

# **THOUSAND OAKS BOULEVARD SPECIFIC PLAN**

## **Final Environmental Impact Report**

### **Volume II Appendices**

#### **Prepared for:**

City of Thousand Oaks  
Community Development Department  
2100 Thousand Oaks Boulevard  
Thousand Oaks, California 91362

#### **Prepared by:**

Impact Sciences, Inc.  
803 Camarillo Springs Road, Suite A  
Camarillo, California 93012

**September 2011**

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### **Notice of Preparation (NOP) and Comments on the NOP**





Notice of Preparation

To: CALTRANS, District 7 Office

120 S. Spring Street

Los Angeles, CA 90012

From: Thousand Oaks Community Development Dept.

2100 E. Thousand Oaks Blvd.

Thousand Oaks, CA 91362

Subject: Notice of Preparation of a Draft Environmental Impact Report

The City of Thousand Oaks

will be the Lead Agency and will prepare an environmental impact report for the project identified below. We need to know the views of your agency as to the scope and content of the environmental information which is germane to your agency's statutory responsibilities in connection with the proposed project. Your agency will need to use the EIR prepared by our agency when considering your permit or other approval for the project.

The project description, location, and the potential environmental effects are contained in the attached materials. A copy of the Initial Study ( ☐ is ☒ is not ) attached.

Due to the time limits mandated by State law, your response must be sent at the earliest possible date but not later than 30 days after receipt of this notice.

Please send your response to Greg Smith at the address shown above. We will need the name for a contact person in your agency.

Project Title: Thousand Oaks Boulevard Specific Plan

Project Applicant, if any: Thousand Oaks Redevelopment Agency

Date January 9, 2010

Signature 

Title Senior Planner, Environmental Services

Telephone (805) 449-2329

Reference: California Code of Regulations, Title 14, (CEQA Guidelines) Sections 15082(a), 15103, 15375.

## NOP Attachment

### THOUSAND OAKS BOULEVARD SPECIFIC PLAN

#### PROJECT DESCRIPTION

##### Proposed Specific Plan

The Thousand Oaks Boulevard Association (TOBA), working in conjunction with RRM Design Group, Inc., has prepared a draft Thousand Oaks Boulevard Specific Plan. The Thousand Oaks City Council approved initiation of this Specific Plan in 2009, so that it may be refined through staff review and further public outreach in coordination with TOBA, and be considered for adoption. See attached map. Going forward, the Redevelopment Agency will be the applicant of record since the proposed Specific Plan is intended to implement the agency's goals for redevelopment of the boulevard. Correspondingly, the City of Thousand Oaks is the "lead agency" for the project since it has permit authority over any future applications or related entitlements.

A critical part of the Thousand Oaks Boulevard Specific Plan is the proposed land use regulations and development standards, which if adopted, would allow a greater range of mixed-use type projects, including taller structures with reduced building set-backs and lesser parking requirements. Initial preliminary estimates prepared by the Community Development Department indicated that the proposed Specific Plan could potentially generate about 370 dwelling units and approximately 1,100,000 sq. ft. of commercial floor area over and above existing conditions. A comparison with current City development standards is provided below.

**Table 1: Principal Development Standards<sup>1</sup>**

SUBJECT	PROPOSED SPECIFIC PLAN		CURRENT CITY STANDARDS
	GENERAL STANDARD	SPECIAL STANDARD FOR BOULEVARD FRONTAGE	
Building setbacks from property line			
Front	0' (minimum 10' landscaped setback if parking is in front.)	0' minimum to 15' maximum (minimum 25' landscaped setback if parking is in the front)	C-2 Zone: 20' min. landscaped setback (to building or parking)
Rear	10'	10'	C-2 Zone: 0'(10' adjacent to residential)
Side	0' (minimum 4' landscaped setback for parking lot)	0' (minimum 4' landscaped setback for parking lot)	C-2 Zone: 0'

SUBJECT	PROPOSED SPECIFIC PLAN		CURRENT CITY STANDARDS
	GENERAL STANDARD	SPECIAL STANDARD FOR BOULEVARD FRONTAGE	
Side and rear setbacks abutting residential	20' - 50' depending on building height	20' - 50' depending on building height  Between Erbes and Conejo School Rds. 10' min. sidewalk (in addition to existing 10'), and 5' min. in other areas	<u>C-2 Zone</u> : 5' side, 10' rear  Other commercial and industrial zones (C-1, C-3, M-1) require a 20' setback if the building is greater than 25' high.
<b>Other standards</b>			
Sidewalk width	8'	20' – Erbes to Conejo School Rd. (requires 10' dedication)  15' – other locations on Boulevard (requires 5' dedication)	10' – commercial areas
Building Height	55' maximum average height, not to exceed 4 stories (no minimum)	20' minimum height  55' maximum average height not to exceed 4 stories	<u>C-2 Zone</u> : - 35'  <u>RPD Zone</u> : - 25' plus where additional setback is provided
Building Form	3 <sup>rd</sup> and 4 <sup>th</sup> stories recessed from front building facades	3 <sup>rd</sup> and 4 <sup>th</sup> stories recessed from front building facades  Additional standards (see pp. 76-79) to enhance pedestrian experience	Similar policy in City's Architectural Design Guidelines  N/A
Public Exterior Space	3% of building footprint – commercial and mixed use projects only	Same as General Standard	Encouraged by City's architectural Design Guidelines, but no specific space standard

1: This table describes the primary proposed development standards. Some of the standards could be exceeded or modified, as incentives to provide certain features, as described in the proposed Incentives Program (Chapter 7C) of the Draft Specific Plan.

### **Companion Applications**

The City Council has initiated two other applications that are being processed concurrently with the Specific Plan, to make conforming changes in the City's General Plan. These are:

General Plan Land Use Element Amendment LU 2009-70130 - The purpose of this amendment is to adopt conforming land use designations in the Land Use Element of the General Plan. This will possibly involve a new land use category for the Specific Plan area or portions of it to accommodate the mixed use proposal. It will be crafted by

City staff separately, and will not introduce any different environmental effects than the Specific Plan itself.

General Plan Circulation Element Amendment C 2001-30 - The City Council initiated this Amendment a number of years ago. The Circulation Element presently depicts Thousand Oaks Boulevard as a 4-lane (total width) road, except between Hodencamp Road and Erbes Road, and between Hampshire Road and the easterly City limits. In those segments, Thousand Oaks Boulevard is shown as a 6 lane road. This amendment would reduce those segments to a 4-lane road. The draft Specific Plan depicts a 4-lane section throughout its length, so this Amendment is needed for consistency within the Specific Plan area.

### **Related Legislative Action**

Measure "E" is an ordinance, adopted in 1996, and codified as Sec. 9-2.203 of the Municipal Code. It requires that any General Plan amendment approved by the City Council which increases residential density, or commercial acreage, above the levels that existed in 1996, must be approved by the electorate. Because of this requirement this companion General Plan amendment will likely be subject to voter ratification if approved by City Council.

### **ENVIRONMENTAL REVIEW PROCESS**

A specific plan is a project subject to the California Environmental Quality Act (CEQA). As noted above, the City/Redevelopment Agency is the lead agency for environmental review purposes, and will prepare an Environmental Impact Report (EIR). Throughout this process, staff will maintain an outreach effort with the various stakeholders, including the Thousand Oaks Business Association, other public agencies, property owners and businesses within the proposed specific plan area, adjacent property owners, community organizations and institutions, and the general public. Staff intends to use the City's website to convey information and receive input about the proposed Specific Plan as it moves through the process, and also conduct further public outreach meetings at key steps.

### **Anticipated Time Frame for EIR Completion**

The anticipated time frame for completion of the steps the final EIR is estimated to be completed within one year, with public hearings on the Specific Plan and voter ratification (if necessary) to follow.

### **List of Potential Environmental Effects**

Land Use – The proposal involves a change to the City's zoning and development policies for the Specific Plan area, and to the Land Use and Circulation elements of the General Plan. As such, the Land Use section of the EIR needs to analyze the proposed changes as to their compliance with underlying General Plan policies related to land use and the other Elements of the General Plan.

Traffic and Circulation – An analysis of the potential impacts on traffic and circulation shall be addressed in terms of the cumulative effect on the LOS (Level of Service) of key intersections located along Thousand Oaks Boulevard, as well as portions of the roadway network that provide primary access to the project. CALTRANS facilities in the study area shall also be analyzed per standard EIR preparation procedures. Any potential impacts to these latter facilities shall also be quantified and appropriate mitigation measures identified.

Air Quality – An analysis of the Specific Plan's potential air quality impacts shall be addressed in terms of NOX, ROC and particulate emission thresholds set forth in the most recent Ventura County Air Quality Impact Guidelines. In addition, the EIR shall address the project's compliance with local AQMP population projections, as well as attainment of state and federal ozone standards within the South Coast Airshed. An analysis of greenhouse gas emissions shall also be prepared pursuant to the most current guidelines published by the State Office of Planning and Research.

Noise – An analysis of potential noise impacts on sensitive land uses, such as residential associated with the Specific Plan's proposed mixed-use component, shall be included in the EIR. This analysis shall focus on the potential exposure of future residents to noise levels in excess of sound levels that are considered "acceptable" in the Noise Element of the General Plan (May, 2000). This includes any sites located within the projected 60 to 65 dB CNEL noise contours depicted in Figure 4 of the Noise Element as they pertain to the Ventura and Route 23 Freeways, Thousand Oaks Boulevard and Erbes Road. Since the Specific Plan does not specify the actual location of residential land uses, the analysis shall focus more on defining areas to avoid completely and appropriate mitigation measures for other areas where residential could be allowed.

