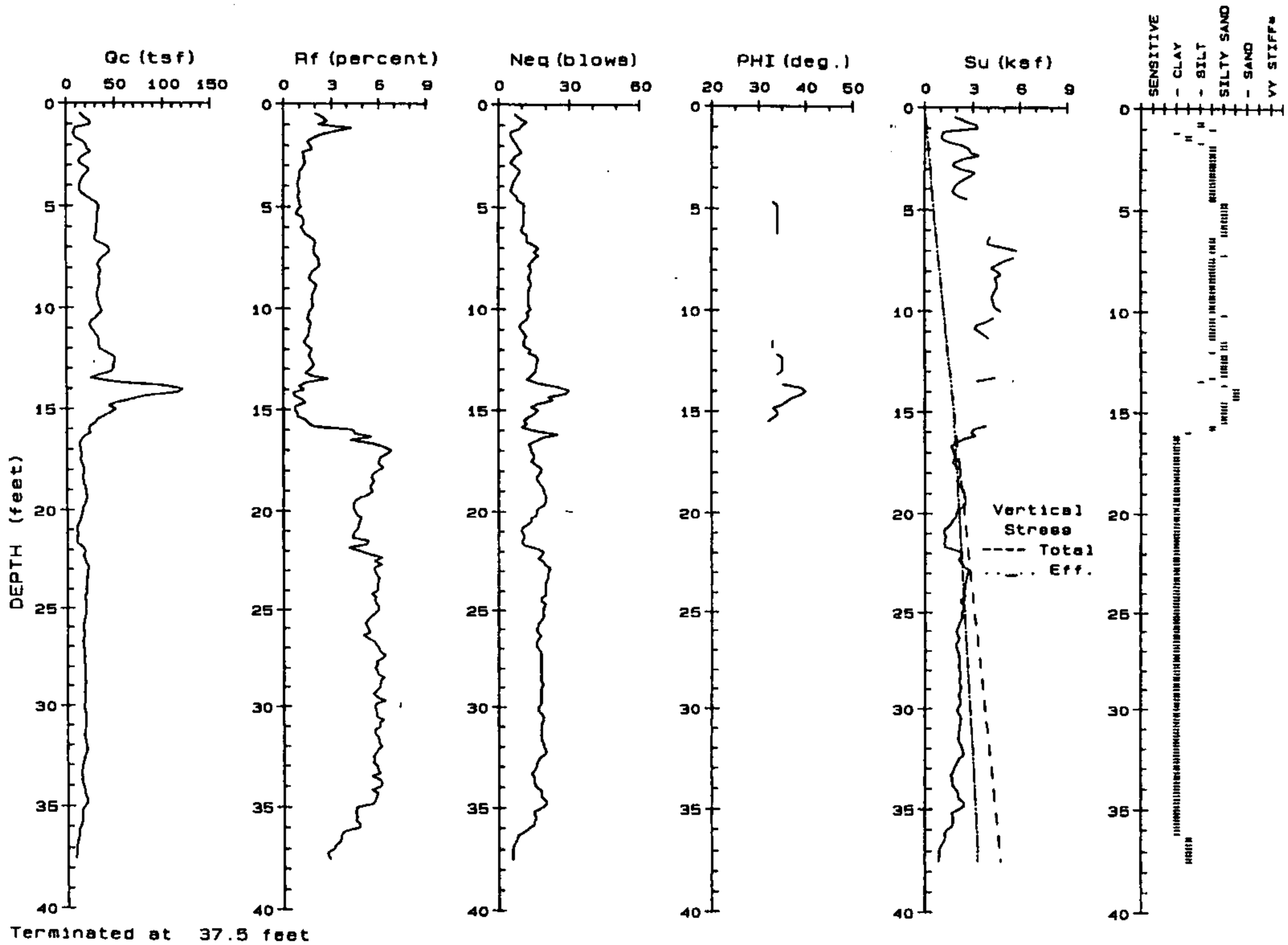
Base from chart developed by John Sarmiento & Associates, Cone Penetrometer Testing Services

DONALD E. BANTA & ASSOCIATES, INC.
Consulting Geotechnical Engineers

KEY TO CONE PENETROMETER SOUNDINGS

THREE OFFICE BUILDINGS - RIDDER PARK DR.
San Jose, California

441-41 November 1999 Figure A-2

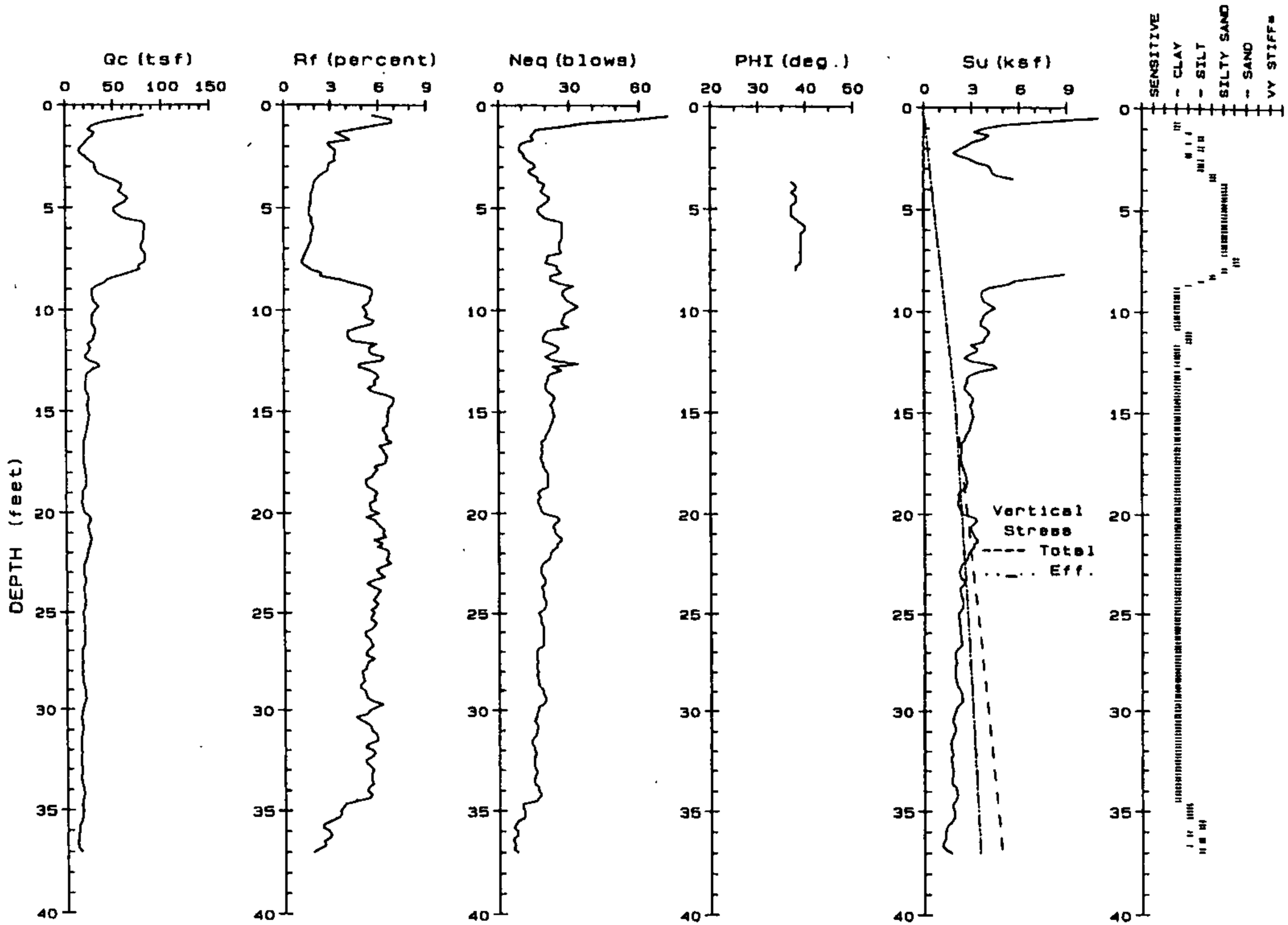


The above data was obtained and reduced by John Sarmiento & Associates, Cone Penetration Testing Service on October 27, 1999.

