

LOS ESTEROS CRITICAL ENERGY FACILITY, LLC

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DOCKET

03-AFC-2C

DATE Apr 26 2011

RECD. Apr 28 2011

April 26, 2011

Mr. Craig Hoffman
California Energy Commission
1516 Ninth Street (MS-2000)
Sacramento, CA 95814

Subject: Los Esteros Critical Energy Facility
03-AFC-2
Condition of Certification TRANS-1 – Construction Traffic Control Plan

Dear Mr. Hoffman:

In accordance with Condition of Certification TRANS-1, as set forth in the California Energy Commission's Final Decision for the Los Esteros Critical Energy Facility II, Phase 2 (LECEF2), the enclosed Construction Traffic Control Plan has been revised based on Staff comments.

If you have any questions regarding this information, please contact me at (925) 557-2250.

Sincerely,



Allison Bryan
Authorized Signatory
EHS Specialist III

Report

**Construction Traffic Control
and Implementation Plan
Los Esteros
Critical Energy Facility**

Prepared for
Los Esteros Critical Energy Facility, LLC

April 2011

CH2MHILL

2485 Natomas Park Drive, Suite 600
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Construction Traffic Control and Implementation Plan

1. Introduction

This report presents a Construction Traffic Control and Implementation Plan (CTCIP) for the construction of Phase II of the Los Esteros Critical Energy Facility (LECEF). The CTCIP was developed pursuant to Condition of Certification (COC) TRANS-1 of the California Energy Commission's (CEC) Decision in 03-AFC-2, adopted in October 2006 (hereinafter, "2006 Decision"). Los Esteros Critical Energy Facility, LLC, is the project owner for the LECEF. The LECEF is located off Zanker Road, approximately 0.2 mile north of State Route (SR) 237, in the Alviso area of North San Jose, California. The site is located in Santa Clara County.

The LECEF is sited on an approximately 21-acre parcel, within the larger 174-acre parcel U.S. DataPort Planned Development Project. The LECEF is under contract to provide power to PG&E under a long term power purchase agreement.

The objective of the CTCIP is to minimize construction-related traffic congestion impacts and mitigate impacts where appropriate. Section 2 of this report provides the COCs incorporated in this plan. Sections 3 and 4 present a brief overview of the proposed project and construction staging activities. Section 5 summarizes existing traffic conditions. Section 6 discusses the potential impacts of the construction activities, and Section 7 outlines the CTCIP elements recommended to reduce traffic impacts. Section 8 discusses implementation and monitoring.

1.1 Project Background

The Application for Certification (AFC) for Phase 2 of LECEF was prepared in December 2003, and the traffic and transportation impacts for Phase 2 construction were assessed at that time. The purpose of this CTCIP is to identify strategies for managing construction activities to minimize construction-related traffic impacts. While much of the AFC is still valid, existing conditions traffic operations and traffic related construction impacts have changed since 2003, when the traffic analysis was conducted. Therefore, a revised impact analysis has been conducted as part of this CTCIP.

2. Conditions of Certification

The CEC issued COCs addressing potential traffic and transportation impacts in the 2006 Decision. TRANS-1 requires preparation of this CTCIP as follows:

2.1 Traffic Control Plan

TRANS-1: The project owner shall develop a Construction Traffic Control Plan that limits peak hour construction-period truck and commute traffic in coordination with the City of