Biological Resources – Since most of the Specific Plan area is already developed, this analysis will focus on identifying what, if any, biological resources could be affected significantly by the development of the few vacant parcels and redevelopment of existing properties. One of the draft Specific Plan's policy changes would be to exempt from the City's Oak Tree Protection Ordinance (Municipal Code section 5-14.01 et. Seq.) any oak tree with a trunk diameter of less than 24 inches at 4 ½ feet above grade. The current ordinance exempts only oak trees with a trunk diameter less than 2 inches. Accordingly, the Specific Plan would reasonably be expected to result in the removal of more oak trees than would otherwise be permitted. However, since no specific land development projects are being proposed at this time, the level of analysis will necessarily be general.

Historic Resources – Staff has determined that there are no historic resources listed in the California Register of Historic Resources or in the Conservation Element of the Thousand Oaks General Plan (locally-designated resources) within the Specific Plan area. As a result, this section will comprise an analysis of the proposed Specific Plan's potential impacts on any places, structures or features that qualify for historic status pursuant to Public Resources Code Section 5024.1.

Water Supply – Due to the amount of additional development the proposed Specific Plan would facilitate, the project will be subject to the requirements of SB 610, which requires an assessment be undertaken in cooperation with local water purveyors in order to provide documentation in the EIR that adequate long-term supplies are available to serve the proposed project.

Solid Waste – An analysis of the Specific Plan's potential effect on regional landfill capacity shall be addressed in terms of any locally adopted or proposed impact thresholds. The EIR shall also include a discussion of any recycling requirements and solid waste reduction programs mandated by the city, county or state.

Public Services – An analysis of the Specific Plan's potential impact on schools, fire protection, police services, wastewater collection and treatment, and public utilities shall be included in the EIR.

Schools: Conejo Valley Unified School District  
Fire: Ventura County Fire Protection District  
Police: Ventura County Sheriff, under contract to City of Thousand Oaks  
Wastewater: City of Thousand Oaks  
Electric: Southern California Edison  
Natural Gas: Southern California Gas Company

Hazardous Materials – The EIR shall analyze potential impacts associated with any parcels that are known to be contaminated by hazardous materials. This shall include LUFT (leaking underground fuel tanks) sites currently undergoing remediation under the supervision of the Ventura County Environmental Health Department.

Aesthetics – The draft Specific Plan includes three (3) visual simulations of the potential type of new development and redevelopment that it would encourage along Thousand Oaks Boulevard (pg. 46 and 47). The aesthetics section will also contain four (4) additional photo-simulations that illustrate a conceptual streetscape of typical building massing, without architectural detail, along Thousand Oaks Boulevard, which could be developed under the Specific Plan, including a range of building heights up to the maximum allowed and setbacks allowed by the Specific Plan. The massing studies shall be superimposed over photographs of existing conditions. The preliminary locations for these photo-simulations will be selected by City Staff.

Geotechnical Hazards – A documentation of geotechnical hazards known to occur within the boundaries of the Specific Plan, or that could potentially affect proposed land uses, shall be included in the EIR. As identified in the Safety Element of the General Plan, this includes potential impacts related to seismic shaking, liquefaction, expansive soils and designated flood zones.

Hydrology – An analysis shall be prepared that addresses the potential for increased stormwater and nuisance water runoff within the Specific Plan boundaries due to both new construction and redevelopment. This analysis shall assume project compliance with SQUIMP (Stormwater Quality Urban Impact Management Plan) and NPDES

(National Pollution Discharge Elimination System) permit requirements that become effective on August 10, 2010.

### **Alternatives to the Proposed Specific Plan**

The following alternatives have been preliminarily identified for definition and review and study. In the development of the draft EIR, these may be refined or altered as necessary to comply with CEQA Guidelines requirements for defining and evaluating alternatives.

**No Project** – This alternative would involve buildout of the Specific Plan area under existing General Plan and zoning.

**Alternative Location** – Although the CEQA Guidelines require this alternative to be discussed in the EIR, it is not considered to be feasible considering the purpose of the project is to guide development for a specific geographic area, and given the City's advanced stage of buildout and lack of sufficient land with similar zoning and locational characteristics to the project area. The EIR shall document reasons for this determination.

**Downtown-Focused Alternative** – Rather than adopting the proposed Specific Plan's development standards for the entire Boulevard, which is nearly three miles long, this alternative would focus on a project area from the Route 23 Freeway eastward to Hampshire Road, as to those development standards (building height, parking ratios, mixed-use) that would lead to more intensive development than allowed by existing zoning. The other proposed regulations related to setbacks, other site planning standards, permitted uses, and architectural guidelines would continue to apply throughout the Specific Plan area. This alternative would limit the area where more intensified land uses would be permitted, as compared to the proposed Specific Plan.

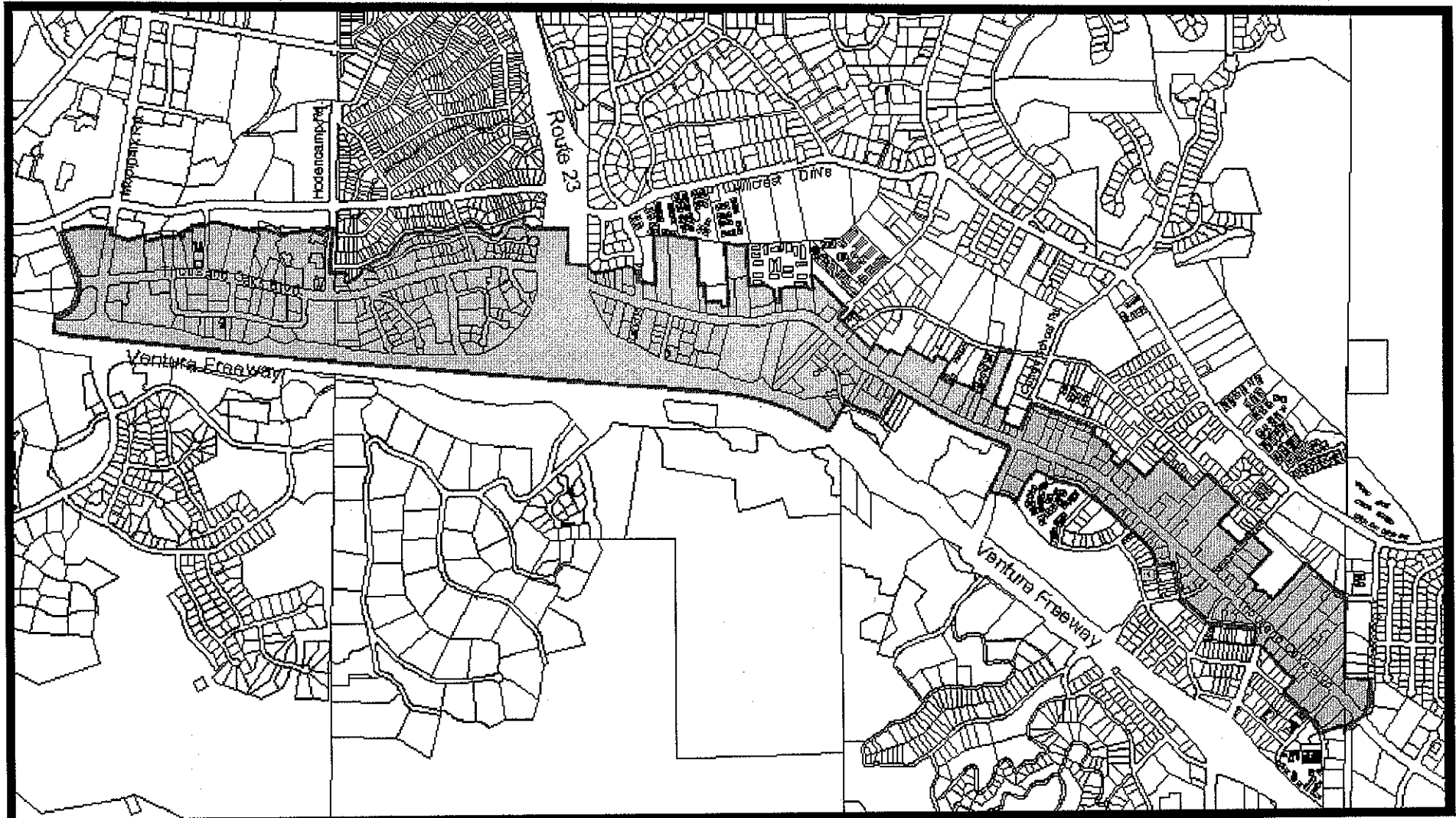
**Gateway Alternative** – Similar to the Downtown-Focused Alternative, this alternative would define the area where more intensive development would be permitted as within a selected distance (perhaps ¼ mile or a number of blocks) of a few selected "Gateway" locations such as the intersection of Thousand Oaks Boulevard with key cross-streets including Moorpark Road, Rancho Road and Hampshire Road.

**Reduced Development Intensity Alternative** - This alternative would involve reducing the allowable intensity of development throughout the Specific Plan area by reducing the permissible maximum building height from four or more stories, to three stories.