DONALD E. BANTA & ASSOCIATES, INC.
Consulting Geotechnical Engineers

CONE PENETROMETER LOG CPT-1
THREE OFFICE BUILDINGS - RIDDER PARK DR.
San Jose, California

441-41 | November 1999 | Sheet 1 of 1



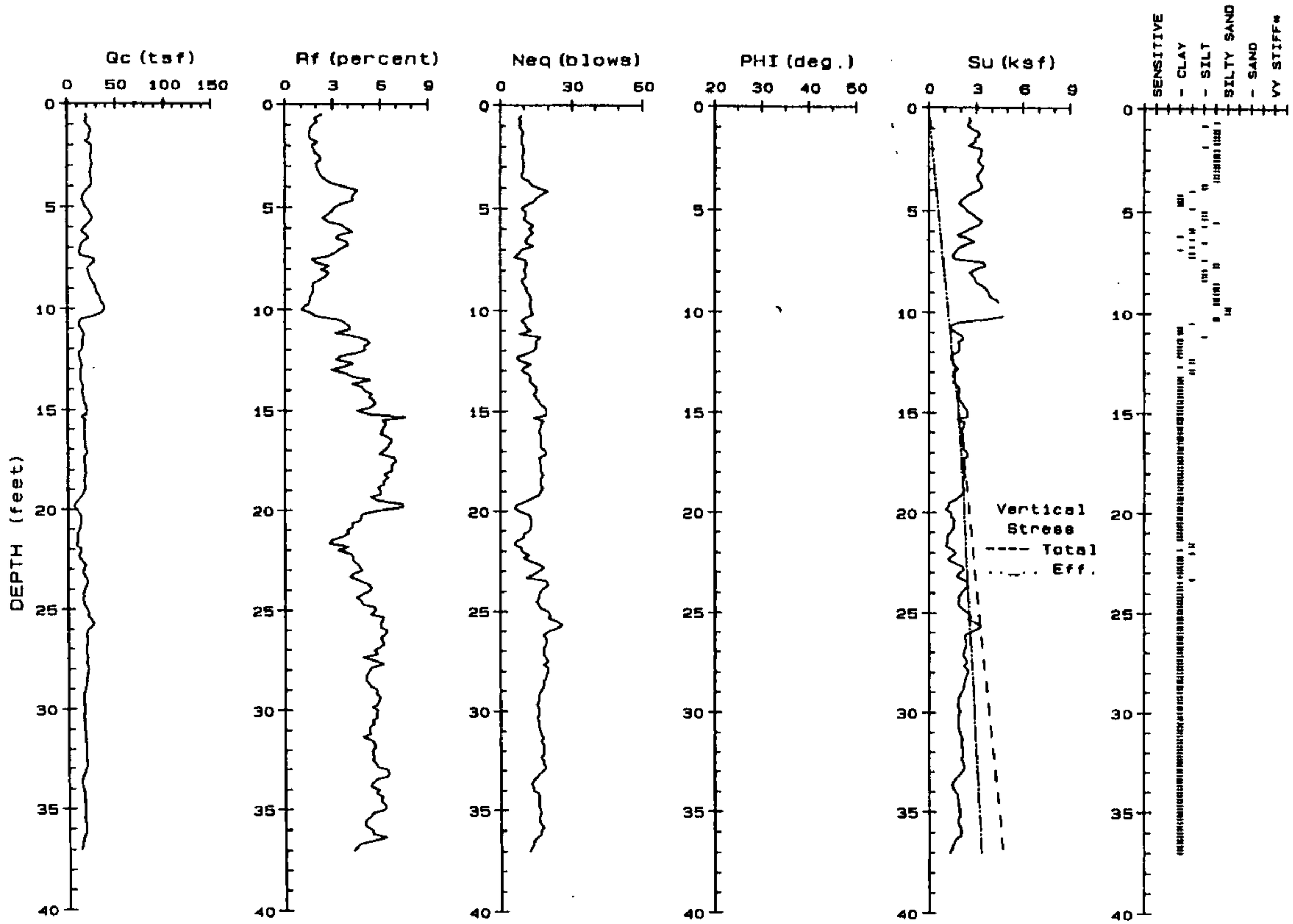
Terminated at 37.0 feet

The above data was obtained and reduced by John Sarmiento & Associates, Cone Penetration Testing Service on October 27, 1999.

DONALD E. BANTA & ASSOCIATES, INC.
Consulting Geotechnical Engineers

CONE PENETROMETER LOG CPT-2
THREE OFFICE BUILDINGS - RIDDER PARK DR.
San Jose, California

441-41 | November 1999 | Sheet 1 of 1



Terminated at 37.0 feet

The above data was obtained and reduced by John Sarmiento & Associates, Cone Penetration Testing Service on October 28, 1999.

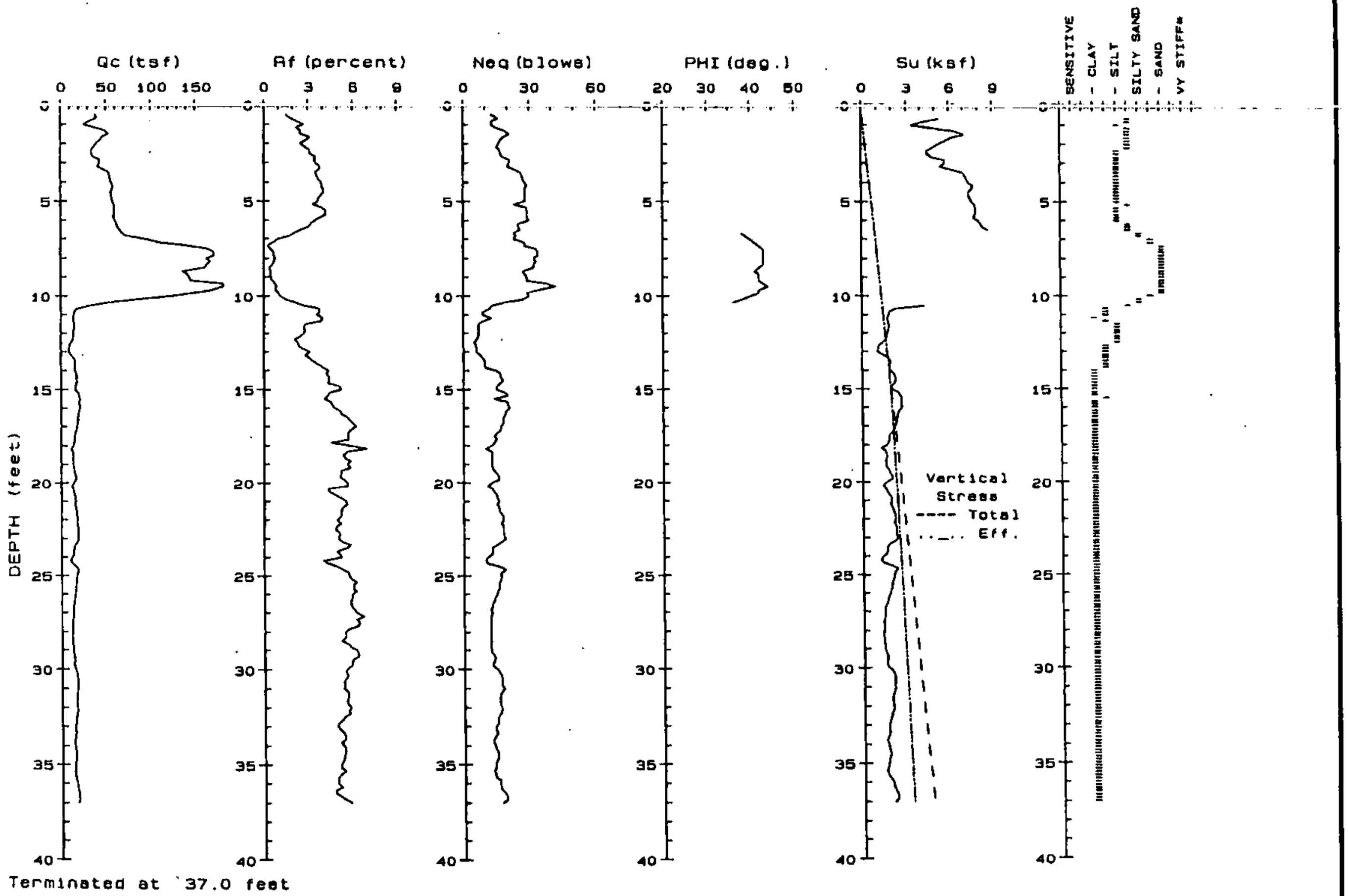
DONALD E. BANTA & ASSOCIATES, INC.
Consulting Geotechnical Engineers

CONE PENETROMETER LOG CPT-3

THREE OFFICE BUILDINGS - RIDDER PARK DR.

San Jose, California

441-41 **November 1999** **Sheet 1 of 1**

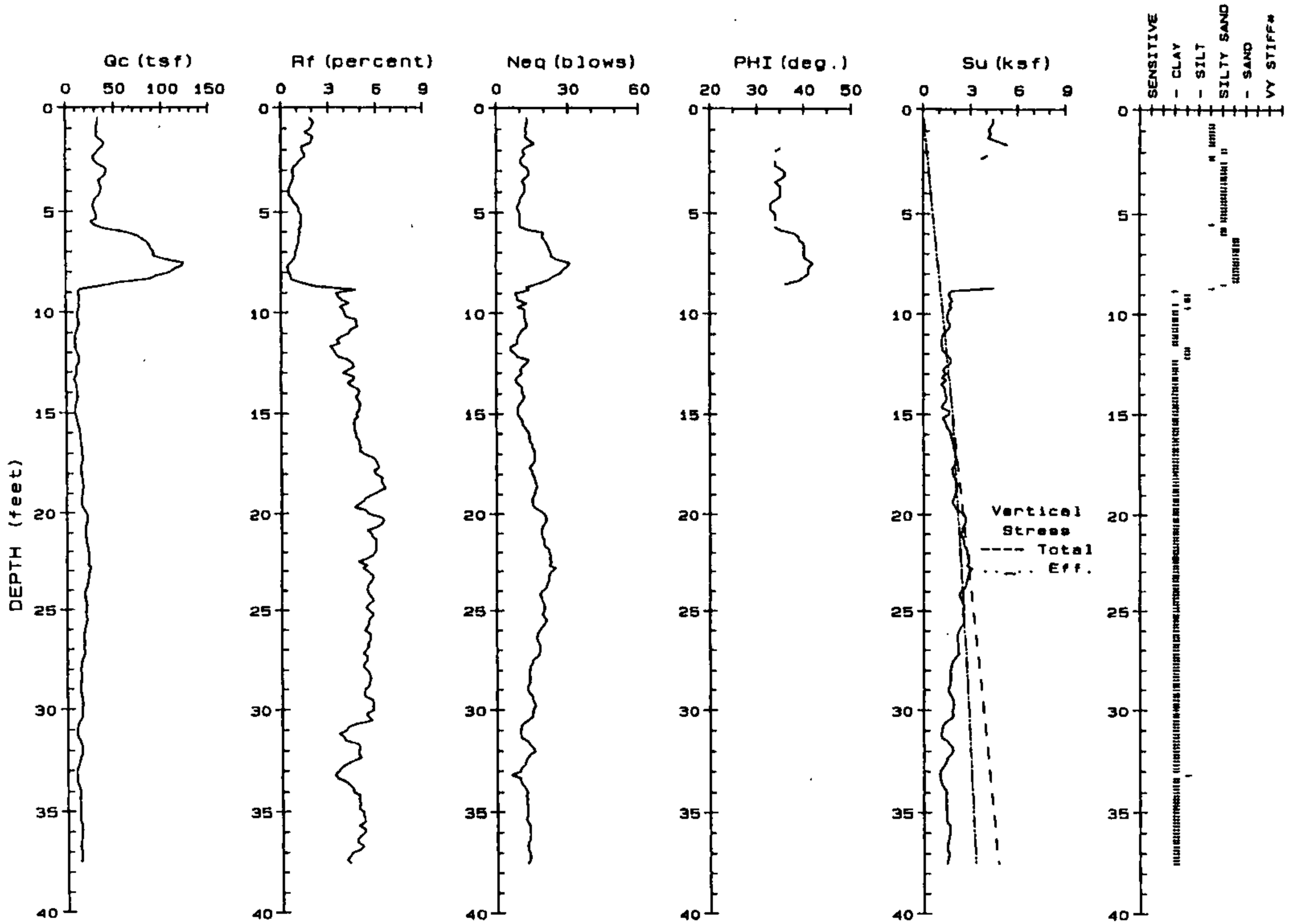


The above data was obtained and reduced by John Sarmiento & Associates, Cone Penetration Testing Service on October 28, 1999.