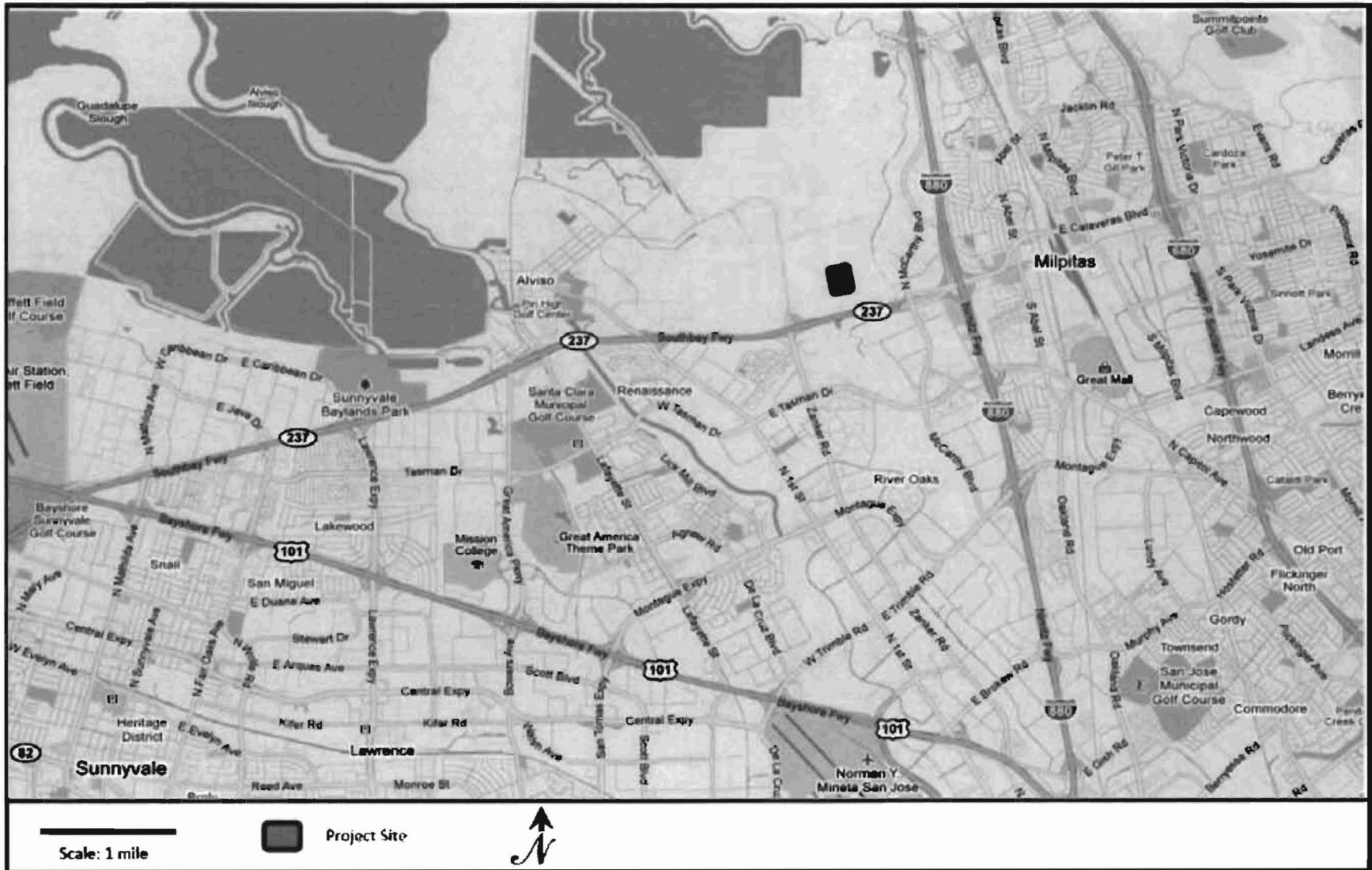


FIGURE 1
 Regional Transportation Facilities
 Construction and Traffic Control Implementation Plan
 Los Esteros Critical Energy Facility