**Environmentally Superior Alternative** – The EIR shall identify an "Environmentally Superior" Alternative from among the alternatives analyzed that would best serve to reduce, or avoid potentially significant environmental effects.



# Thousand Oaks Boulevard Specific Plan Revised Boundary



0 500 1,000 2,000 3,000 4,000 Feet



October 2, 2009

City of Thousand Oaks  
Community Development Department  
2100 E. Thousand Oaks Boulevard  
Thousand Oaks, CA 91362  
(805) 449-2323





STATE OF CALIFORNIA

GOVERNOR'S OFFICE of PLANNING AND RESEARCH

STATE CLEARINGHOUSE AND PLANNING UNIT



ARNOLD SCHWARZENEGGER  
GOVERNOR

CYNTHIA BRYANT  
DIRECTOR

Notice of Preparation

January 7, 2010

To: Reviewing Agencies  
  
Re: Thousand Oaks Boulevard Specific Plan  
SCH# 2010011013

Attached for your review and comment is the Notice of Preparation (NOP) for the Thousand Oaks Boulevard Specific Plan draft Environmental Impact Report (EIR).

Responsible agencies must transmit their comments on the scope and content of the NOP, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of the NOP from the Lead Agency. This is a courtesy notice provided by the State Clearinghouse with a reminder for you to comment in a timely manner. We encourage other agencies to also respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

Greg Smith  
City of Thousand Oaks  
2100 E. Thousand Oaks Blvd.  
Thousand Oaks, CA 91326

with a copy to the State Clearinghouse in the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the environmental document review process, please call the State Clearinghouse at (916) 445-0613.

Sincerely,

Scott Morgan  
Acting Director

Attachments  
cc: Lead Agency

**Document Details Report  
State Clearinghouse Data Base**

**SCH#** 2010011013  
**Project Title** Thousand Oaks Boulevard Specific Plan  
**Lead Agency** Thousand Oaks, City of

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**Type** NOP Notice of Preparation  
**Description** Thousand Oaks Boulevard Specific Plan is the proposed land use regulations and development standards, which if adopted, would allow a greater range of mixed-use type projects, including taller structures with reduced building set-backs and lesser parking requirements. Initial preliminary estimates prepared by the Community Development Department indicated that the proposed Specific Plan could potentially generate about 370 dwelling units and approximately 1,100,000 sq. ft. of commercial floor area over and above existing conditions.

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**Lead Agency Contact**

**Name** Greg Smith  
**Agency** City of Thousand Oaks  
**Phone** (805) 449-2329 **Fax**  
**email**  
**Address** 2100 E. Thousand Oaks Blvd.  
**City** Thousand Oaks **State** CA **Zip** 91326

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**Project Location**

**County** Ventura  
**City** Thousand Oaks  
**Region**  
**Cross Streets**  
**Lat / Long**  
**Parcel No.**  

<b>Township</b>	<b>Range</b>	<b>Section</b>	<b>Base</b>
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**Proximity to:**

**Highways**  
**Airports**  
**Railways**  
**Waterways**  
**Schools**  
**Land Use**

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**Project Issues** Landuse; Traffic/Circulation; Air Quality; Noise; Biological Resources; Archaeologic-Historic; Water Supply; Solid Waste; Public Services; Toxic/Hazardous; Aesthetic/Visual; Geologic/Seismic; Water Quality; Other Issues

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**Reviewing Agencies** Resources Agency; Office of Historic Preservation; Department of Parks and Recreation; Department of Water Resources; Department of Fish and Game, Region 5; Native American Heritage Commission; California Highway Patrol; Caltrans, District 7; Department of Toxic Substances Control; Regional Water Quality Control Board, Region 4

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**Date Received** 01/07/2010 **Start of Review** 01/07/2010 **End of Review** 02/08/2010

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# NOP Distribution List

County: Yuba

SCH#

## Regional Water Quality Control Board (RWQCB)

- ☐ **RWQCB 1**  
Cathleen Hudson  
North Coast Region (1)
- ☐ **RWQCB 2**  
Environmental Document  
Coordinator  
San Francisco Bay Region (2)
- ☐ **RWQCB 3**  
Central Coast Region (3)
- ☒ **RWQCB 4**  
Teresa Rodgers  
Los Angeles Region (4)
- ☐ **RWQCB 5S**  
Central Valley Region (5)
- ☐ **RWQCB 5F**  
Central Valley Region (5)  
Fresno Branch Office
- ☐ **RWQCB 5R**  
Central Valley Region (5)  
Redding Branch Office
- ☐ **RWQCB 6**  
Lahontan Region (6)
- ☐ **RWQCB 6V**  
Lahontan Region (6)  
Victorville Branch Office
- ☐ **RWQCB 7**  
Colorado River Basin Region (7)
- ☐ **RWQCB 8**  
Santa Ana Region (8)
- ☐ **RWQCB 9**  
San Diego Region (9)

☐ Other \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Last Updated on 01/04/2010

## Business, Trans & Housing

- ☐ Caltrans - Division of  
Aeronautics  
Sandy Hesnard
- ☐ Caltrans - Planning  
Terri Pencovic
- ☒ California Highway Patrol  
Scott Loetscher  
Office of Special Projects
- ☐ Housing & Community  
Development  
CEQA Coordinator  
Housing Policy Division

## Dept. of Transportation

- ☐ Caltrans, District 1  
Rex Jackman
- ☐ Caltrans, District 2  
Marcelino Gonzalez
- ☐ Caltrans, District 3  
Bruce de Terra
- ☐ Caltrans, District 4  
Lisa Carboni
- ☐ Caltrans, District 5  
David Murray
- ☐ Caltrans, District 6  
Michael Navarro
- ☒ Caltrans, District 7  
Elmer Alvarez

## Cal EPA

### Air Resources Board

- ☐ Airport Projects  
Jim Lerner
- ☐ Transportation Projects  
Douglas Ito
- ☐ Industrial Projects  
Mike Tollstrup
- ☐ California Department of  
Resources, Recycling & Recovery  
Sue O'Leary
- ☐ State Water Resources Control  
Board  
Regional Programs Unit  
Division of Financial Assistance
- ☐ State Water Resources Control  
Board  
Student Intern, 401 Water Quality  
Certification Unit  
Division of Water Quality
- ☐ State Water Resources Control Board  
Steven Herrera  
Division of Water Rights
- ☒ Dept. of Toxic Substances Control  
CEQA Tracking Center
- ☐ Department of Pesticide Regulation  
CEQA Coordinator

- ☐ Fish & Game Region 2  
Jeff Drongesen
- ☐ Fish & Game Region 3  
Charles Armor
- ☐ Fish & Game Region 4  
Julie Vance
- ☒ Fish & Game Region 5  
Don Chadwick  
Habitat Conservation Program
- ☐ Fish & Game Region 6  
Gabrina Gatchel  
Habitat Conservation Program
- ☐ Fish & Game Region 6 I/M  
Brad Henderson  
Inyo/Mono, Habitat Conservation  
Program
- ☐ Dept. of Fish & Game M  
George Isaac  
Marine Region

## Other Departments

- ☐ Food & Agriculture  
Steve Shaffer  
Dept. of Food and Agriculture
- ☐ Depart. of General Services  
Public School Construction
- ☐ Dept. of General Services  
Anna Garbeff  
Environmental Services Section
- ☐ Dept. of Public Health  
Bridgette Binning  
Dept. of Health/Drinking Water

## Independent Commissions, Boards

- ☐ Delta Protection Commission  
Linda Flack
- ☐ Office of Emergency Services  
Dennis Castrillo
- ☐ Governor's Office of Planning  
& Research  
State Clearinghouse
- ☒ Native American Heritage  
Comm.  
Debbie Treadway

## Resources Agency

- ☒ Resources Agency  
Nadell Gayou
- ☐ Dept. of Boating & Waterways  
Mike Sotelo
- ☐ California Coastal  
Commission  
Elizabeth A. Fuchs
- ☐ Colorado River Board  
Gerald R. Zimmerman
- ☐ Dept. of Conservation  
Rebecca Salazar
- ☐ California Energy  
Commission  
Eric Knight
- ☐ Cal Fire  
Allen Robertson
- ☒ Office of Historic  
Preservation  
Wayne Donaldson
- ☒ Dept of Parks & Recreation  
Environmental Stewardship  
Section
- ☐ Central Valley Flood  
Protection Board  
James Herota
- ☐ S.F. Bay Conservation &  
Dev't. Comm.  
Steve McAdam
- ☒ Dept. of Water Resources  
Resources Agency  
Nadell Gayou

Conservancy

## Fish and Game

- ☐ Depart. of Fish & Game  
Scott Filnt  
Environmental Services Division
- ☐ Fish & Game Region 1  
Donald Koch
- ☐ Fish & Game Region 1E  
Laurie Harnsberger

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January 27, 2010

Mr. Greg Smith, Senior Planner, Environmental Services

**CITY OF THOUSAND OAKS COMMUNITY DEVELOPMENT DEPARTMENT**

2100 East Thousand Oaks Boulevard  
Thousand Oaks, CA 91362

Re: SCH#2010011013 CEQA Notice of Preparation (NOP); draft Environmental Impact Report (DEIR) for the Thousand Oaks Boulevard Specific Plan Project; located in the City of Thousand Oaks; Ventura County, California

Dear Mr. Smith:

The Native American Heritage Commission (NAHC) is the state 'trustee agency' pursuant to Public Resources Code §21070 for the protection and preservation of California's Native American Cultural Resources.. (Also see *Environmental Protection Information Center v. Johnson* (1985) 170 Cal App. 3<sup>rd</sup> 604) The California Environmental Quality Act (CEQA - CA Public Resources Code §21000-21177, amended in 2009) requires that any project that causes a substantial adverse change in the significance of an historical resource, that includes archaeological resources, is a 'significant effect' requiring the preparation of an Environmental Impact Report (EIR) per the California Code of Regulations §15064.5(b)(c)(f) CEQA guidelines). Section 15382 of the CEQA Guidelines defines a significant impact on the environment as "a substantial, or potentially substantial, adverse change in any of physical conditions within an area affected by the proposed project, including ... objects of historic or aesthetic significance." In order to comply with this provision, the lead agency is required to assess whether the project will have an adverse impact on these resources within the 'area of potential effect (APE)', and if so, to mitigate that effect. To adequately assess the project-related impacts on historical resources, the Commission recommends the following.