DONALD E. BANTA & ASSOCIATES, INC.
Consulting Geotechnical Engineers

CONE PENETROMETER LOG CPT-4
THREE OFFICE BUILDINGS - RIDDER PARK DR.
San Jose, California

441-41 | November 1999 | Sheet 1 of 1



Terminated at 37.5 feet

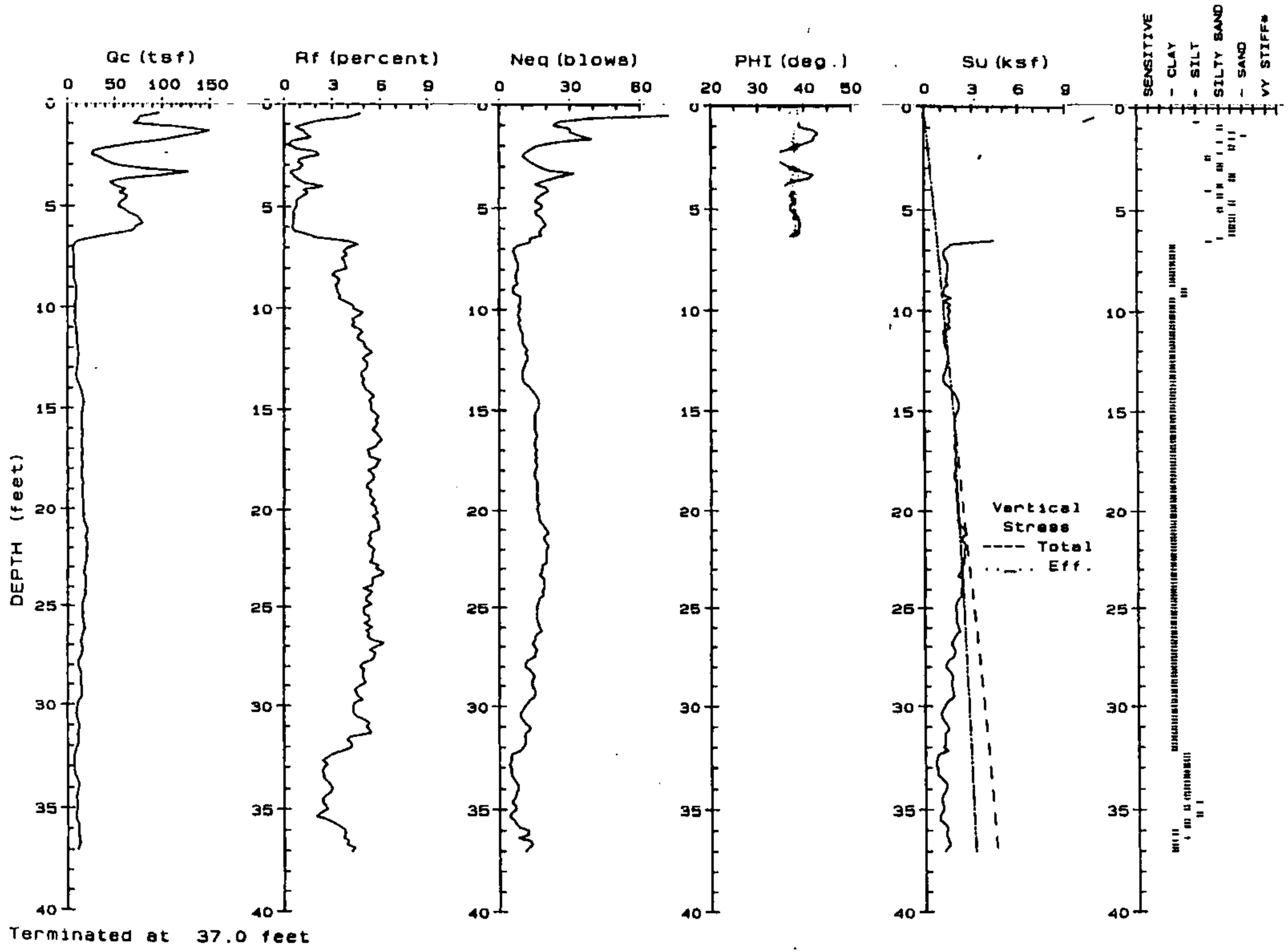
The above data was obtained and reduced by John Sarmiento & Associates, Cone Penetration Testing Service on October 28, 1999.

DONALD E. BANTA & ASSOCIATES, INC.
Consulting Geotechnical Engineers

CONE PENETROMETER LOG CPT-5

THREE OFFICE BUILDINGS - RIDDER PARK DR.
San Jose, California

441-41 | November 1999 | Sheet 1 of 1



Terminated at 37.0 feet

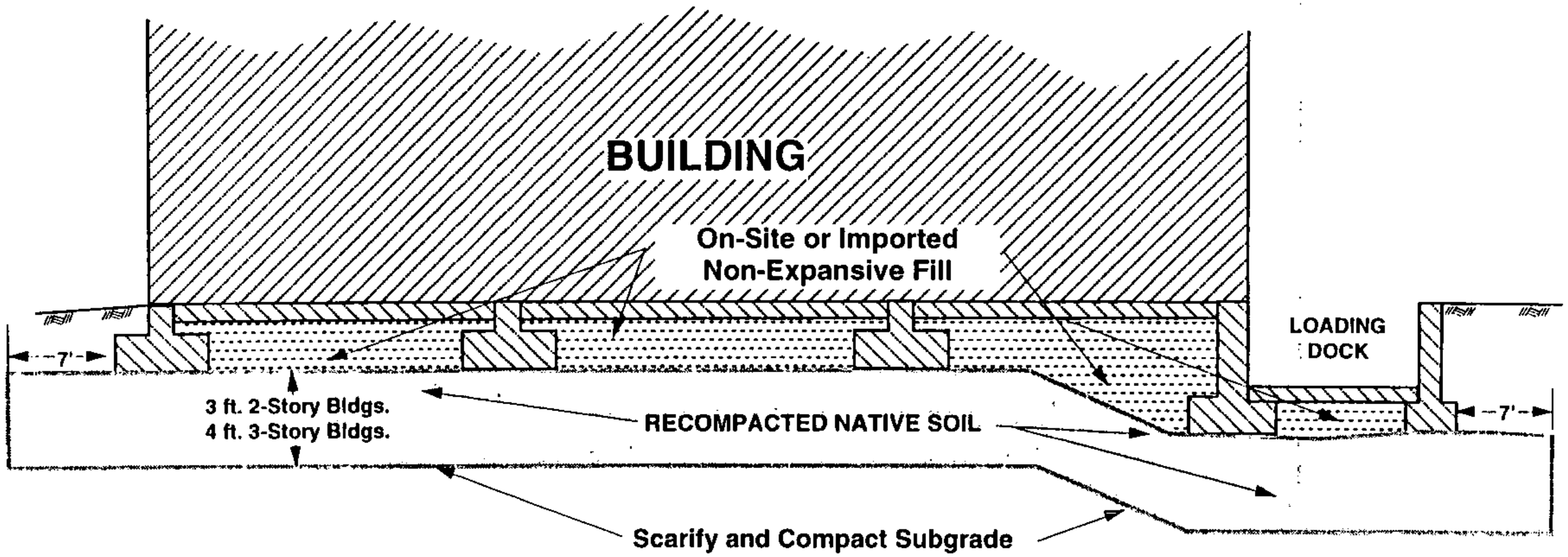
The above data was obtained and reduced by John Sarmiento & Associates, Cone Penetration Testing Service on October 28, 1999.

DONALD E. BANTA & ASSOCIATES, INC.
Consulting Geotechnical Engineers

CONE PENETROMETER LOG CPT-6

THREE OFFICE BUILDINGS - RIDDER PARK DR.
San Jose, California

441-41 | November 1999 | Sheet 1 of 1



NOTES:

1. Over-excavate and recompact native soil in shaded area. Replace and compact in thin lifts in accordance with Section A. 7, "Compaction."
2. The recompacted native soil must extend a minimum of 3 feet and 4 feet, respectively, below the footing bearing level for 2-story and 3-story buildings.
3. Limits of the over-excavation/recompaction should cover the entire building pad and should extend a minimum of 7 feet horizontally beyond the limits of the exterior foundations.
4. All of the structural fill should be compacted to at least 90% relative compaction by mechanical means only as determined by ASTM D1557.
5. Building pad fill materials above the footing bearing level should be either on-site or imported soils meeting the requirements for select non-expansive fill (see Section A. 5, "Material for Fill").

SKETCH: NOT-TO-SCALE

DONALD E. BANTA & ASSOCIATES, INC.
Consulting Geotechnical Engineers

RECOMPACTION REQUIREMENTS
THREE OFFICE BUILDINGS - RIDDER PARK DR.
San Jose, California

441-41 November 1999 Figure 2

APPENDIX A - FIELD INVESTIGATION

The field investigation consisted of a surface reconnaissance and a subsurface exploration program using truck-mounted drilling and electronic cone penetrometer equipment. Three exploratory borings and six cone penetrometer soundings were advanced between October 27 through October 30, 1999, to depths of 5.5 to 37.5 feet. The approximate locations of the exploratory borings and cone penetrometer soundings are shown on the Site Plan, Figure 1. The soils encountered in the borings were continuously logged in the field by our representative and described in accordance with the Unified Soil Classification System (ASTM D 2487). The logs of the borings and cone penetrometer soundings, as well as keys for the classification of the soil (Figure A-1) and cone penetrometer soundings (Figure A-2), are included as part of this appendix.