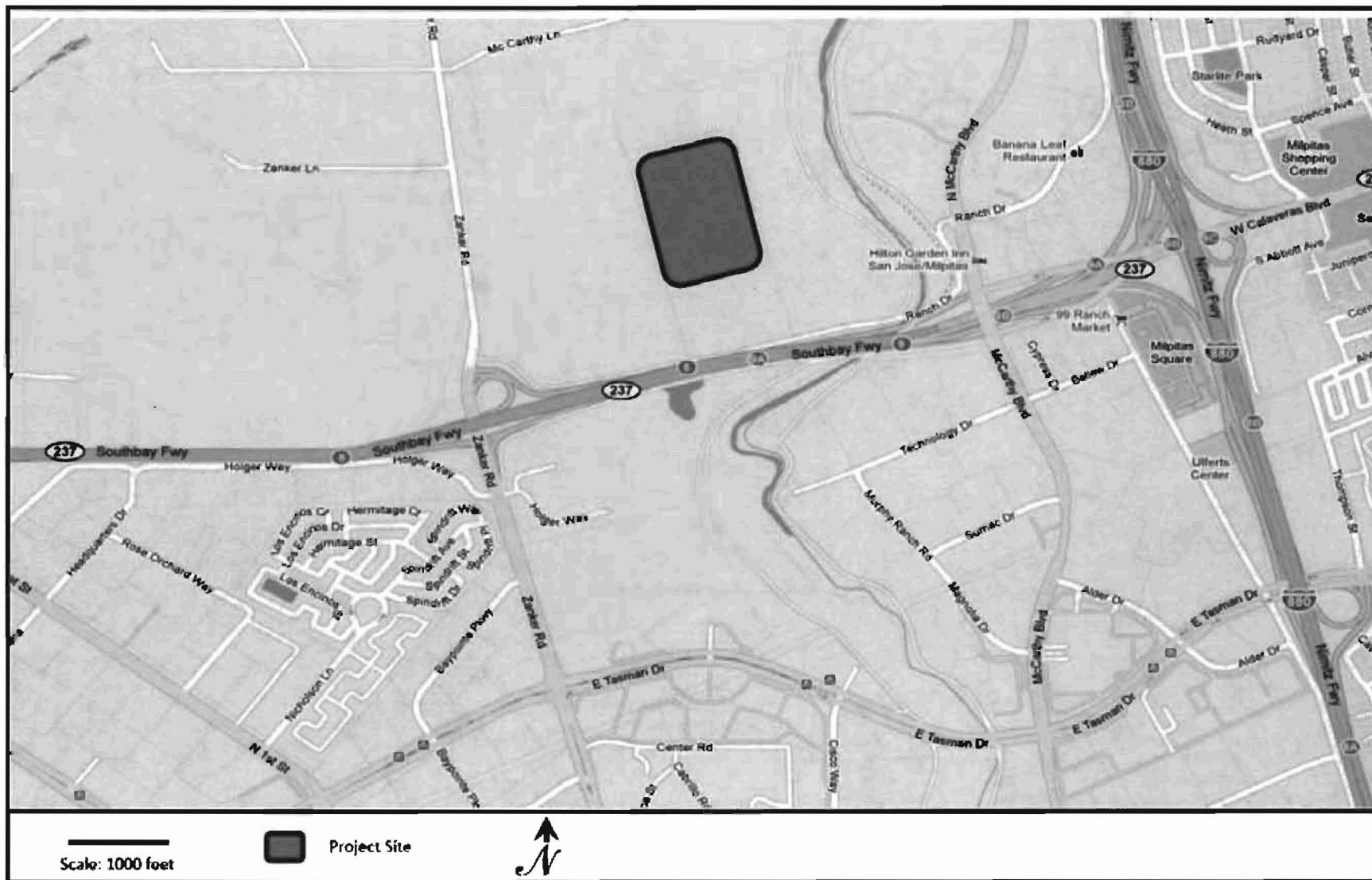


FIGURE 2
 Local Transportation Facilities
 Construction and Traffic Control Implementation Plan
 Los Esteros Critical Energy Facility

A shuttle service from the most distant off-street parking/laydown areas will not be necessary, as all construction parking for workers' personal vehicles will be located on the project site.

3.3 Bicycle and Pedestrian Facilities

There are designated bike lanes along McCarthy Road at the intersection of Ranch Drive. The Bay Trail and Coyote Creek Trail are located west of McCarthy Road.

Pedestrian facilities consist primarily of sidewalks along both sides of McCarthy Road and along portions of Ranch Drive and west side of Zanker Road.

3.4 Public Transit

The Santa Clara Valley Transportation Authority (VTA) provides regional and local public transportation service and connection to other transportation systems include:

- Caltrain
- Altamont Commuter Express
- Amtrak

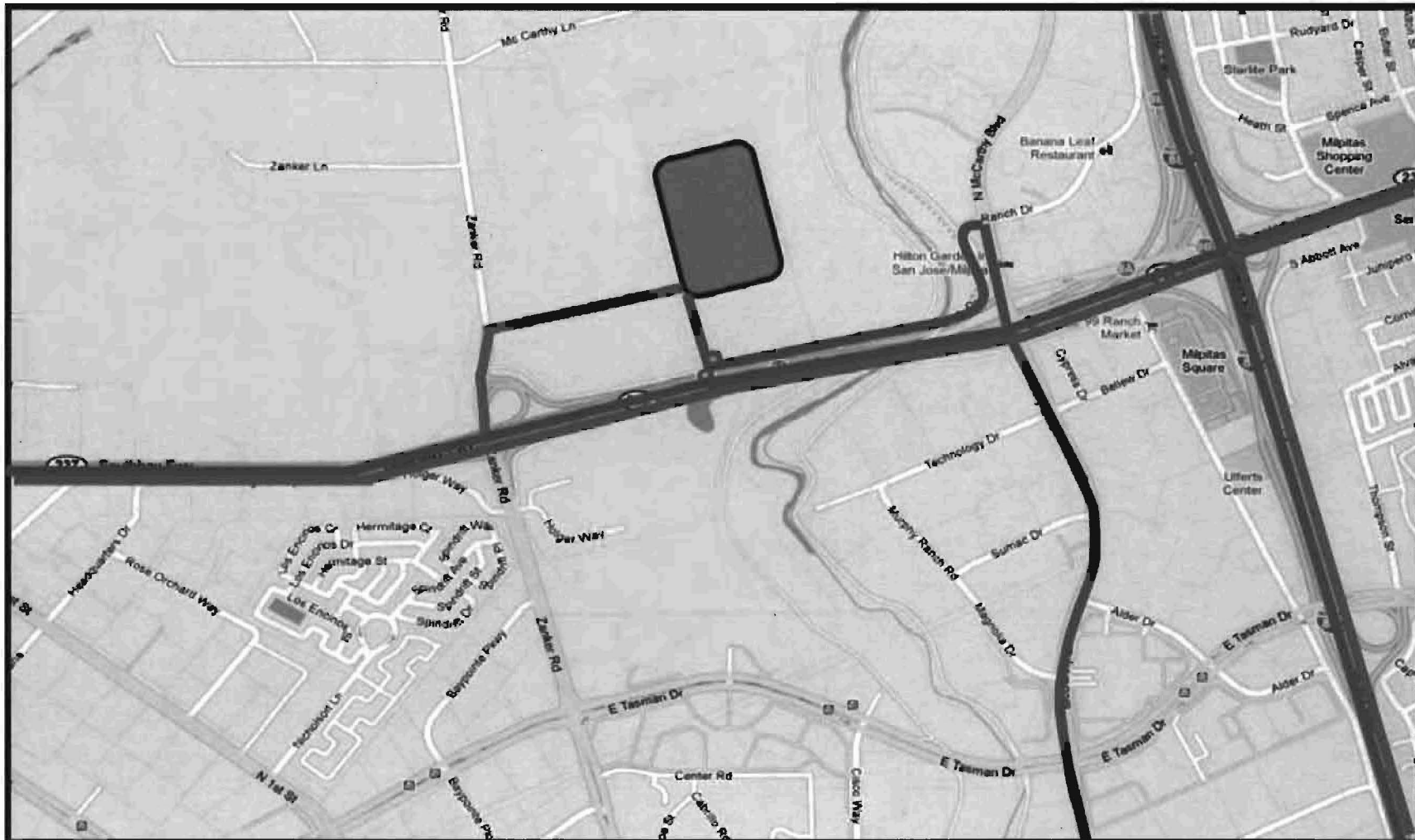
The project site is not served directly by any local VTA bus lines. In the project area the nearest bus line is the Number 47, which provides service between Great Mall/Main Transit Center and McCarthy Ranch shopping center with 30 minute headways during weekday commute hours.