The Native American Heritage Commission did perform a Sacred Lands File (SLF) search in the NAHC SLF Inventory, established by the Legislature pursuant to Public Resources Code §5097.94(a) and Native American Cultural resources were not identified within one-half mile of the APE. There are, however, Native American cultural resources in close proximity to the APE.

Early consultation with Native American tribes in your area is the best way to avoid unanticipated discoveries once a project is underway. Enclosed are the names of the nearest tribes and interested Native American individuals that the NAHC recommends as 'consulting parties,' for this purpose, that may have knowledge of the religious and cultural significance of the historic properties in the project area (e.g. APE). We recommend that you contact persons on the attached list of Native American contacts. A Native American Tribe or Tribal Elder may be the only source of information about a cultural resource.. Also, the NAHC recommends that a Native American Monitor or Native American culturally knowledgeable person be employed whenever a professional archaeologist is employed during the 'Initial Study' and in other phases of the environmental planning processes.. Furthermore we suggest that you contact the California Historic Resources Information System (CHRIS) at the Office of Historic Preservation (OHP) Coordinator's office (at (916) 653-7278, for referral to the nearest OHP Information Center of which there are 11..

Consultation with tribes and interested Native American tribes and individuals, as consulting parties, on the NAHC list, should be conducted in compliance with the requirements of federal NEPA (42 U.S.C. 4321-43351) and Section 106 and 4(f) of federal NHPA (16 U.S.C. 470 [f] *et seq*), 36 CFR Part 800.3, the President's Council on Environmental Quality (CSQ; 42 U.S.C. 4371 *et seq*) and NAGPRA (25 U.S.C. 3001-3013), as appropriate. .



Linda S. Adams  
Secretary for  
Environmental Protection



## Department of Toxic Substances Control

Maziar Movassaghi  
Acting Director  
9211 Oakdale Avenue  
Chatsworth, California 91311



Arnold Schwarzenegger  
Governor

February 1, 2010

Mr. Greg Smith  
City of Thousand Oaks  
2100 E. Thousand Oaks Boulevard  
Thousand Oaks, California 91326

### NOTICE OF PREPARATION FOR THE THOUSAND OAKS BOULEVARD SPECIFIC PLAN DRAFT ENVIRONMENTAL IMPACT REPORT, SCH NO. 2010011013

Dear Mr. Smith:

The Department of Toxic Substances Control (DTSC) has received your Notice of Preparation of a draft Environmental Impact Report (EIR) for the project mentioned above.

Based on the review of the document, DTSC comments are as follows:

1. The draft EIR needs to identify and determine whether current or historic uses at the Project site (Site) have resulted in any release of hazardous wastes/substances.
2. The draft EIR needs to identify any known or potentially contaminated area within the Site. For all identified areas, the draft EIR needs to evaluate whether conditions at the Site pose a threat to human health or the environment.
3. The draft EIR should identify the mechanism to initiate any required investigation and/or remediation for any area that may require remediation, and which government agency will provide appropriate regulatory oversight.
4. If during construction of the project, soil contamination is suspected, construction in the area should stop, and appropriate health and safety procedures should be implemented. If it is determined that contaminated soils exist, the draft EIR should identify how any required investigation and/or remediation will be conducted, and which government agency will provide regulatory oversight.

Mr. Greg Smith  
February 1, 2010  
Page 2

DTSC provides guidance for Preliminary Endangerment Assessment preparation and cleanup oversight through the Voluntary Cleanup Program (VCP). For additional information on the VCP please visit DTSC's web site at [www.dtsc.ca.gov](http://www.dtsc.ca.gov). If you would like to meet and discuss this matter further, please contact me at (818) 717-6550.

Sincerely,

  
Alberto T. Valmidiano  
Project Manager  
Brownfields and Environmental Restoration Program – Chatsworth Office

cc: Governor's Office of Planning and Research  
State Clearinghouse  
P.O. Box 3044  
Sacramento, California 95812-3044

Mr. Guenther W. Moskat, Chief  
Office of Planning and Environmental Analysis  
CEQA Tracking Center  
Department of Toxic Substances Control  
1001 "I" Street, P.O. Box 806  
Sacramento, California 95812-0806



RESOURCE MANAGEMENT AGENCY  
**county of ventura**

Planning Division

Kimberly L. Rodriguez  
Director

February 5, 2010

City of Thousand Oaks  
Community Development Dept.  
2100 East Thousand Oaks Blvd.  
Thousand Oaks, CA 91362  
Attn.: Greg Smith

E-mail: [Gsmith@toaks.org](mailto:Gsmith@toaks.org)

Subject: Comments on NOP of a DEIR for the Thousand Oaks Boulevard Specific Plan

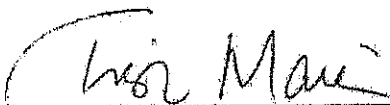
Dear Mr. Smith:

Thank you for the opportunity to review and comment on the subject document. Attached are the comments that we have received resulting from intra-county review of the subject document. Additional comments may have been sent directly to you by other County agencies.

Your proposed responses to these comments should be sent directly to the commenter, with a copy to Laura Hocking, Ventura County Planning Division, L#1740, 800 S. Victoria Avenue, Ventura, CA 93009.

If you have any questions regarding any of the comments, please contact the appropriate respondent. Overall questions may be directed to Laura Hocking at (805) 654-2443.

Sincerely,



Tricia Maier, Manager  
Program Administration Section

Attachment

County RMA Reference Number 10-02

800 South Victoria Avenue, L#1740, Ventura, CA 93009 (805) 654-2481 Fax (805) 654-2509



Printed on Recycled Paper



**VENTURA COUNTY**  
**AIR POLLUTION CONTROL DISTRICT**  
Memorandum

TO: Laura Hocking/Dawnyelle Addison, Planning      DATE: February 3, 2010

FROM: Alicia Stratton

SUBJECT: Request for Review of Notice of Preparation for an Environmental Impact Report for the Thousand Oaks Boulevard Specific Plan, City of Thousand Oaks (Reference No. 10-02)

Air Pollution Control District staff has reviewed the subject notice of preparation for an environmental impact report (EIR), which is a proposal for a specific plan to implement the Thousand Oaks Boulevard Associations' goals for redevelopment of the Boulevard. The Specific Plan addresses regulations and development standards that would allow a greater range of mixed-use type projects, including taller structures with reduced building setbacks and lesser parking requirements. Initial preliminary estimates prepared by the Community Development Department indicate that the proposed Specific Plan could generate approximately 370 dwelling units and 1,100,000 sq. ft. of commercial area. The project location is Thousand Oaks Boulevard in the City of Thousand Oaks.

District staff recommends the EIR evaluate all potential air quality impacts that may result from the project. Specifically, the air quality assessment should consider reactive organic compound, nitrogen oxide emissions and particulate matter from all project-related motor vehicles and construction equipment. Consistency with Ventura County AQMP population projections should be included, as well as an analysis of greenhouse gas emissions.

A carbon monoxide screening analysis should be conducted for any project-impacted roadway intersection that are currently operating, or that are expected to operate at, Levels of Service D, E, or F, or at any project-impacted roadway intersection that may be a CO hotspot. If a potential hotspot is identified, the District recommends that a complete CALINE3 or CALINE4 carbon monoxide analysis be conducted for that intersection.

If you have any questions, please call me at (805) 645-1426.



**PUBLIC WORKS AGENCY  
TRANSPORTATION DEPARTMENT  
Traffic, Advance Planning & Permits Division  
MEMORANDUM**

**DATE:** January 26, 2010

**TO:** RMA – Planning Division  
Attention: Laura Hocking

**FROM:** Behnam Emami, Engineering Manager II

**SUBJECT: REVIEW OF DOCUMENT 10-02** Notice of Preparation (NOP) of a Draft Environmental Impact Report (EIR)  
**Thousand Oaks Boulevard Specific Plan.**  
Thousand Oaks Boulevard, City of Thousand Oaks (city).  
Lead Agency: **City of Thousand Oaks**

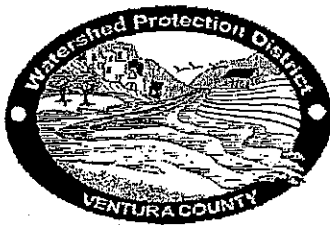
Pursuant to your request, the Public Works Agency - Transportation Department has completed the review of the NOP of a Draft EIR for the Thousand Oaks Boulevard Specific Plan (SP). The project consists of the proposed land use regulations and development standards, which if adopted, would allow a greater range of mixed-use type projects, including taller structures with reduced building set-backs and lesser parking requirements. Initial preliminary estimates prepared by the Community Development Department indicated that the proposed SP could potentially generate about 370 dwelling units and approximately 1,100,000 SF of commercial floor area over and above existing conditions. Two other applications are being processed with the SP: General Plan Land Use Element Amendment and General Plan Circulation Element Amendment. The project is located at Thousand Oaks Boulevard in the city of Thousand Oaks.