Representative soil samples were obtained from the exploratory borings at selected depths appropriate to the soil investigation. All samples were returned to our laboratory for evaluation and appropriate testing. Standard penetration resistance blow counts were obtained by dropping a 140-pound hammer through a 30-inch free fall. The 2-inch O. D. split spoon sampler was driven to a maximum depth of 18 inches and the number of blows recorded for each 6-inch penetration interval. The blows per foot recorded on the boring logs represent the accumulated number of blows that were required to drive the last 12 inches. In addition, samples were obtained by driving a 2.4-inch I. D. Modified California sampler through a distance of 18 inches using a 140-pound hammer; these blow counts have also been recorded on the boring logs. Boring log notations for standard split spoon and Modified California samplers are indicated below:

Field tests included an evaluation of the undrained shear strength of soil samples using a pocket penetrometer device. The results of these tests are presented on the boring logs at the appropriate sample depths and are designated "(p)."

Drill Rig · Hollow Flight Auger	Surface Elevation —	Logged By DEB
Groundwater Not Encountered	Boring Diameter 8 inches	Date Drilled 10/30/99

DESCRIPTION AND CLASSIFICATION				Depth (Feet)	SAMPLER	SAMPLE DATA					
DESCRIPTION AND REMARKS	COLOR	CONSISTENCY	SOIL TYPE			Blows Per Foot	Percent Moisture	Dry Density (Pcf)	Plasticity Index / Liquid Limit (%)	Percent Passing #200 Sieve	Shear Strength (Ksf)
SANDY CLAY, upper 8 inches recently disced	light brown	loose / stiff		1, 2		13	6 15	106 102		51 77	1.0(p)
SILTY SAND, fine to medium-grained, with less silt below 4.5 feet	light brown	loose	SM-SP	3, 4, 5	X	6 15	7 8 4	 96 98		35 6	
(very silty below 8.5 feet)		medium dense to dense		6, 7, 8, 9, 10, 11, 12, 13, 14		10 41	 21 4	93 92 113		32 19 5	
SANDY GRAVEL, fine to coarse sand and rounded gravel to 1.5 inches	light brown/ gray	dense	GP/GM	15, 16, 17, 18							
SILTY CLAY	gray and brown	very stiff	CL	19, 20, 21, 22, 23, 24, 25	X X	20 22	28 26			94 97	
Bottom of Boring = 25.0 feet				26, 27, 28, 29, 30							

Note: "(p)" indicates shear strength by pocket penetrometer.

DONALD E. BANTA & ASSOCIATES, INC.
Consulting Geotechnical Engineers

EXPLORATORY BORING LOG 1

THREE OFFICE BUILDINGS - RIDDER PARK DR.
San Jose, California

441-41 | November 1999 | Sheet 1 of 1

Unified Soil Classification System

PRIMARY DIVISIONS				GROUP SYMBOL	SECONDARY DIVISIONS
COARSE GRAINED SOILS MORE THAN HALF OF MATERIAL IS LARGER THAN # 200 SIEVE SIZE	GRAVELS MORE THAN HALF OF COARSE FRACTION IS LARGER THAN # 4 SIEVE	CLEAN GRAVELS (LESS THAN 5% FINES)		GW	Well graded gravels, gravel-sand mixtures, little or no fines
				GP	Poorly graded gravels or gravel-sand mixtures, little or no fines
		GRAVELS WITH FINES		GM	Silty gravels, gravel-sand-silt mixtures, non-plastic fines
				GC	Clayey gravels, gravel-sand-clay mixtures, plastic fines
	SANDS MORE THAN HALF OF COARSE FRACTION IS SMALLER THAN # 4 SIEVE	CLEAN SANDS (LESS THAN 5% FINES)		SW	Well graded sands, gravelly sands, little or no fines
				SP	Poorly graded sands or gravelly sands, little or no fines
		SANDS WITH FINES		SM	Silty sands, sand-silt mixtures, non-plastic fines
				SC	Clayey sands, sand-clay mixtures, plastic fines
FINE GRAINED SOILS MORE THAN HALF OF MATERIAL IS SMALLER THAN # 200 SIEVE SIZE	SILTS AND CLAYS LIQUID LIMIT IS LESS THAN 50%			ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity
				CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
				OL	Organic silts and organic silty clays of low plasticity
	SILTS AND CLAYS LIQUID LIMIT IS GREATER THAN 50%			MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts
				CH	Inorganic clays and silty clays of high plasticity, fat clays
				OH	Organic clays and silts of medium to high plasticity, organic silts
HIGHLY ORGANIC SOILS				Pt	Peat and other highly organic soils

DEFINITION OF TERMS

CLEAR SQUARE SIEVE OPENINGS

75 µm | 425 µm | 2 mm | 4.75 mm | 3/4" | 3" | 12"

SILTS AND CLAYS	SAND			GRAVEL		COBBLES	BOULDERS
	FINE	MEDIUM	COARSE	FINE	COARSE		

#200 | #40 | #10 | #4 ← American Standard Sieve Sizes

GRAIN SIZES

SANDS	BLOWS / FOOT†
VERY LOOSE	0 - 4
LOOSE	4 - 10
MEDIUM DENSE	10 - 30
DENSE	30 - 50
VERY DENSE	OVER 50

RELATIVE DENSITY

CLAYS	STRENGTH*	BLOWS / FOOT†
VERY SOFT	0 - 1/4	0 - 2
SOFT	1/4 - 1/2	2 - 4
FIRM	1/2 - 1	4 - 8
STIFF	1 - 2	8 - 16
VERY STIFF	2 - 4	16 - 32
HARD	OVER 4	OVER 32

CONSISTENCY

†Number of blows of 140 pound hammer falling 30 inches to drive a 2 inch O.D. (1-3/8" I.D.) split spoon sampler.
*Unconfined compressive strength in tons/sq.ft. as determined by laboratory testing or approximated by pocket penetrometer, torvane, or visual observation.

DONALD E. BANTA & ASSOCIATES, INC.
Consulting Geotechnical Engineers

KEY TO EXPLORATORY BORING LOGS

THREE OFFICE BUILDINGS - RIDDER PARK DR.
San Jose, California

441-41 | November 1999 | Figure A-1

Drill Rig Hollow Flight Auger	Surface Elevation —	Logged By DEB
Groundwater Not Encountered	Boring Diameter 8 inches	Date Drilled 10/30/99

DESCRIPTION AND CLASSIFICATION				Depth (Feet)	SAMPLER	SAMPLE DATA					
DESCRIPTION AND REMARKS	COLOR	CONSISTENCY	SOIL TYPE			Blows Per Foot	Percent Moisture	Dry Density (Pcf)	Plasticity Index / Liquid Limit (%)	Percent Passing #200 Sieve	Shear* Strength (Ksf)
SANDY CLAY, very silty with upper 8 inches recently disced	light brown	loose / stiff	CL	1, 2		10	6 3	106		51 14	
SILTY SAND, with some fine gravel	light brown	loose	SM-SP	3, 4	x	4	3			10	
				5, 6, 7, 8		13	4	99		5	
(with clean coarse sand lens at 8 feet)											
SANDY CLAY	brown	firm to stiff	CL	9, 10	x	8	22			91	
				11, 12, 13							
	brown gray			14, 15	x	9	30			93	
				16, 17, 18							
				19, 20		36	29 29	96 96		91 95	
Bottom of Boring = 20.0 feet				21, 22, 23, 24, 25, 26, 27, 28, 29, 30							

DONALD E. BANTA & ASSOCIATES, INC.
Consulting Geotechnical Engineers

EXPLORATORY BORING LOG 2

THREE OFFICE BUILDINGS - RIDDER PARK DR.
San Jose, California

441-41 November 1999 Sheet 1 of 1

APPENDIX B - LABORATORY TESTING

The laboratory testing program was directed toward a quantitative and qualitative evaluation of the physical and mechanical properties of the soils underlying the site.

The natural water content was determined on 20 samples of the materials recovered from the borings. These water contents are recorded on the boring logs at the appropriate sample depths.

Dry density determinations were performed on 13 samples to measure the unit weight of the subsurface soils. The results of these tests are shown on the boring logs at the appropriate sample depths.

The percent soil fraction passing the No. 200 sieve was determined on 20 samples to aid in their classification. The results of these tests are also shown on the boring logs at the appropriate sample depths.

A resistance "R" value test was performed on a representative sample of the near surface soil at the site to provide data for pavement design. The results of the test are presented below:

RESULTS OF "R" VALUE TESTS

Sample No.	Description of Material	Water Content (%)	Dry Density (pcf)	Exudation Pressure (psi)	"R" Value	Expansion Pressure (psf)
EB-1 @	Light Brown	15.7	112.5	448	36	490
0-1 ft.	CLAYEY SILT	18.5	105.8	234	11	65
		20.3	102.6	158	7	56

"R" Value @ 300 psi = 18

APPENDIX C - CORROSION TEST DATA AND ANALYSIS

California State Certified Laboratory No.2153

C E R C O
analytical, inc.

3942-A Valley Avenue
Pleasanton, CA 94566-4715
Tel: 925.462.2771
Fax: 925.462.2775

November 19, 1999
Job No.9911028
Cust.No.10731

Ms. Karen Banta
Donald E. Banta & Associates
415 Meridian Avenue
San Jose, CA 95126

SUBJECT: Project No.: 441-41
Project Name: Ridder Park Dr., San Jose
Corrosivity Analysis - ASTM Test Methods

Dear Mr. Carpenter:

In accordance with your request, we have analyzed the soil sample furnished by your office and have evaluated it for corrosivity using ASTM Test Methods. The results are enclosed.

Based upon the conductivity measurement, this sample is classified as "moderately corrosive". All buried iron, steel, cast iron, ductile iron, galvanized steel and dielectric coated steel or iron should be properly protected against corrosion depending upon the critical nature of the structure. All buried metallic pressure piping such as ductile iron fire water pipelines should be protected against corrosion.

The chloride ion concentration reflects none detected with a detection limit of 5 mg/kg and is determined to be insufficient to attack steel embedded in a concrete mortar coating.

The sulfate ion concentration reflects none detected with a detection limit of 25 mg/kg and is determined to be insufficient to damage reinforced concrete structures and a cement mortar coating at this location.

The pH of the soil is 7.9 which does not present corrosion problems for buried iron, steel, mortar coated steel and reinforced concrete structures.