4. Construction Activities

It is anticipated that workers will be drawn from the labor pool in Santa Clara County. During the peak construction phase (months 11 and 12, in mid-2012), construction will require a workforce of 144 workers each day.

Construction workers will use a temporary access during the construction period. Workers will travel northbound on McCarthy Road and turn left on Ranch Drive. Workers will continue along Ranch Drive as it parallels SR 237 to a temporary access approximately 0.6 miles west of the McCarthy Road and Ranch Drive intersection. Figure 3 identifies the worker access routes.


Construction will occur typically Monday through Friday from 7:00 a.m. to 4:00 p.m. Analysis of existing traffic counts at local intersections suggests that the peak hour occurs relatively late in the morning and afternoon. Turning movement counts indicate peak hours from 9:00 a.m. to 10:00 a.m. and 4:45 p.m. to 5:45 p.m. Therefore, the inbound worker trips will occur before the morning peak hour for existing traffic and the outbound worker trips will occur before the evening peak hour. During the peak construction phase, a maximum of seven delivery/haul trucks will be required each day. The LECEF proposes delivery truck and heavy haul/wide load trucks access the project site from Zanker Road, via SR 237. Any trucks delivering hazardous materials would also access the project site via the same route. It is expected that most deliveries would occur between 7:00 a.m. and 4:30 p.m. so that truck traffic will generally avoid peak periods. Figure 3 is an illustration of the proposed access routes for heavy haul and hazardous material as well as proposed access routes for construction workers. Neither route will require any new construction.



Scale: 1000 feet

 Worker Access Route

 Project Site

 Heavy Haul and Hazardous Material Route

 Location of Flagmen, if Needed

FIGURE 3
 All Construction Routes
 Construction and Traffic Control Implementation Plan
 Los Esteros Critical Energy Facility

No temporary lane closures or use of flagmen is anticipated because construction activities occur on roadways not travelled by the general public. If temporary lane closures or use of flagmen is determined to be necessary on Ranch Drive, the contractor will coordinate with the City of Milpitas and the City of San Jose to develop lane closure and flagging plans at that time. The potential location of flagmen on Ranch Drive is indicated in Figure 3.

5. Existing Traffic Conditions

Regional access to the site is provided from SR 237 and Interstate 880. Access for construction equipment and deliveries to the project site is provided by Zanker Road and the LECEF primary access road (Thomas Foon Chew Way), whereas construction workers will access the site via McCarthy Road. Both routes are shown in Figure 3. The construction traffic accessing the project site may affect the roadways described below.

5.1 State Route 237

SR 237 is a six-lane, limited access, east-west state highway in north San Jose. East of I-880, SR 237 (East Calaveras Boulevard) is classified as an arterial. According to traffic counts published by the California Department of Transportation (Caltrans) in 2009, the average daily traffic volume on SR 237 is 146,000 vehicles per day east of Zanker Road and 125,000 vehicles per day west of Zanker Road.

5.2 Interstate 880

I-880 is an eight- to twelve-lane, north-south highway that connects U.S. Route 101, State Route 237 and State Route 262 in San Jose, Milpitas and Fremont. North of the SR 237 interchange, I-880 is a twelve-lane facility. South of the SR 237 interchange I-880 is an eight-lane facility. According to traffic counts published by Caltrans in 2009, the average daily traffic volume on I-880 is 197,000 vehicles per day north of SR 237 and 159,000 vehicles per day south of SR 237.

5.3 McCarthy Road

McCarthy Road is a four- to six-lane, north-south roadway between Montague Expressway and Dixon Landing Road and serves San Jose, Milpitas, and Fremont. McCarthy Road provides local access to the project site for construction workers traveling east and west on SR 237. The City of Milpitas General Plan classifies this roadway as an arterial.

5.4 Zanker Road

Zanker Road is a four- to six-lane, north-south roadway through San Jose that starts north of the project site and ends south of East Brokaw Road. Zanker Road provides local access to the project site for trucks and delivery vehicles. Near the project site, Zanker Road has two lanes. This roadway is classified as a minor arterial by the California Road System.

5.5 Existing Intersection Operations

As discussed in Section 1, the existing conditions traffic operations from the December 2003 AFC have been updated in this CTCIP. This is primarily because of the change in route that construction workers will utilize to access the LECEF during construction, as compared with the original AFC. Intersection turning movement counts were conducted on two

Per Caltrans, LOS D is acceptable for planning purposes on highways and intersections that are located within the Caltrans jurisdiction. The Santa Clara County General Plan and Congestion Management Program (CMP) identify LOS D as the desired intersection operations threshold, with LOS E being acceptable under some circumstances. The City of Milpitas General Plan adopts the Santa Clara County CMP guidelines as well. Therefore, all the study intersections operate under acceptable conditions (LOS D or better).