We offer these comments:

1. We generally concur with the comments in the NOP of a Draft EIR for those areas under the purview of the Transportation Department. The NOP of a Draft EIR indicates that this project would generate additional traffic.
2. Any future specific development shall have mitigation measures for the cumulative impact of traffic on Ventura County Road Network. If the cumulative impact of the project, when considered with the cumulative impact of all other approved (or anticipated) development projects in the County is potentially significant, a condition for paying the County Traffic Impact Mitigation Fee to the County shall be included.

Our review is limited to the impacts this project may have on the County's Regional Road Network.

Please contact me at 654-2087 if you have questions.



**Ventura County  
Watershed Protection District  
Water & Environmental Resources Division  
Water Quality Section**

**MEMORANDUM**

---

**DATE:** January 20, 2010

**TO:** Laura Hocking, RMA- Planning Division

**FROM:** Paul Tantet

**SUBJECT: RMA 10-02 – THOUSAND OAKS BLVD. SPECIFIC PLAN, CITY OF THOUSAND OAKS**

I have reviewed the Notice of Preparation ("NOP") and accompanying NOP Attachment for the EIR for the project, and the documents adequately address my surface water quality concerns. As discussed in the NOP Attachment, it is imperative that an analysis be prepared to address the potential for increased stormwater runoff under the current Countywide NPDES permit requirements for low impact development and post-construction treatment control best management practices.



# City of Thousand Oaks

COMMUNITY DEVELOPMENT DEPARTMENT  
JOHN C. PRESCOTT, DIRECTOR

BUILDING DIVISION (805) 449-2500  
PLANNING DIVISION (805) 449-2323  
HOUSING/REDEVELOPMENT DIV. (805) 449-2393

February 17, 2010

Attn: Environmental Division  
CALTRANS District 7 Office  
120 S. Spring Street  
Los Angeles, CA 90012

RE: Thousand Oaks Boulevard Specific Plan EIR- SCH#2010011013


To whom it may concern,

As per the requirements of CEQA Guidelines Section 15086(a)(5), a scoping meeting for the above referenced "regionally significant" project has been scheduled in Conference Room "B" on Wednesday, February 24<sup>th</sup> at 10:00 a.m., here at City Hall.

Although the Notice of Preparation (NOP) for this project was received by the State Clearing House on January 7, 2010, as of yet, the City has still not received any comments from CALTRANS. See attached NOP. The Public Works Department Traffic Division is particularly interested in receiving input regarding the scope of analysis necessary to prepare an adequate and complete traffic study for this project.

In order to facilitate this scoping meeting, please contact me at your earliest convenience in order to confirm your attendance, or reschedule to another date and time. I can be contacted at either: (805) 449-2329 or [cdgrsmith@toaks.org](mailto:cdgrsmith@toaks.org).

Sincerely,

  
Greg Smith, Senior Planner  
Environmental Services Section

Attachment (1)



## **APPENDIX 4.2**

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### **Traffic Impact Analysis**

# **THOUSAND OAKS BOULEVARD SPECIFIC PLAN TRAFFIC IMPACT ANALYSIS**

**City of Thousand Oaks**

Prepared for  
**CITY OF THOUSAND OAKS**

Prepared by



14725 ALTON PARKWAY, IRVINE, CALIFORNIA 92618-2027  
CONTACT: BOB MATSON 949.472.3505 bobmatson@rbf.com

**April 1, 2011**

JN 10-107314

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## EXECUTIVE SUMMARY

The Thousand Oaks Boulevard Specific Plan proposes special development regulations for Thousand Oaks Boulevard between Moorpark Road and Duesenberg Drive, which will allow more intense development than existing regulations, and will also encourage a more pedestrian-friendly environment through its proposed standards for building design and placement.

This study analyzes forecast traffic conditions for the proposed Specific Plan, as well as two alternatives to the Specific Plan, the proposed Downtown Alternative and proposed Reduced Intensity Alternative. Specifically, the following traffic analysis scenarios are studied:

- Existing Conditions;
- Forecast Existing Plus Proposed Specific Plan Conditions Assuming Existing Study Intersection Geometry/Control;
- Forecast Existing Plus Proposed Downtown Alternative Conditions Assuming Existing Study Intersection Geometry/Control;
- Forecast Existing Plus Proposed Reduced Intensity Alternative Conditions Assuming Existing Study Intersection Geometry/Control;
- Forecast General Plan Land Use Buildout Conditions Assuming Existing Study Intersection Geometry/Control Except Signalization of the Skyline Drive/Hillcrest Drive Intersection;
- Forecast General Plan Land Use Buildout Plus Proposed Specific Plan Conditions Assuming Existing Study Intersection Geometry/Control Except Signalization of the Skyline Drive/Hillcrest Drive Intersection;
- Forecast General Plan Land Use Buildout Plus Proposed Downtown Alternative Conditions Assuming Existing Study Intersection Geometry/Control Except Signalization of the Skyline Drive/Hillcrest Drive Intersection; and
- Forecast General Plan Land Use Buildout Plus Proposed Reduced Intensity Alternative Conditions Assuming Existing Study Intersection Geometry/Control Except Signalization of the Skyline Drive/Hillcrest Drive Intersection.

Based on the thresholds of significance, significant traffic impacts are forecast to occur for the six project analysis scenarios. Mitigation measures have been identified to reduce all significant traffic impacts to a level considered less than significant.

## INTRODUCTION

The Thousand Oaks Boulevard Specific Plan proposes special development regulations for Thousand Oaks Boulevard between Moorpark Road and Duesenberg Drive, which will allow more intense development than existing regulations, and will also encourage a more pedestrian-friendly environment through its proposed standards for building design and placement.

This study analyzes forecast traffic conditions for the proposed Specific Plan, as well as two alternatives to the Specific Plan, the proposed Downtown Alternative and proposed Reduced Intensity Alternative. Specifically, the following traffic analysis scenarios are studied:

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- Forecast General Plan Land Use Buildout Conditions Assuming Existing Study Intersection Geometry/Control Except Signalization of the Skyline Drive/Hillcrest Drive Intersection;
- Forecast General Plan Land Use Buildout Plus Proposed Specific Plan Conditions Assuming Existing Study Intersection Geometry/Control Except Signalization of the Skyline Drive/Hillcrest Drive Intersection;
- Forecast General Plan Land Use Buildout Plus Proposed Downtown Alternative Conditions Assuming Existing Study Intersection Geometry/Control Except Signalization of the Skyline Drive/Hillcrest Drive Intersection; and
- Forecast General Plan Land Use Buildout Plus Proposed Reduced Intensity Alternative Conditions Assuming Existing Study Intersection Geometry/Control Except Signalization of the Skyline Drive/Hillcrest Drive Intersection.

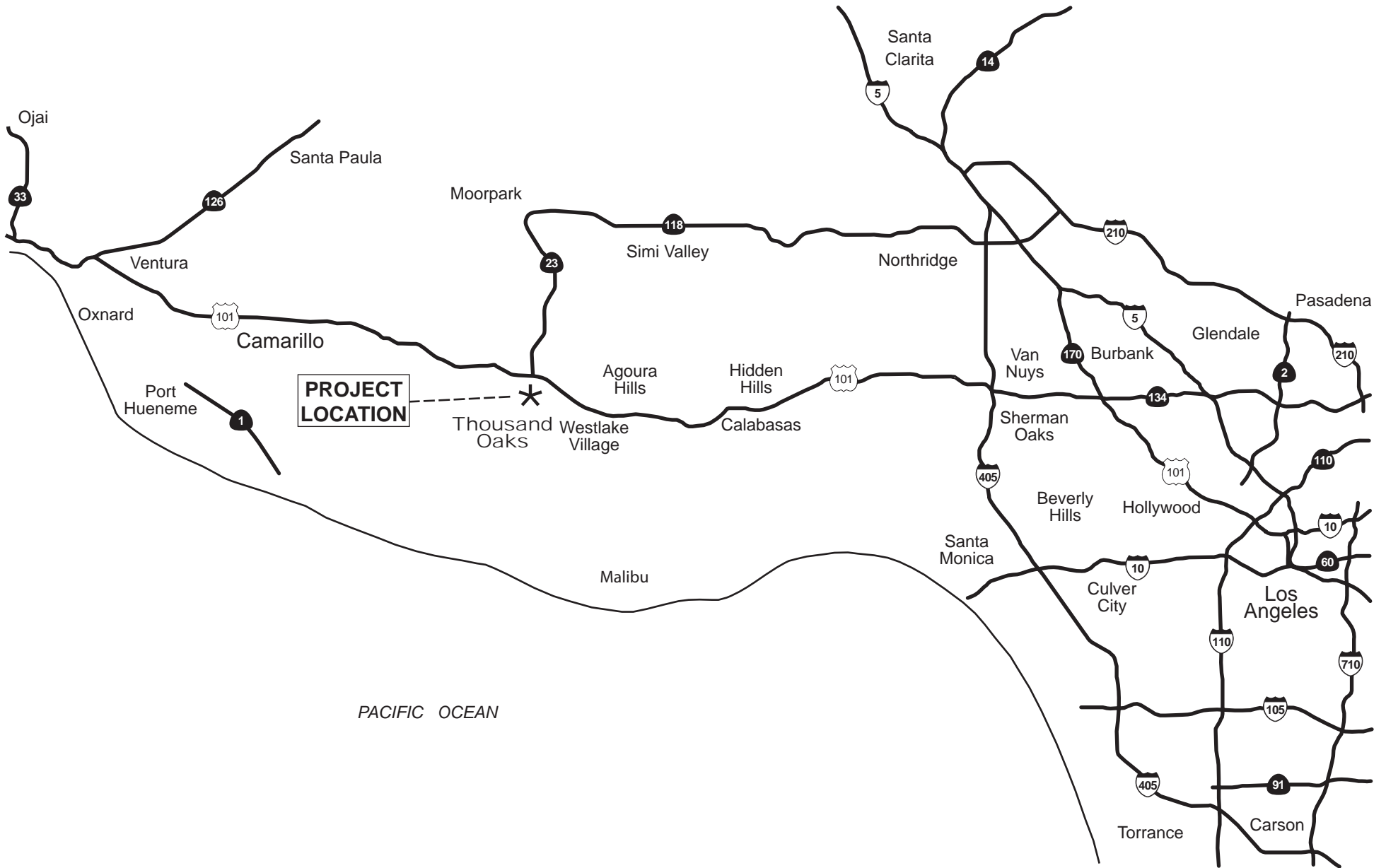
Exhibit 1 shows the regional project location, located in the City of Thousand Oaks.