The redox potential is 240-mV which is indicative of potentially "slightly corrosive" soils resulting from anaerobic soil conditions.

The information provided in this report is general in nature. For specific design recommendations, please call for consultation.

We appreciate the opportunity of working with you on this project. If you have any questions, or if you require additional information, please do not hesitate to contact us.

Very truly yours,
CERCO ANALYTICAL, INC.

J. Darby Howard

J. Darby Howard, Jr., P.E.
President

JDH/jdl

CERCO Analytical, Inc.

3942-A Valley Avenue, Pleasanton, CA 94566-4715 (925) 462-2771 Fax (925) 462-2775

FINAL RESULTS

Client: Donald E. Banta Associates
Client's Project No.: 441-41
Client's Project Name: Ridder Park Dr., San Jose
Authorization: Signed Chain of Custody

Date Sampled: 30-Oct-1999
Date Received: 4-Nov-1999
Date of Report: 18-Nov-1999

Job/Sample No.	Sample I.D.	Matrix	Redox (mV)	pH	Conductivity (umhos/cm)*	Sulfide (mg/kg)*	Chloride (mg/kg)*	Sulfate (mg/kg)*
9911028-001	EB-1 @ 2.5-5'	Soil	240	7.9	240	-	N.D.	N.D.

Method:	ASTM D1498	ASTM D4972	ASTM D1125Mod	ASTM D4658Mod	ASTM D4327	ASTM D4327
Detection Limit:	-	-	10	50	5	25
Date Analyzed:	16-Nov-1999	16-Nov-1999	16-Nov-1999	-	16-Nov-1999	16-Nov-1999

Cheryl McMillen
Laboratory Director

* Results Reported on Wet Weight Basis

N.D. - None Detected

Quality Control Summary - All laboratory quality control parameters were found to be within established limits

APPENDIX F

FLOOD PLAIN EVALUATION

Schaaf & Wheeler
CONSULTING CIVIL ENGINEERS

James R. Schaaf, PE
Kirk R. Wheeler, PE
David A. Foote, PE
Peder C. Jorgensen, PE

100 N. Winchester Blvd., Suite 200
Santa Clara, CA 95050
(408) 246-4848
FAX (408) 246-5624
sw@swsv.com

Monterey Bay Office
200 12th Street
Suite 200
Marina, CA 93933
(831) 582-2648
FAX (831) 582-2649
swmb@ihot.com

July 6, 1999

Ms. Jennifer Moore
HMH, Inc.
P.O. Box 611510
San Jose, CA 95161-1510

Re: Northwest Publications Site, Flood Plain Evaluation

Dear Ms. Moore:

Schaaf & Wheeler is pleased to submit this letter report concerning the existing flood plain conditions for the Northwest Publications site on Ridder Park Drive in the City of San Jose. The site is bounded by Ridder Park Drive on the southeast, Highway 880 on the west, and Coyote Creek on the northeast.

The site is within the 100-year flood plain, based on the effective FEMA Flood Insurance Rate Map. The effective map has not been revised in this reach to include the existing bridges at Brokaw Road and Ridder Park Drive. These bridges were constructed after the Flood Insurance Study was completed.

Based on the FIS information and preliminary hydraulics models from the Santa Clara Valley Water District, the site is subject to shallow flooding from Coyote Creek. The site is protected by a low levee from Coyote Creek, which has not been certified for FEMA requirements. The area was not included as effective flow area in the hydraulic calculations for Coyote Creek. The estimated 100-year water surface elevations in Coyote Creek at the site range from 48.2 ft NGVD at Brokaw Road to 50.5 ft at Ridder Park Drive.

Development on the site would not have a significant effect on upstream or downstream flood conditions. The area is not included as effective flow area due to the existing levee and upstream and downstream blockage. There would be nothing in the City of San Jose flood hazard ordinance or FEMA regulations to prevent development on the site. Development could include fill to above the 100-year flood elevation or levee improvements to meet FEMA requirements. Levee improvements may be complicated by the fact that the channel reach would not have 100-year capacity and would require SCVWD ownership of the levee. For planning purposes, the simplest solution would be to assume that the site would be filled to approximately 3 feet above the 100-year flood elevation in Coyote Creek. The final site grading would depend on the final freeboard requirements and existing ground elevations.

Development on the site would involve the SCVWD approvals to ensure that the proposed project would not affect any future flood control improvements. In addition, a FEMA Letter of Map Revision (LOMR) would be required to remove the site from the insurance requirements. A LOMR for the site may require evaluation of the revised existing flood conditions to include the existing bridges.

If you have any questions, please call me.

Sincerely,
SCHAAF & WHEELER

Kirk R. Wheeler, PE
Principal

c:\ridder\hmhi07.l01

APPENDIX G

NOTICE OF PREPARATION
AND
RESPONSES TO THE NOP

NOTICE OF PREPARATION

OF A

DRAFT ENVIRONMENTAL IMPACT REPORT

FOR THE

CREEKSIDE PLAZA SITE DEVELOPMENT PERMIT

Project Applicant: Northwest Publications Knight Ridder
Spieker Properties

Site Development Permit File Number: H00-08-063

APN: 237-05-035, -049, -050, & -051

As the Lead Agency, the City of San Jose will prepare an Environmental Impact Report for the above-referenced project and would like your views regarding the scope and content of the environmental information to be addressed in the EIR. This EIR may be used by your agency when considering approvals for this project.

The project description, its location, and a brief summary of potential environmental effects are attached.

According to State law, the deadline for your response is 30 days after receipt of this notice; however, we would appreciate an earlier response, if possible. Please identify a contact person, and send your response to:

City of San Jose
Department of Planning, Building & Code Enforcement
Attention: Ron Eddow
801 North First Street, Room 400
San Jose, California 95110-1795
(408) 277-4576

James R. Derryberry
Director of Planning, Building & Code Enforcement

Ron Eddow
Senior Planner

Date: 10/11/00

NOTICE OF PREPARATION
OF AN ENVIRONMENTAL IMPACT REPORT
FOR THE CREEKSIDE PLAZA
SITE DEVELOPMENT PERMIT

San Jose, California
October 2000

A. Introduction

The purpose of an Environmental Impact Report (EIR) is to inform decision makers and the general public of the environmental effects of a proposed project. The EIR process is intended to provide environmental information sufficient to evaluate a proposed project and its potential for significant impacts on the environment; to examine methods of reducing adverse environmental impacts; and to consider alternatives to the project.

The EIR for the proposed development will be prepared and processed in accordance with the California Environmental Quality Act (CEQA) of 1970, as amended. In accordance with the requirements of CEQA, the EIR will include:

- A summary of the project
- A project description
- A description of the existing environmental setting, potential environmental impacts, and mitigation measures
- Alternatives to the project as proposed
- Environmental consequences, including: (a) any significant environmental effects which cannot be avoided if the project is implemented; (b) any significant irreversible and irretrievable commitments of resources, (c) the growth-inducing impacts of the proposed project, (d) effects found not to be significant, and (e) cumulative impacts.

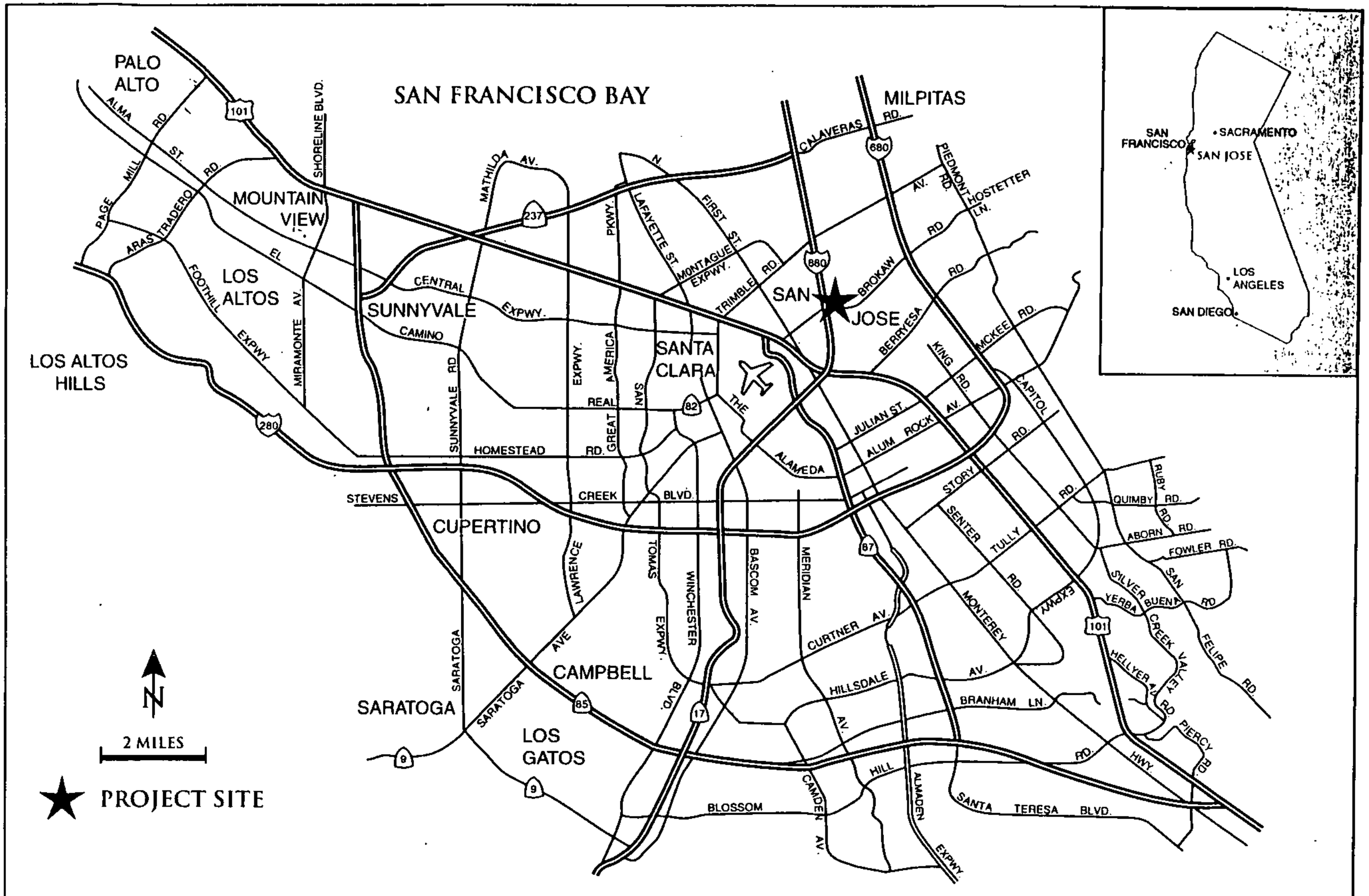
B. Project Location

The project site is located northwest of Ridder Park Drive between Brokaw Road, Coyote Creek and Interstate 880. West of Ridder Park Drive, the site is bounded by Brokaw Road and Coyote Creek on the northeast, and Interstate 880 and the Brokaw Road off-ramp on the west. A small portion of the site is located east of Ridder Park Drive. This parcel is bounded by Coyote Creek on the north, the Union Pacific railroad tracks on the east, Schallenberger Road on the south, and Ridder Park Drive on the west (Figure 1 and 2).