5.6 Existing Roadway Operations

The 2000 HCM includes a set of criteria for assessing the performance of highway systems and the capacity of roadways by measuring the flow of traffic. For highway operations the volume-to-capacity (V/C) ratio is a general indicator of traffic flow characteristics. For highways, the traffic flow characteristics for different V/C ratios are described in Table 4.

TABLE 4
Level of Service Criteria for Highways

V/C Ratio	Traffic Flow Characteristics
0.00 – 0.60	Free flow; insignificant delays
0.61 – 0.70	Stable operation; minimal delays
0.71 – 0.80	Stable operation; acceptable delays
0.81 – 0.90	Approaching unstable flow; queues develop rapidly but no excessive delays
0.91 – 1.00	Unstable operation; significant delays
> 1.00	Forced flow; jammed conditions

Source: Highway Capacity Manual, 2000

The analysis for state facilities is based on PM peak hour two-way volumes. Using planning-level estimates of state highways' capacity, the capacity of a freeway or interstate facility was assumed as 2,000 vehicles per lane. Peak hour volumes were obtained from year 2009 Caltrans traffic counts.

Table 5 summarizes the daily traffic volumes and V/C ratios for study state highway segments under existing conditions. All study highway corridors operate at a V/C ratio of 0.85 or lower. There is no formal association between V/C ratio and LOS, but 0.90 is often used as a threshold value for LOS D/E. Therefore, these highway segments are expected to operate at an acceptable level.

TABLE 5
Study Highway Segment Operations—Existing Conditions

Highway	Location	Roadway Classification	Number Lanes	PM Peak Hour Volume*	PM Peak Hour Capacity	PM Peak Hour V/C Ratio
SR 237	West of North First/Taylor Street	Freeway	8	9,900	16,000	0.62
SR 237	West of Zanker Road	Freeway	6	10,000	12,000	0.83
SR 237	West of McCarthy Road	Freeway	8	11,100	16,000	0.69
I-880	North of SR 237	Interstate	12	14,400	24,000	0.60
I-880	South of SR 237	Interstate	8	12,200	16,000	0.76

*Source: 2009 Caltrans Traffic Counts

Note: Caltrans often uses a lower capacity for construction activities (e.g., 1,600 vehicles/hour/lane). This lower capacity value reflects the effects of narrower lanes, narrower shoulders, construction activities, and roadside barriers. For the LECEF project, however, there will not be any highway construction, so the baseline capacity (2,000 vehicles/hour/lane) was applied.

Construction Traffic Distribution

The following assumptions were used to distribute construction traffic over the study area network. The assumed routes are shown on Figure 4:

- When leaving the site, 100 percent of the construction worker traffic would travel south on McCarthy Road. Approximately 55 percent would travel east on SR 237, 35 percent would travel west on SR 237 and 10 percent would continue south on McCarthy Road.
- Of the 55 percent that travels east on SR 237, 25 percent would travel north on I-880, 25 percent would travel south on I-880 and five percent would continue east on East Calaveras Boulevard.

With this distribution, the number of construction workers accessing the site via only local arterials is anticipated to be low. Arterial analysis has not been conducted as this volume would not affect operations along local arterials.

Intersection Operations with Construction Traffic

The peak hour traffic generated during the construction period was added to the existing turning movement counts at the study intersections. The results of the existing plus construction traffic peak-hour intersection analysis are summarized in Tables 7 and 8.

Comparing Tables 2 and 3 with Tables 7 and 8, the intersections will operate at an acceptable LOS with construction traffic with one exception. The intersection of McCarthy Road and Ranch Drive is projected to operate at LOS E, worse than the LOS D for existing conditions using the October 2010 field data as the basis for existing conditions. If the February 2011 data are used as the base, this intersection would operate at LOS D during construction. Averaging the October and February counts and applying construction traffic would also result in LOS E. The increased delay at this intersection is caused by the increase in traffic volumes (105 vehicles per hour) for the eastbound right-turn from Ranch Drive to McCarthy Road.

This delay/LOS estimate is likely conservative, because construction workers are expected to arrive and depart much earlier than the peak period for office workers in the area. Also, the construction worker estimate is only for the two-month construction peak. Therefore, the projected impact may not be significant.

TABLE 7
Study Intersection AM Peak Hour Operations – Existing plus Construction Traffic Conditions

#	Study Intersection	October Data		February Data	
		Delay	LOS	Delay	LOS
1	McCarthy Road/Eastbound SR 237 Ramps	18.8	B	18.9	B
2	McCarthy Road/Westbound SR 237 Ramps	19.8	B	20.0	C
3	McCarthy Road/Ranch Drive	26.0	C	19.2	B