### Intersection Study Area

City of Thousand Oaks staff identified the following seventeen City intersections within or near the Specific Plan area for analysis in this study, which are designated on Exhibit 2:

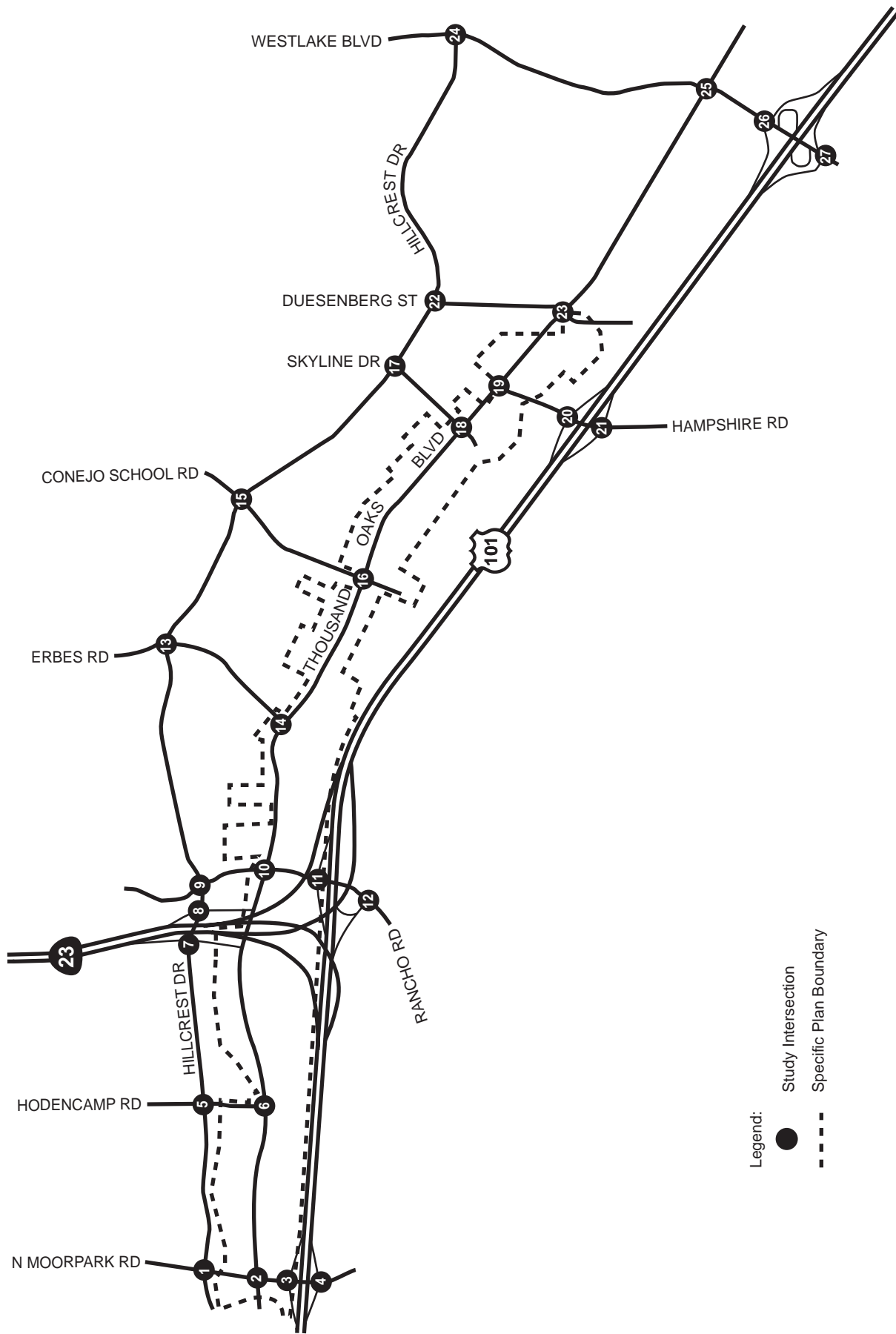
1. Moorpark Rd/Hillcrest Dr (signalized);
2. Moorpark Rd/Thousand Oaks Blvd (signalized);
5. Hodencamp Rd/Hillcrest Dr (signalized);
6. Hodencamp Rd/Thousand Oaks Blvd (signalized);
9. Rancho Rd/Hillcrest Dr (signalized);
10. Rancho Rd/Thousand Oaks Blvd (signalized);
13. Erbes Rd/Hillcrest Dr (signalized);
14. Erbes Rd/Thousand Oaks Blvd (signalized);
15. Conejo School Rd/Hillcrest Dr (signalized);
16. Conejo School Rd/Thousand Oaks Blvd (signalized);
17. Skyline Dr/Hillcrest Dr (one-way stop controlled);
18. Skyline Dr/Thousand Oaks Blvd (signalized);
19. Hampshire Rd/Thousand Oaks Blvd (signalized);





Not to Scale





Not to Scale



# Specific Plan Boundary and Study Intersection Locations

22. Duesenberg Dr/Hillcrest Dr (signalized);
23. Duesenberg Dr/Thousand Oaks Blvd (signalized);
24. Westlake Blvd/Hillcrest Dr (signalized); and
25. Westlake Blvd/Thousand Oaks Blvd (signalized).

Additionally, Caltrans staff identified the following ten State Highway intersections for analysis in this study also shown on Exhibit 2:

3. Moorpark Road/US 101 Northbound Ramps;
4. Moorpark Road/US 101 Southbound Ramps;
7. Route 23 Southbound Off-Ramp/Hillcrest Road;
8. Route 23 Northbound On-Ramp/Hillcrest Road;
11. Rancho Road/US 101 Northbound Ramps;
12. Rancho Road/US 101 Southbound Ramps;
20. Hampshire Road/US 101 Northbound Ramps;
21. Hampshire Road/US 101 Southbound Ramps;
26. Westlake Boulevard/US 101 Northbound Ramps; and
27. Westlake Boulevard/US 101 Southbound Ramps.

### Intersection Analysis Methodology

Level of service (LOS) is commonly used as a qualitative description of intersection operation and is based on the capacity of the intersection and the volume of traffic using the intersection. The City of Thousand Oaks utilizes the Intersection Capacity Utilization (ICU) analysis methodology for signalized intersections and the 2000 Highway Capacity Manual (HCM) Operational Analysis Methodology for unsignalized intersections.

The ICU analysis methodology describes the operation of a signalized intersection using a range of LOS from LOS A (free-flow conditions) to LOS F (severely congested conditions), based on corresponding Volume/Capacity (V/C) ratios shown in Table 1.

**Table 1**  
**LOS & V/C Ratio Ranges**  
**Signalized Intersections**

LOS	V/C Ratio
A	$\leq 0.60$
B	$> 0.60$ to $\leq 0.70$
C	$> 0.70$ to $\leq 0.80$
D	$> 0.80$ to $\leq 0.90$
E	$> 0.90$ to $\leq 1.00$
F	$> 1.00$

*Source: 1990 Transportation Research Board*

The 2000 Highway Capacity Manual (HCM) Operational Analysis Methodology is used to evaluate the operation of unsignalized study intersections, where the LOS of study intersections is based on the delay experienced per vehicle. The LOS delay ranges for unsignalized intersections are summarized in Table 2.