Industrial uses border the site to the southeast. Major roadways (Interstate 880 and Brokaw Road) border the site on the north and west and a reach of Coyote Creek borders the site to the northeast. Other uses in the immediate project vicinity include office/R&D and commercial uses.

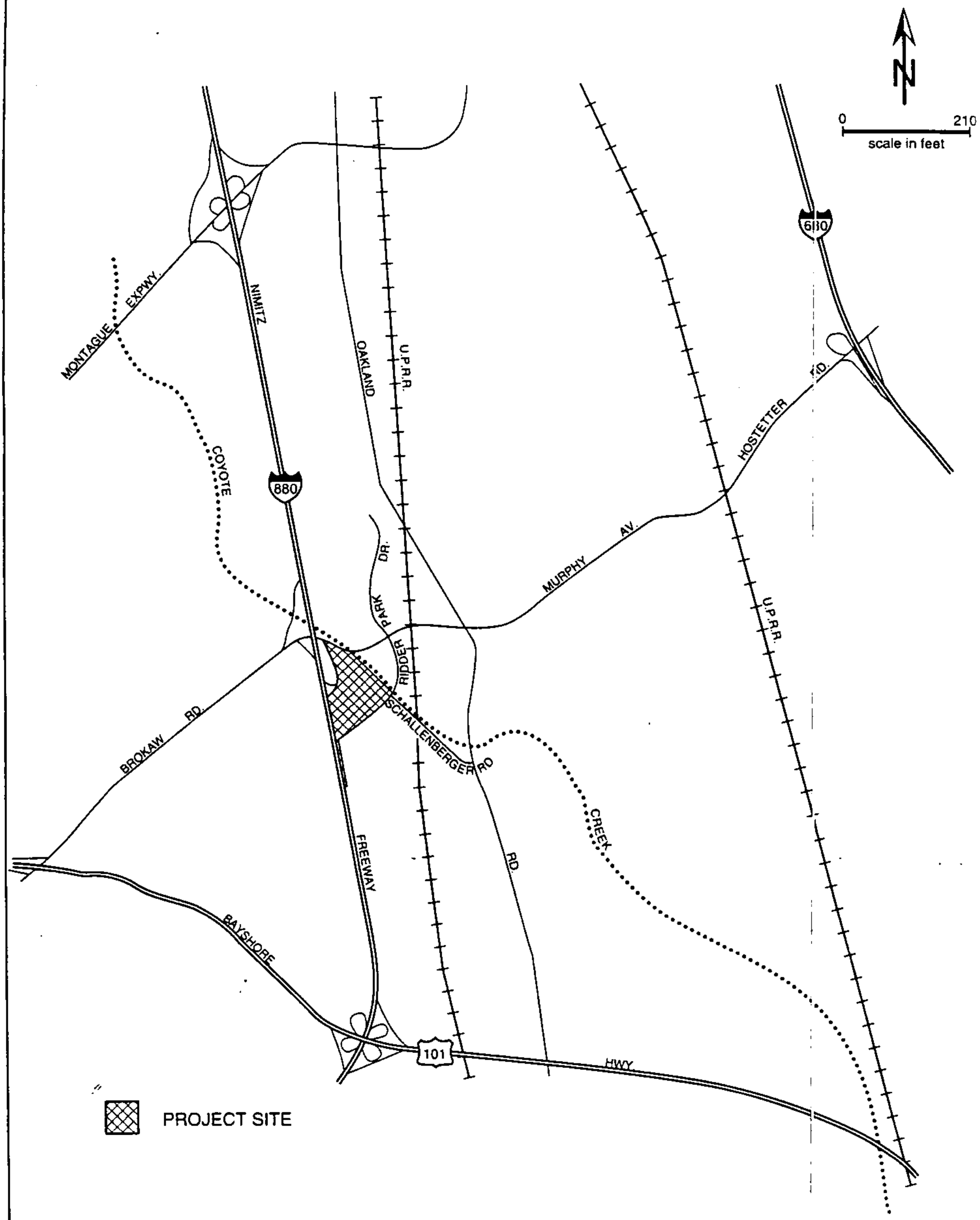
C. Description of the Project

The proposed project is the development of approximately 17.4 acres of land within the Rincon de Los Esteros Redevelopment Area of North San Jose. The project proposes development of 265,000 square feet of office/Research and Development (R&D) uses in two buildings, each three-stories in height.



REGIONAL MAP

FIGURE 1



VICINITY MAP

FIGURE 2

The project proposes to provide landscaping within a central courtyard area, adjacent to buildings, and around the perimeter of parking areas and driveways. A minimum development setback of 100 feet is proposed between pavement and buildings and the edge of the riparian corridor of Coyote Creek. The proposed project will plant locally native trees and shrubs within the riparian setback to provide a buffer between the development and the riparian corridor.

D. Potential Environmental Effects of the Project

The project EIR will identify the significant environmental effects anticipated to result from development of the project as proposed. The EIR will include at least the following specific environmental categories related to the proposed development:

1) *Land Use:* The EIR will describe the existing land uses within the project area and in adjacent areas, and previous uses of the site. Land use compatibility and loss of open space from the project will be described. Appropriate mitigation measures will be identified for significant land use impacts resulting from the project.

2) *Transportation:* The transportation section of the EIR will identify the existing roadway conditions and other elements (light rail, bus routes, bike routes, etc.) of the transportation system near the project site, including the local streets and intersections, regional facilities (such as expressways), and freeways. Analyses will be completed for projected traffic conditions, including identification of existing, existing+approved (defined as background conditions), and existing+ approved+project traffic. The analysis will discuss conditions and impacts on all transportation facilities likely to experience significant changes. Appropriate mitigation for significant impacts will be identified, where warranted. In addition, the EIR will discuss conformance with the City of San Jose Level of Service Policy and North San Jose Area Development Policy.

3) *Flooding, Drainage, and Water Quality:* The EIR will address flooding, drainage and water quality impacts which may occur as a result of the proposed project. Potential water quality impacts and conformance with the Santa Clara Valley Urban Runoff Pollution Prevention Program and the City of San Jose's Post-Construction Urban Runoff Management Policy will be addressed.

4) *Biological Resources:* The EIR will address habitats on the site, special status species, ordinance-sized trees, and other biological resources in the project area. Potential impacts on the nearby Coyote Creek riparian corridor and foraging habitat for Burrowing Owls will be specifically addressed. Appropriate mitigation for biological impacts will be identified.

5) *Air Quality:* The EIR will address the regional air quality conditions in the San Francisco Bay Area and the air quality impacts from the anticipated number of automobile trips. Temporary construction related impacts such as vehicle exhaust and fugitive dust will also be discussed. Mitigation measures will be identified for potentially significant air quality impacts.

6) *Noise:* The EIR will assess potential noise impacts associated with the proposed project. Impacts to existing and future development will be identified. Noise levels will be evaluated for consistency with applicable standards and guidelines in the City of San Jose. Mitigation measures to reduce noise impacts would be identified, if necessary.

7) Geology and Soils: The EIR will address the general soil characteristics of the site and potential impacts associated with development on this site. Design techniques and geotechnical measures to mitigate potential seismic, soil and geologic/geotechnical constraints to a less than significant level will be identified.

8) *Cultural Resources:* The EIR will address prehistoric and historic cultural resources within the project area based upon an archival search and site reconnaissance. The EIR will also identify potential impacts to archaeological and historic resources, and will address appropriate mitigation measures.

9) *Hazardous Materials*: The EIR will address existing conditions on site as well as any anticipated use of hazardous materials in the proposed development. Appropriate mitigation measures will be described.

10) *Visual Resources:* The EIR will describe the existing visual setting of the project site in terms of visual conditions. The project site is adjacent to Interstate 880, a state transportation corridor designated as a Landscaped Throughway in the General Plan.

11) *Public Utilities and Service Systems:* The EIR will describe the existing utilities and services in the project area and address any utility infrastructure necessary to serve the project.

12) *Energy:* In conformance with CEQA Section 15126(c), the EIR will identify the potential for the project to result in energy impacts and the conservation measures included in the project to avoid significant energy impacts.

13) *Availability of Public Facilities and Services:* The EIR will address the availability of public facilities to meet demands generated as a result of this project. Impacts will not be identified as environmental unless the project triggers a need for the construction of new facilities.

14) *Alternatives to the Project:* Alternatives to the project as proposed, including "No Project" will be addressed. Other alternatives analyzed may include a smaller (less intense) development and an alternative site.

15) *Cumulative Impacts:* The EIR will include a Cumulative Impacts section which will address the potentially significant cumulative impacts of the project when considered with other past, present and reasonably foreseeable future projects in the area. The analysis will include a discussion of all projects for which applications are pending. It will cover all subject areas discussed in the EIR (*e.g.*, traffic, air quality, etc.) and will specify which of the areas are anticipated to experience significant cumulative impacts. Cumulative impacts will be discussed qualitatively, unless specific quantitative information on other pending projects is available prior to publication of the Draft EIR.