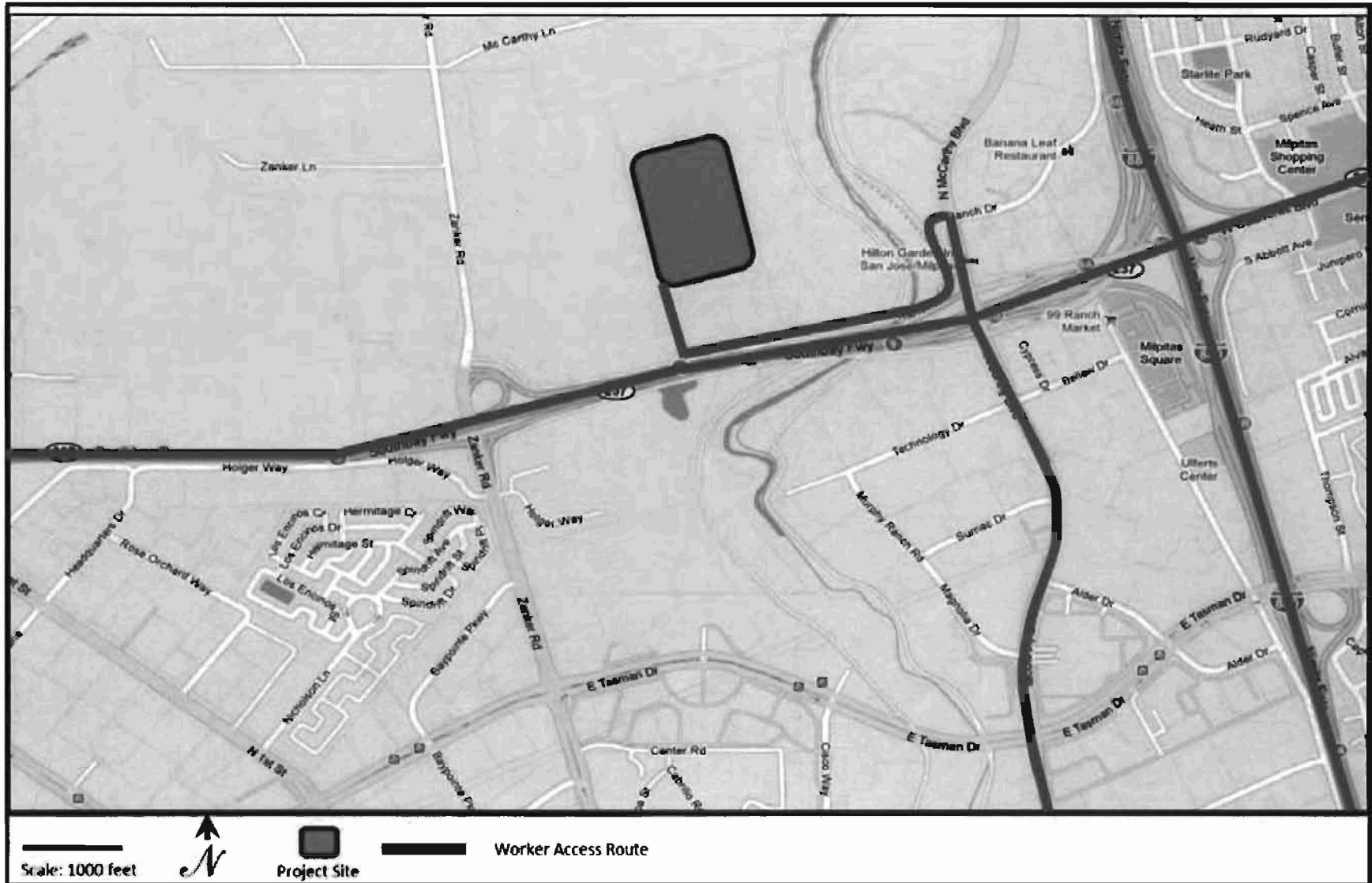


FIGURE 4
 Construction Worker Access Routes
 Construction and Traffic Control Implementation Plan
 Los Esteros Critical Energy Facility

TABLE 8
Study Intersection PM Peak Hour Operations – Existing plus Construction Traffic Conditions

#	Study Intersection	October Data		February Data	
		Delay	LOS	Delay	LOS
1	McCarthy Road/Eastbound SR 237 Ramps	24.7	C	26.9	C
2	McCarthy Road/Westbound SR 237 Ramps	23.3	C	20.2	C
3	McCarthy Road/Ranch Drive	59.4	E	53.7	D

Roadway LOS with Construction Traffic

Average peak hour traffic generated during the construction period was added to the existing traffic volumes on each roadway segment. The peak hour V/C ratios of study highway segments under existing plus construction traffic conditions are summarized in Table 9. Based on the analysis, the study roadway segments are forecasted to operate at the same or similar V/C ratio as existing conditions (see Table 5). There will be no significant impacts from the construction traffic.

TABLE 9
Study Highway Segment Operations – Existing plus Construction Traffic Conditions

Highway	Location	ADT	Project Trips Added		Projected PM Peak Hour V/C Ratio
			PM Peak Hour	Percent of PM Peak Hour	
SR 237	West of North First/Taylor Street	9,900	40	<1%	0.62
SR 237	West of Zanker Road	10,000	40	<1%	0.84
SR 237	West of McCarthy Road	11,100	60	<1%	0.70
I-880	North of SR 237	14,400	30	<1%	0.60
I-880	South of SR 237	12,200	30	<1%	0.76

Note: Caltrans often uses a lower capacity for construction activities (e.g., 1,600 vehicles/hour/lane). This lower capacity value reflects the effects of narrower lanes, narrower shoulders, construction activities, and roadside barriers. For the LECEF project, however, there will not be any highway construction, so the baseline capacity (2,000 vehicles/hour/lane) was applied. To test the sensitivity of a lower capacity, the calculations were repeated at 1,600 vehicles/hour, resulting in V/C ratios of 0.75 to 1.04. However, the increase in V/C ratio attributable to project construction remained at less than 1 percent.