**Table 2  
Delay & LOS Ranges**

Unsignalized Intersections	
Average Total Delay Per Vehicle (Seconds)	LOS
0 - 10.0	A
10.01 - 15.0	B
15.01 - 25.0	C
25.01 - 35.0	D
35.01 - 50.0	E
50.01 & up	F

**Source:** 2000 Highway Capacity Manual

### **City of Thousand Oaks Performance Criteria**

The City of Thousand Oaks target for peak hour intersection operation is LOS C or better.

### **City of Thousand Oaks Thresholds of Significance**

The City of Thousand Oaks defines a significant traffic project impact as an increase in the volume-to-capacity (V/C) ratio of two percent or greater at intersections operating at LOS C or worse.

## **EXISTING CONDITIONS**

### **Roadway Descriptions**

The characteristics of the roadway system in the study area are described below:

**Thousand Oaks Boulevard** is a four-lane divided roadway trending east-west through the study area with a left-turn pocket provided at intersections and a continuous left-turn lane between Moorpark Road and Duesenberg Drive. East of Duesenberg Drive, Thousand Oaks Boulevard is a four-lane, divided roadway with a raised landscaped median. Thousand Oaks Boulevard allows some on-street parking in both directions throughout the study area.

**US-101** provides access to the study area as a four- to eight-lane freeway facility, traversing the west coast in a north-south orientation. US-101 originates in Los Angeles, California at Interstate 10 (I-10) and continues north to its terminus in Olympia, Washington.

**State Route 23 (SR-23)** provides access to the study area as a four to six-lane freeway facility running north-south in the study area. SR-23 originates in the City of Malibu at State Route 1 and terminates in the City of Fillmore at State Route 126. SR-23 is constructed as a grade-separated freeway facility for approximately eight miles in the City of Thousand Oaks from US-101 to State Route 118 in the City of Moorpark. SR-23 has an interchange with US-101 in the project vicinity.

**Westlake Boulevard** is a six-lane divided arterial highway with a raised landscaped median, trending in a north-south direction. Westlake Boulevard, located in the easterly part of the study area, provides regional access via an interchange with US-101. South of US-101, Westlake Boulevard is designated SR-23.

**Hillcrest Drive** is a four-lane divided roadway, trending east-west with a raised and landscaped median, between Moorpark Road and Hodencamp Road. East of Hodencamp Road, Hillcrest Drive is a four-lane undivided roadway with left-turn pockets at several intersections, transitioning to a two-lane divided roadway with a continuous left-turn lane east of Duesenberg Drive. Hillcrest Drive terminates just east of Westlake Boulevard. Some parking is allowed on Hillcrest Drive.

**Moorpark Road** between Thousand Oaks Boulevard and Hillcrest Drive is a five-lane divided roadway with a raised median trending north-south with (three northbound lanes and two southbound lanes). Moorpark Road between Thousand Oaks Boulevard and the US 101 Freeway is a six-lane divided roadway with a raised median. Moorpark Road provides regional access via an interchange with US-101.

**Boardwalk Avenue** is a two-lane divided roadway with a continuous left-turn lane trending in a north-south direction. Boardwalk Avenue terminates on the south at Thousand Oaks Boulevard and terminates on the north at Hillcrest Drive. On-street parking is provided in both directions of Boardwalk Avenue.

**Hodencamp Road** is a four-lane divided roadway with on-street parking allowed and a raised landscaped median, trending in a north-south direction. Hodencamp Road terminates on the south at Thousand Oaks Boulevard.

**Rancho Road** is a four-lane divided roadway with a continuous left-turn lane trending north-south. North of Thousand Oaks Boulevard, on-street parking is allowed in the southbound direction. Rancho Road provides regional access via an interchange with US-101.

**Erbes Road** is a two-lane undivided roadway, trending in a north-south direction. On-street parking is allowed in the northbound direction in the study area. Erbes Road terminates on the south at Thousand Oaks Boulevard.

**Conejo School Road** is a two-lane undivided roadway, trending in a northeast-southwest direction. On-street parking is allowed at a few locations.

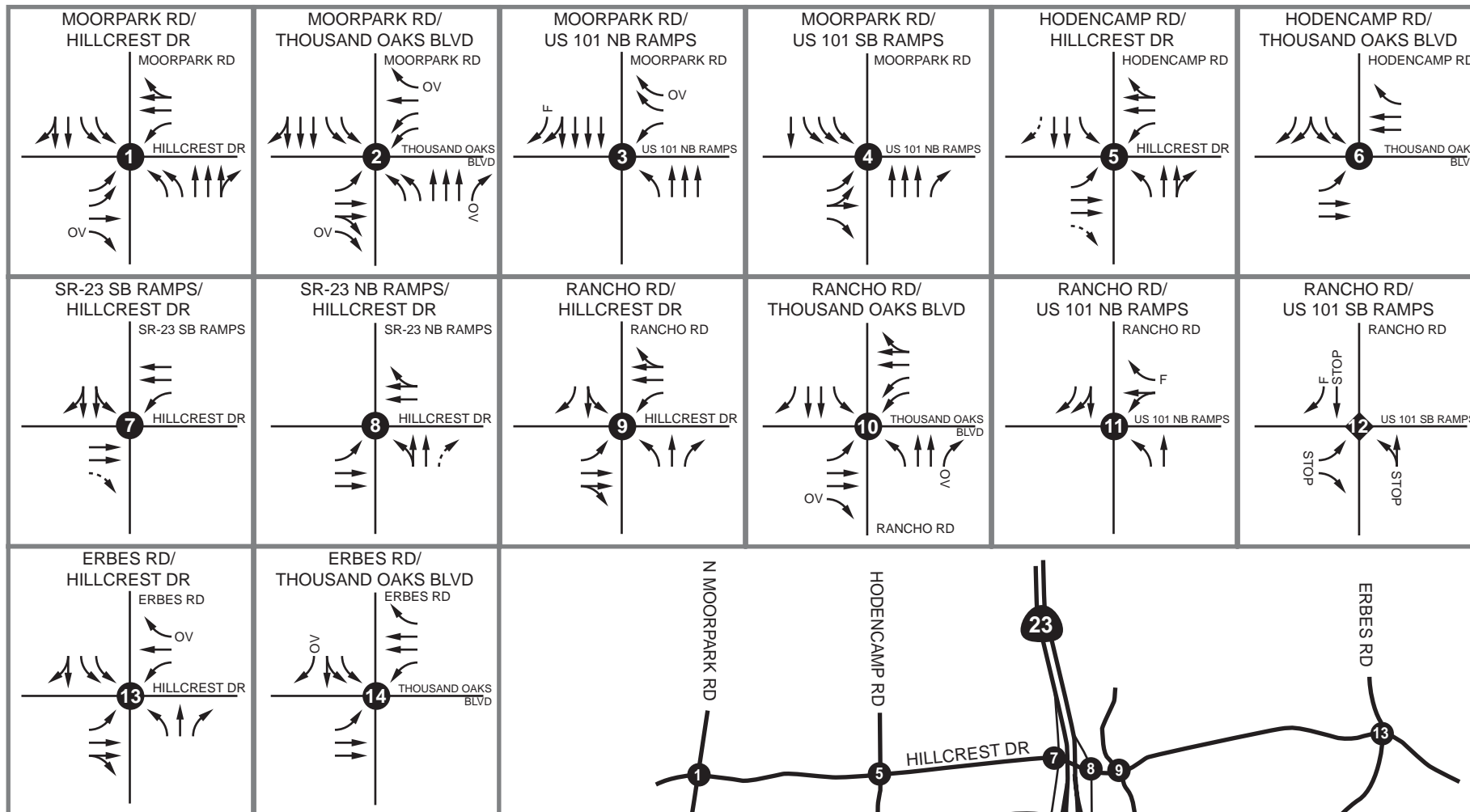
**Skyline Drive** is a two-lane undivided roadway, trending in a north-south direction with on-street parking allowed in both directions. Skyline Drive terminates on the north at Hillcrest Drive.

**Hampshire Road** is a four-lane divided roadway with a raised landscaped median, trending in a north-south direction. Hampshire Road terminates on the north at Thousand Oaks Boulevard. Hampshire Road provides regional access via an interchange with US-101.

**Duesenberg Drive** is a two-lane divided roadway with a continuous left-turn lane, trending in a north-south direction. Duesenberg Drive terminates on the north at Hillcrest Drive. South of Los Feliz Road on-street parking is provided in both directions on Duesenberg Drive.