State of California - The Resources Agency
DEPARTMENT OF FISH AND GAME
http://www.dfg.ca.gov
POST OFFICE BOX 47
YOUNTVILLE, CALIFORNIA 94599
(707) 944-5500

GRAY DAVIS, Governor

October 25, 2000

RECEIVED
OCT 27 2000
CITY OF SAN JOSE
PLANNING DEPARTMENT

Mr. Ron Eddow
City of San Jose
Department of Planning, Building,
and Code Enforcement
801 North First Street, Room 400
San Jose, California 95110-1795

Dear Mr. Eddow:

Notice of Preparation of
Draft Environmental Impact Report (DEIR)
Creekside Plaza Site Development Permit
SCH Number 2000102049, Santa Clara County

Department of Fish and Game personnel have reviewed the Notice of Preparation of a DEIR for the Creekside Plaza Site Development Permit project. The project would allow construction of two research and development buildings on a 17.4-acre site adjacent to Coyote Creek in north San Jose. We believe the following issues need to be addressed in the DEIR.

Plant and wildlife species that are present or dependent upon potentially impacted habitats should be identified in the DEIR. Particular attention needs to be paid to State and Federally listed and candidate species, and unlisted species whose status is of regional concern. The California Natural Diversity Data Base and the California Native Plant Society should be consulted to identify sensitive species that have been documented in the area. Consultation with the data base should not preclude or substitute for qualitative and/or quantitative field surveys.

Sensitive animal species that are likely to occur in this vicinity include steelhead (*Oncorhynchus mykiss*), western pond turtle (*Clemmys marmorata*), California red-legged frog (*Rana aurora draytonii*), burrowing owl (*Athene cunicularia*), loggerhead shrike (*Lanius ludovicianus*), several diurnal raptors, and several sensitive bat species. These and other rare, threatened or endangered species, or California species of special concern must be addressed and appropriate surveys conducted by a qualified biologist. Details regarding specific survey protocol can be obtained from this Department. The National Marine

Fisheries Service (NMFS) and the U. S. Fish and Wildlife Service need to be contacted regarding appropriate survey methods and avoidance and mitigation measures for steelhead and red-legged frog.

The burrowing owl is known to occur in the project vicinity. There are two types of mitigation necessary for any impacts to burrowing owls, mitigation for the loss of burrowing owl breeding and foraging habitat, and mitigation to avoid "take" of individual burrowing owls and their nest sites. In order to determine whether or not owls breed on or near the project site, a burrowing owl survey must be conducted according to the survey guidelines described in the Burrowing Owl Survey Protocol and Mitigation Guidelines (Burrowing Owl Consortium, 1993) between April 15 and July 15.

If burrowing owls are found on the project site, we recommend that the project be reconfigured to allow impact avoidance. If impacts to burrowing owl habitat cannot be avoided, we recommend that a minimum of 6.5 acres of off-site habitat be preserved for each pair of owls or each unpaired owl impacted by the project. At least two enhanced or artificial burrows need to be provided for each burrow impacted. Land identified to off-set impacts to burrowing owls must be protected in perpetuity either by a conservation easement or fee title acquisition. Burrowing owl mitigation lands should be adjacent to occupied burrowing owl foraging habitat in the San Jose area. Final mitigation requirements will depend upon the number of pairs of birds or single birds that are found during the surveys.

Mitigation to avoid "take" of individual burrowing owls and their nest sites is fulfilled by conducting a pre-construction survey for the species, no more than 30 days prior to construction. Pre-construction surveys must be conducted according to the guidelines referenced above. Pre-construction survey results must be submitted to the Department for review and approval. It is unlawful to take, possess, or destroy burrowing owls, their nests, or their eggs, pursuant to Section 3503.5 of the Fish and Game Code and the Federal Migratory Bird Treaty Act. For this reason, any impacts to the species during the breeding season (February 1 to August 31) must be avoided. If there are construction activities proposed during the owl breeding season, and if burrowing owls are observed on, or within, 250 feet of a project site during pre-construction surveys, a 250-foot protective buffer must be established with the placement of a

barrier fence which shall remain in place for the duration of the breeding season. If pre-construction surveys are conducted during the non-breeding season and burrowing owls are observed on the site, the Department will authorize owl eviction only after the habitat mitigation plan and mitigation agreement have been finalized.

It is the policy of this Department that a project should cause no net loss of either wetland or riparian acreage or habitat value. We recommend impacts to creeks be avoided where possible. Impacts would include, but are not limited to, road crossings, culverts, channelization and rip rap. For impacts to riparian habitat that cannot be avoided, we recommend a minimum mitigation ratio of 3:1, based on creation of in-kind acreage of equal or better habitat value. Replacement of habitat acreage at a lower ratio may be appropriate if the replacement is completed prior to the destruction of the original habitat. Any revegetation plans should use native species, with seeds or cuttings collected on-site.

The Department recommends a minimum 100-foot buffer, measured outward from the top of each creekbank, or from the outside edge of riparian vegetation if riparian vegetation extends outward beyond the bank, be established to protect the creek and its vegetation, and to provide a travel corridor for wildlife. No roads, buildings, or other construction should be permitted within the buffer.

The Department has direct jurisdiction under Fish and Game Code sections 1601-03 in regard to any proposed activities that would divert or obstruct the natural flow or change the bed, channel, or bank of any stream. We recommend early consultation since modification of the proposed project may be required to avoid impacts to fish and wildlife resources. To avoid unnecessary delays, formal notification under Fish and Game Code sections 1601-03 should be made after all other permits and certifications have been obtained. Work cannot be initiated until a streambed alteration agreement is executed.

A recent court order requires the Department, prior to entering into a 1600 agreement, to conduct an environmental review pursuant to the California Environmental Quality Act (CEQA). Therefore, because of the additional process required under CEQA which includes minimum document circulation periods,

we are no longer restricted to issuing agreements within 30 days. We will still attempt to issue these as soon as possible but, at this time, we are not certain how long it will take to process these applications.

The U. S. Army Corps of Engineers (Corps) also has jurisdiction over the discharge of fill to streams and wetlands under Section 404 of the Clean Water Act. We recommend that the Corps be contacted to determine if they have jurisdiction and if they require a permit.

The DEIR should discuss the amounts and effects of urban runoff and how these can be mitigated. A policy should be included to require installation and maintenance of oil/grease separators in storm drains.

Impacts to all sensitive species and their habitats should be avoided. Specific measures to adequately mitigate unavoidable impacts, including cumulative ones, need to be incorporated into project design prior to certification of the DEIR. A monitoring program, as required by Assembly Bill 3180, must ensure that mitigation measures are effective and must provide for corrective action if they are not effective.

Thank you for the opportunity to comment on this project. We request that subsequent documents related to the project be submitted to this Department for our review. If you have any questions regarding our comments, please contact Martha Schauss, Associate Wildlife Biologist, at (831) 623-4989; or Carl Wilcox, Habitat Conservation Manager, at (707) 944-5525.

Sincerely,

Robert W. Floerke
Regional Manager
Central Coast Region

cc: NMFS

USFWS
Sacramento Office

CALIFORNIA
HISTORICAL
RESOURCES
INFORMATION
SYSTEM

ALAMEDA
COLUSA
CONTRA COSTA
LAKE
MARIN
MENDOCINO
MONTEREY
NAPA
SAN BENITO
SAN FRANCISCO
SAN MATEO
SANTA CLARA
SANTA CRUZ
SOLANO
SONOMA
YOLO

Northwest Information Center
Sonoma State University
1801 East Cotati Avenue
Rohnert Park, California 94928-3609
Tel: 707.664.2494 • Fax: 707.664.3947
E-mail: nwic@sonoma.edu

October 24, 2000

File No: 00-SC-62E

RECEIVED
NOV 0 2 2000
CITY OF SAN JOSE
PLANNING DEPARTMENT

City of San Jose
Department of Planning, Building & Code Enforcement
Attention: Ron Eddow
801 North First Street, Room 400
San Jose, CA. 95110-1795

re: Creekside Plaze Site; APN: 237-05-035,-049,-050,-051

Dear Mr.:Eddow;

This office concurs with the recommendation given by Basin Research Associates (S-21577, 1998) that an archaeologist monitor the southeastern portion of parcel APN 237-05-51 during subsurface construction due to a low to moderate potential for exposing subsurface cultural materials that could be associated with the location of the former 1865-1896 Second Orchard School.

Thank you for your continued concern for protecting our historical heritage.

Sincerely,

K. Thorne, for
Leigh Jordan
Coordinator

STATE OF CALIFORNIA - BUSINESS, TRANSPORTATION AND HOUSING AGENCY GRAY DAVIS, Governor

DEPARTMENT OF TRANSPORTATION
P O BOX 23660
OAKLAND, CA 94623-0660
Tel: (510) 286-4444
TDD (510) 286-4454

RECEIVED
NOV 0 7 2000
CITY OF SAN JOSE
PLANNING DEPARTMENT

October 27, 2000

SCL-880-4.08
2000102049
SCL880201

Mr. Ron Eddow
Department of Planning, Building
and Code Enforcement
801 North First Street, Room 400
San Jose, CA 95110-1795

Dear Mr. Eddow:

Notice of Preparation (NOP) of a Draft Environmental Impact Report (DEIR) for the Creekside Plaza Site Development Permit, City of San Jose

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the proposed project. We have examined the above-referenced document and are concerned about the traffic impact on already congested Interstate 880. We recommend a traffic study be conducted. Please include the following information in the study:

a. Information on the project's traffic impacts in terms of trip generation, distribution, and assignment. The assumptions and methodologies used in compiling this information should be addressed.

b. Average Daily Traffic (ADT) and AM and PM peak hour volumes on all significantly affected streets and highways, including crossroads and controlling intersections.

c. Schematic illustration of the traffic conditions for: 1) existing, 2) existing plus project, and 3) cumulative for the intersections in the project area.

d. Calculation of cumulative traffic volumes should consider all traffic-generating developments, both existing and future, that would affect the facilities being evaluated.

e. Mitigation measures that consider highway and non-highway improvements and services. Special attention should be given to the development of alternative solutions to circulation problems which do not rely on increased highway construction.

f. All mitigation measures proposed should be fully discussed, including financing, scheduling, implementation responsibilities, and lead agency monitoring.

Should you require further information or have any questions regarding this letter, please call Haiyan Zhang of my staff at (510) 622-1641.