6.2 Road Damage

Damage to existing roads by construction activity will be repaired to original, or as near original condition as possible by the contractor. Any road damage would likely occur on:

- Zanker Road
- Ranch Drive
- Thomas Foon Chew Way
- McCarthy Road

A video recording showing the existing construction condition of the routes listed above will be made by the contractor or owner before construction starts. Another video recording will be made up to 90 days following the completion of construction to show that any identified damaged sections have been repaired.

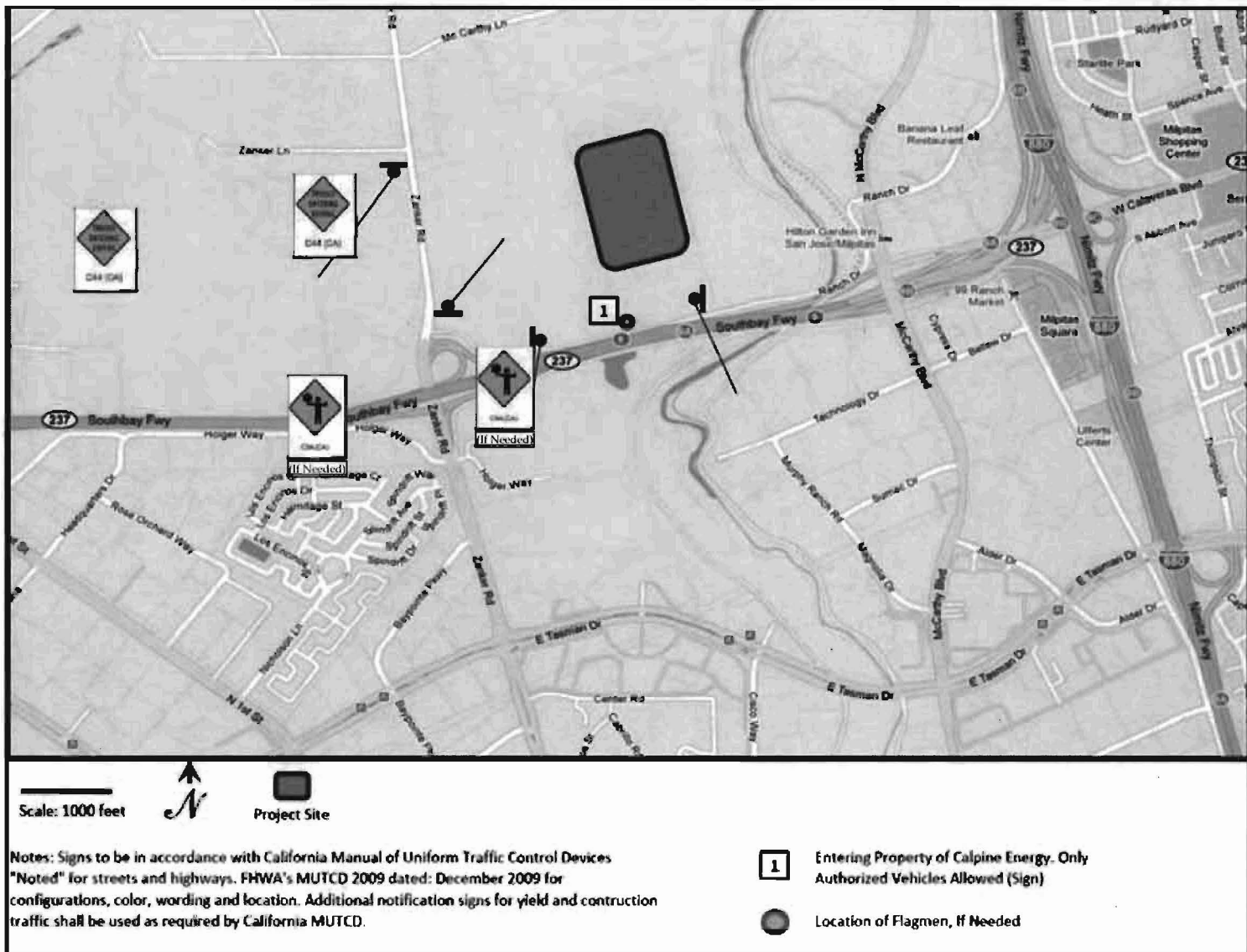
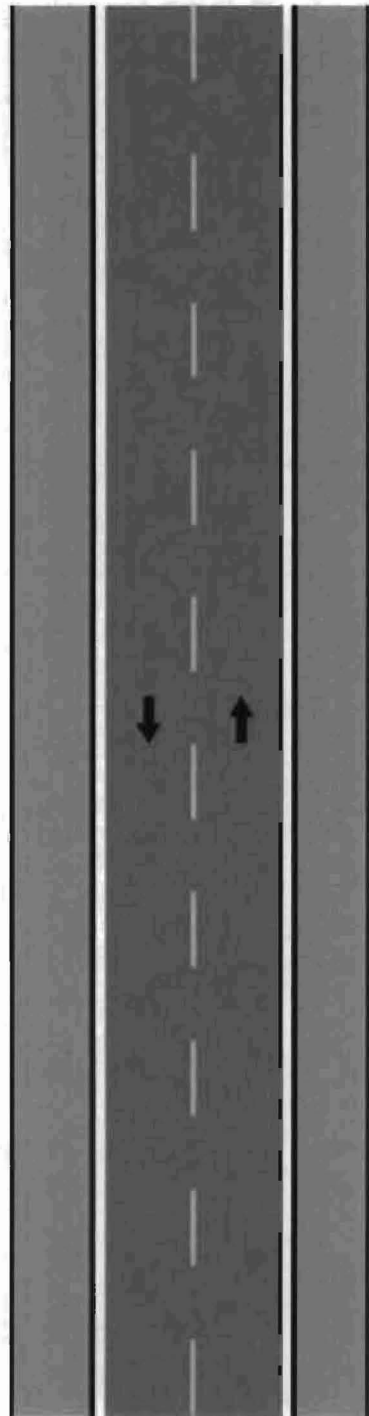
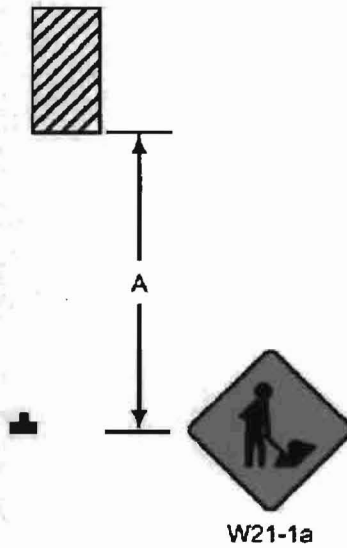


FIGURE 5
 Construction Signing Plan
 Construction and Traffic Control Implementation Plan
 Los Esteros Critical Energy Facility



Typical Application 1



Note: See Table 6H-2 and 6H-3 for the meaning of the symbols and/or letter codes used in this figure.

FIGURE 6

Typical Application for Work Outside of the Shoulder
 (source: California MUTCD 2010)
 Construction and Traffic Control Implementation Plan
 Los Esteros Critical Energy Facility

7.1 Traffic Monitoring and Restriping

As discussed in Section 6.1, there is a potential impact to operations at the McCarthy Road/Ranch Drive intersection. Increased delay is expected due to the construction traffic from eastbound Ranch Drive to southbound McCarthy Road. The projected delay may exceed the LOS D goal for operations. However, it is expected that the timing of construction worker traffic will not affect intersection operations to a noticeable degree.

To address the potential impacts of construction activities, traffic operations will be monitored at the intersection of McCarthy Road/Ranch Drive, McCarthy Road/westbound SR 237 on-off ramps, and McCarthy Road/eastbound SR 237 on-off ramps during the AM and PM peak periods. Monitoring will occur every 2 months during construction. Intersections' delays will be monitored by a transportation count contractor through field observations/traffic counts and use of traffic analysis software to determine LOS and average vehicle delay. If the intersection of McCarthy Road and Ranch Drive operates at LOS E as a result of the project, the contractor will notify the City of Milpitas Traffic Engineering Division. To reduce delays to an acceptable level, the intersection can be restriped for a second right-turn lane (shared with the existing through lane). The contractor will coordinate with the City of Milpitas Traffic Engineering Division regarding requirements for restriping channelization (e.g., survey loop detectors and adjust signal timings) and will prepare an application for an encroachment permit. With this change, operations would be improved to LOS D or better.

7.2 Motorist Information Strategies

Motorist information strategies are a direct way of informing motorists in the project area. These strategies include various means to provide motorists in the vicinity of the construction with appropriate traffic and incident information. This information is intended to guide and assist drivers with making decision about alternate route choices or travel planning. For the LECEF project these strategies would include signing and traffic control device placement.

To warn drivers of slower moving vehicles and trucks entering and crossing the roads, signage will be placed along routes used by trucks, in particular Zanker Road. Where required, flaggers will be used for temporary traffic control, to direct vehicles and permit safe truck movement in construction zones. Flagger stations and advance warning signs shall be located such that approaching road users will have sufficient distance to stop.

All signage and traffic controls shall be in accordance with the "Manual of Uniform Traffic Control Devices" (U.S. Department of Transportation Federal Highway Administration, 2007), the Work Area Traffic Control Handbook" (American Public Works Association, 2006), California Vehicle Code Section 21400 and other local, state, and federal regulatory requirements and specifications.

7.3 Ridesharing Plan

A ridesharing plan will also promote carpooling among construction workers by helping match those who wish to share a ride from/to the same destination. The contractor will set up information on ridesharing in a common area, as well as a means to allow potential ridesharing partners to meet.

Transportation Research Board. 2000. Highway Capacity Manual.

Ma, Paul. 2010. Personal Communication, City of San Jose Department of Transportation, Transportation Systems Planning Manager.

Chan, Steve. 2010. Personal Communication, City of Milpitas Engineering Division, Traffic Engineer.

U.S. Department of Transportation Federal Highway Administration. 2009. Manual on Uniform Traffic Control Devices. Accessed at <http://mutcd.fhwa.dot.gov/>.