Sincerely,

HARRY Y. YAHATA
District Director

By Jean C. R. Finney

JEAN C. R. FINNEY
District Branch Chief
IGR/CEQA

c: State Clearinghouse

SANTA CLARA
Valley Transportation Authority

RECEIVED
NOV 14 2000
CITY OF SAN JOSE
PLANNING DEPARTMENT

November 8, 2000

City of San Jose
Department of Planning, Building and Code Enforcement
801 North First Street
San Jose, CA 95110

Attention: Ron Eddow, Project Manager

Subject: File No.: H00-08-063 / Creekside Plaza NOP of DEIR

Dear Mr. Eddow:

Santa Clara Valley Transportation Authority (VTA) staff have reviewed the Notice of Preparation (NOP) of the Draft Environmental Impact Report (DEIR) for the construction of 265,000 square feet of office/research uses on a 17.382 gross acre site located on the southeast corner of I-880 and Brokaw Road. We have the following comments regarding the scope and content of the EIR.

I-880 Interchange Improvements

The Draft VTP 2020 Plan includes a project to improve the I-880/Brokaw Road Interchange. The City of San Jose's Transportation Division should be contacted to confirm whether the project is consistent with conceptual plans to improve the interchange.

Transportation Impact Analysis Report

A TIA is required for projects which generate more than 100 peak-hour trips. Based on the information provided on this project, a TIA may be required. If a TIA has already been performed, please forward a copy to VTA. If a TIA has not yet been performed for this development, then VTA recommends that one be completed and forwarded to VTA for review.

VTA's *Transportation Impact Analysis Guidelines* should be used when preparing the TIA. These guidelines include the analysis of bicycle facilities, parking, site circulation and pedestrian access, as well as roadways. For more information on TIA guidelines, please call Sylvia Star-Lack of the CMP at (408) 321-5725.

Transportation Demand Management

VTA recommends that the DEIR include the following Transportation Demand Management (TDM) actions in order to help reduce the number of newly generated auto trips for the proposed office development:

- Charging for parking
- Parking cash-out or other payments for taking alternate modes
- In-house carpool matching for employees
- Vanpool program
- Preferentially located carpool parking
- In-house shuttle connection to transit and to lunch/convenience services
- Co-sponsoring of transit connection shuttle or local shuttle
- Bicycle lockers, racks
- Showers, clothes lockers
- On-site or walk-accessible employee services (day-care, dry-cleaning, fitness, banking, convenience store)
- On-site or walk-accessible restaurants
- Guaranteed ride home program
- Transit fare incentives: Eco-Pass; Commuter Checks

Bicycle Parking Facilities

VTA strongly recommends that the DEIR include bicycle parking as a traffic mitigation measure. Bicycle parking should include racks for short-term visitor parking and bicycle lockers for long-term employee use. VTA's *Bicycle Technical Guidelines* offer guidance on estimating supply, siting, and design for bicycle parking. For a copy of the guidelines, please contact Sylvia Star-Lack at (408) 321-5725.

We appreciate the opportunity to review this project. If you have any questions, please call Christina Jaworski of my staff at (408) 321-5751.

Sincerely,

Christina Jaworski for

Roy Molseed
Senior Environmental Analyst

RM:CTJ:kh

cc: Timm Borden, City of San Jose Public Works

File: 26538
Coyote Creek

Re: Notice of Preparation of DEIR
for the Creekside Plaza

November 15, 2000

Mr. Ron Eddow
City of San Jose
Dept. of Planning, Building & Code Enforcement
801 North First Street, Room 400
San Jose, CA 95110-1795

Dear Mr. Eddow,

Subject: Notice of Preparation of a Draft Environmental Impact Report for the Creekside Plaza Site Development Permit, File No: H00-08-063

The Santa Clara Valley Water District (District) has reviewed the Notice of Preparation (NOP) of the Draft Environmental Impact Report (DEIR) for the subject project, received by us on October 16, 2000. Because of the close proximity of the proposed project to Coyote Creek, the following issues should be addressed and discussed in the DEIR:

1) According to current Federal Insurance Rate Maps, the site is subject to flooding of greater than one foot in the event of a 100-year flood. This should be discussed in both the *Flooding, Drainage and Water Quality* section and the *Cumulative Impacts* section.

2) The *Flooding, Drainage and Water Quality* section should consider the 100 year flood as well as storm and flooding that occur during more frequent events to properly evaluate the results of the proposed project.

3) The *Biological Resources* section should specifically address that Coyote Creek provides passage for steelhead (federally listed as a Threatened Species by United States Fish & Wildlife Service) and Chinook salmon (sensitive species.) Neither project construction nor post-construction development of the site should impair fish passage.

4) *The Availability of Public Facilities and Services* section should include discussion of storm drains for the site. There should be no direct outfalls to Coyote Creek.

5) The *Project Location* says that the site is bounded by Coyote Creek on the northeast. This section also states that an additional small portion of the site is located east of Ridder Park

Drive and bounded by Coyote Creek to the north. This piece of land is not marked on the project Vicinity Map (Figure 2). Plot the location of this parcel(s) on a project map and include its size. Indicate the specific use proposed for the area.

6) District Ordinance 83-2, Section 6.1, prohibits the pollution of water supplies of the District. To prevent pollutants, including sediments from reaching Coyote Creek, which is within District jurisdiction, follow the Santa Clara Valley Urban runoff Pollution Prevention Program's recommended Best Management Practices (BMP's) for construction activities, as contained in the "Blueprint for a Clean Bay" and the California Stormwater Construction BMP Handbook. Any construction, demolition, or grading proposed within 50 feet from the top of bank of a District watercourse is subject to review and the issuance of a permit prior to commencement of work. When prepared, two sets of project site plans should be sent to the District for review and issuance of a permit.

The Project Description states that a "*A minimum development setback of 100 feet is proposed between the pavement and buildings and the edge of the riparian corridor of Coyote Creek. The proposed project will plant locally native trees and shrubs within the riparian setback to provide a buffer between the development and the riparian corridor.*" The District supports enhancing the riparian corridor. However, the complexity of riparian revegetation design and the variety of ecosystems that exist within the county require that each individual project be mentored through all stages of project planning and design by experienced plant biologist. Contract nursery production of native stock will take a one-year minimum lead time before installation. In order to preserve genetic integrity in county watersheds, propagation material (seeds, cuttings, divisions) for revegetation projects shall originate from local native stock, (i.e. individuals found as close as possible to the project site and within the same watershed.) Direct seeding should be used when possible. Plant species should be selected that are historically and ecologically appropriate to the project area and should blend with the existing native vegetation types. Revegetation projects should be designed to quickly attain sustainability rather than to require long-term human intervention. Irrigation, weed and pest control, soil manipulation, etc., should become unnecessary within one to three years. Land use on adjacent sites should be factored into design decisions for revegetation projects. For additional information on riparian revegetation guidelines, call Mr. Rick Austin at (408) 256-2600, extension 2573.

7) In 1987, amendments to the Federal Clean Water Act expanded the National Point Discharge Elimination System (NPDES) permit process to address non point source water quality impacts on the nation's water ways. In California, Municipal NPDES permits for storm water discharges are issued by the Regional Water Quality Control Boards to municipalities, counties, and special districts that own and /or operate municipal separate storm sewer systems. The Regional Boards also issue NPDES storm water discharge permits for industrial activities and for construction activities. The provisions of these permits currently require the implementation of Best Management Practices (BMP's) to reduce or eliminate pollutants in storm water discharged to waters of the state. The City should ensure that the project proponent has adequate plans to comply with these permits during and after site development.

New, more stringent water quality regulations of the Clean Water Act have recently been triggered in the Coyote Creek Watershed because the NPDES permits program has failed to protect beneficial uses (evidenced by such observances as violations of ambient water quality criteria, toxic substances in toxic amounts, and fish consumption health advisories) of the county's creeks. These regulations require that the Total Maximum Daily Loads (TMDLs) of sediment, heavy metals, exotic species, and pesticides are to be calculated for discharges to South San Francisco Bay. Since discharges to Coyote Creek are ultimately discharges to South San Francisco Bay, it is likely that the TMDLs developed for these pollutants will establish load allocations for discharges to and from Coyote Creek. Further, because South San Francisco Bay is identified as an impaired water body due to these pollutants for which TMDLs will be developed, as well as other applicable water quality laws, any change of land use must have a neutral impact on the loading of these pollutants. The City should require the project proponent to develop and implement a non point source treatment plan that ensures that loads of sediment, heavy metals, and pesticides are not increased, and that exotic species are not increased in number or variety, due to activities or impacts attributable to the site that occur during and after site development.

8) The design of the site should incorporate water quality mitigation measures such as those found in "Start at the Source, Residential Site Planning and Design Guidance Manual for Stormwater Quality Protection," prepared for the Bay Area Stormwater Management Agencies Association. This manual can be obtained from the urban runoff coordinator for the City of San Jose. Water quality measures such as biofilters and vegetated drainage swales can be incorporated into the site improvements to mitigate non point source impacts.

9) As construction will include disturbance of more than 5 acres, a Notice of Intent must be filed with the State Water Resources Control Board in compliance with the National Pollutant Discharge Elimination System for storm water discharge. The DEIR should include a discussion of the requirement and the Storm Water Pollution Plan that must be prepared for the site, along with measures that will be included with the project to reduce the introduction of pollutants into storm water runoff. An erosion and sediment control plan should be completed as an element of the mitigation monitoring program.

10) In accordance with District Ordinance 90-1, the owner should show any existing well(s) on the site plans. The well(s) should be properly registered with the District and either be maintained or abandoned in accordance with the District's standards. Property owners or their representative should call Mr. David Zozoya at (408) 265 2600, extention 2150, for more information regarding well permits and registering or abandonment of any wells.

We appreciate the opportunity to provide comments on the NOP and wish to receive the DEIR when it has been prepared. Please reference District File No. 26538 on any future correspondence regarding this project. If you have any comments or questions, please call me at (408) 265-2607, extension 2692.

Sincerely,

Melissa M. Dargis
Environmental Planner
Community Projects Review Unit

cc: S. Tippets, R. Anderson, R. Austin, M. Dargis, File (2)
M. Klemencic, G. Fowler, L. Melton, M Iverson