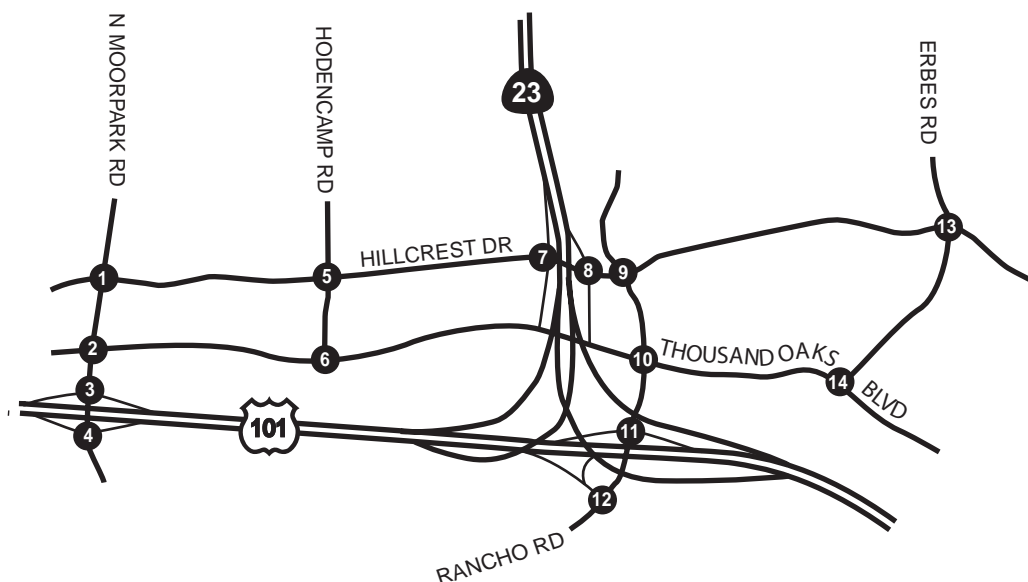
### **Existing Traffic Volumes**

Exhibits 3 and 4 show the existing study intersection geometry/control. The study area has been split into two areas for mapping purposes for clarity. Area 1 (west) is shown on Exhibit 3 and Area 2



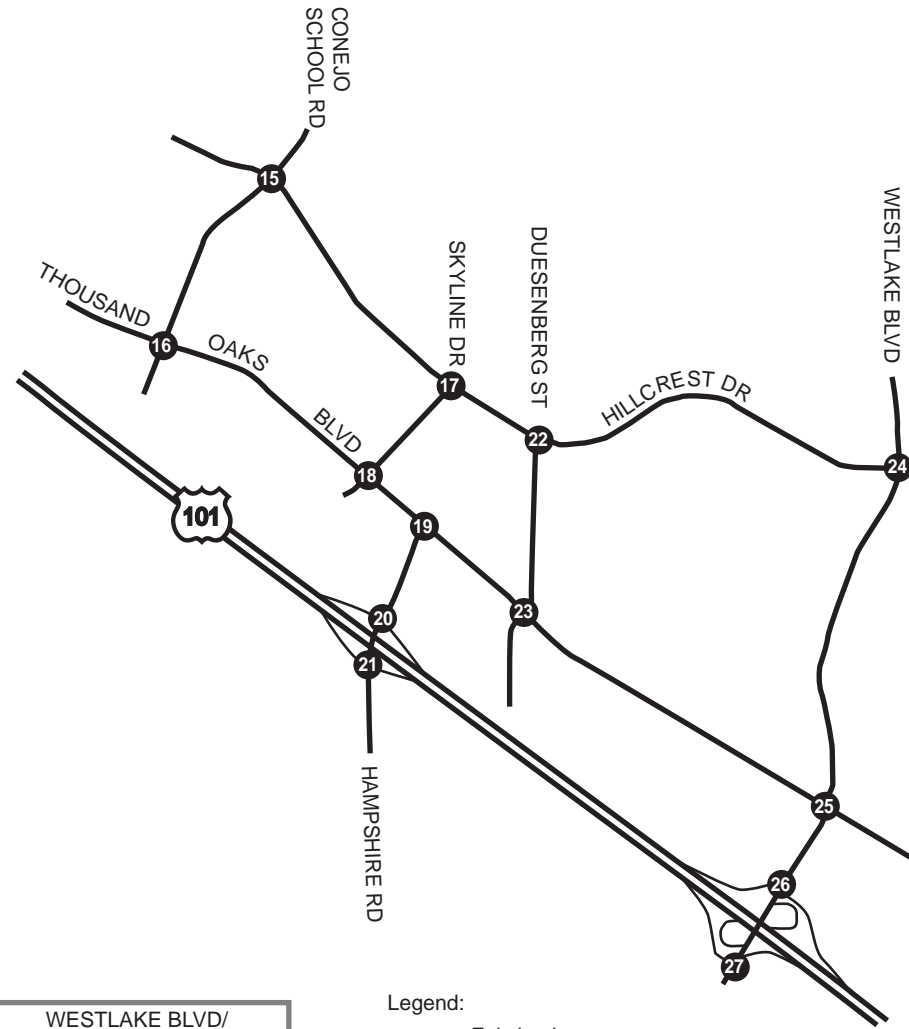
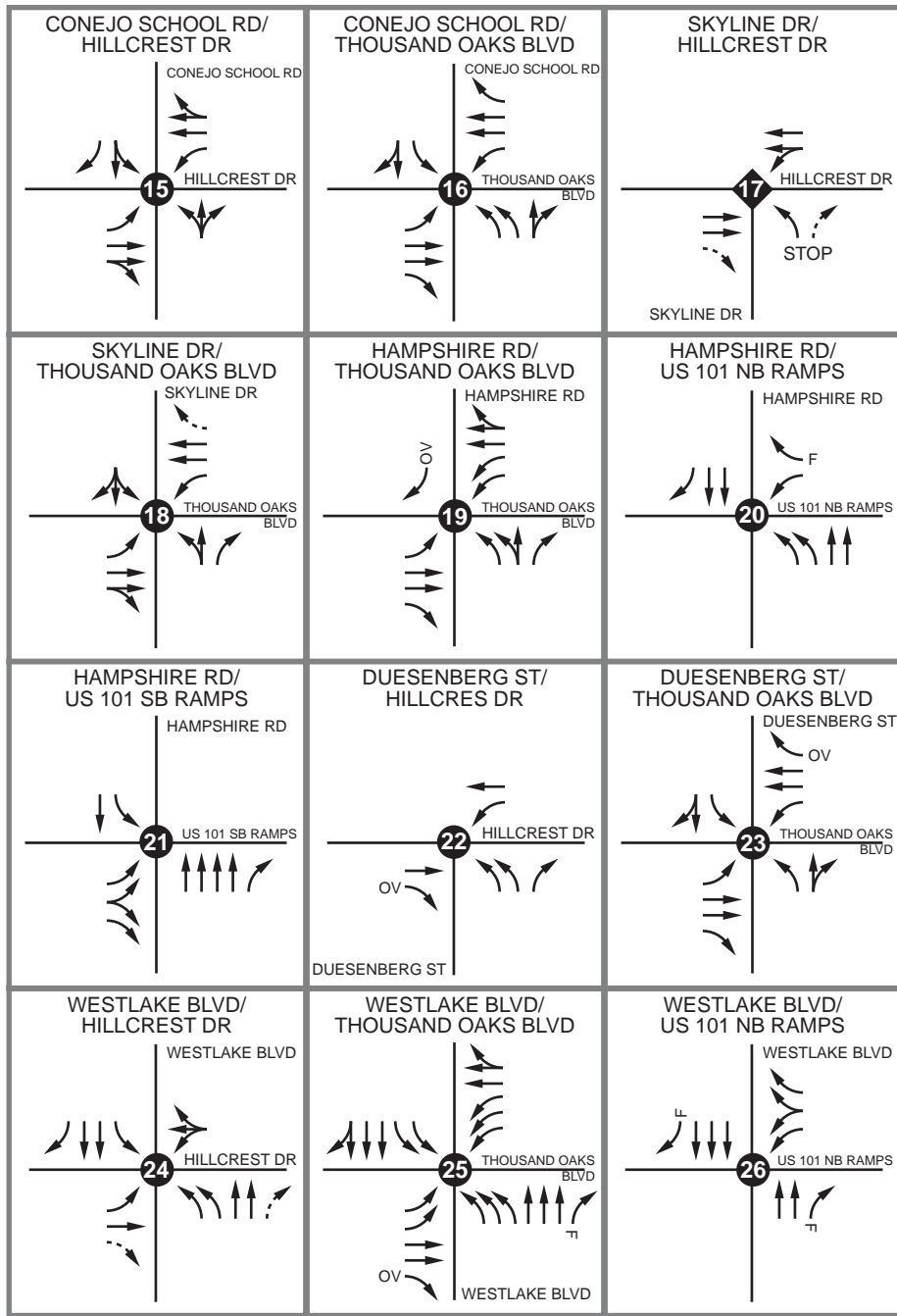
Legend:

- ← Existing Lane
- F Free Right-Turn Lane
- Defacto Right-Turn Lane
- ov Right-Turn Overlap
- XX Stop-Controlled Intersection
- XX Signal-Controlled Intersection
- STOP Stop-Controlled Approach



# Area 1 Existing Conditions Study Intersection Geometry/Control

Exhibit 3



- Legend:
- Existing Lane
  - Free Right-Turn Lane (F)
  - Defacto Right-Turn Lane
  - Right-Turn Overlap (OV)
  - Stop-Controlled Intersection (xx)
  - Signal-Controlled Intersection (xx)
  - STOP Stop-Controlled Approach

(east) is shown on Exhibit 4. To determine the existing operation of the study area intersections, weekday a.m. and p.m. peak hour intersection movement counts were collected in January 2010. Exhibits 5 and 6 show existing a.m. and p.m. peak hour volumes at the study intersections for Areas 1 and 2, respectively; detailed traffic count data is included in Appendix A.

Daily traffic counts were collected in January 2010. Exhibit 7 shows existing conditions average daily traffic (ADT) volumes at the roadway segments; detailed traffic count data is included in Appendix A.

### Existing Conditions Peak Hour Intersection Level of Service

Signalized study intersections are currently synchronized and may be adjusted based on future travel patterns. Table 3 summarizes existing a.m. and p.m. peak hour LOS of the study intersections; detailed LOS analysis sheets are provided in Appendix B.

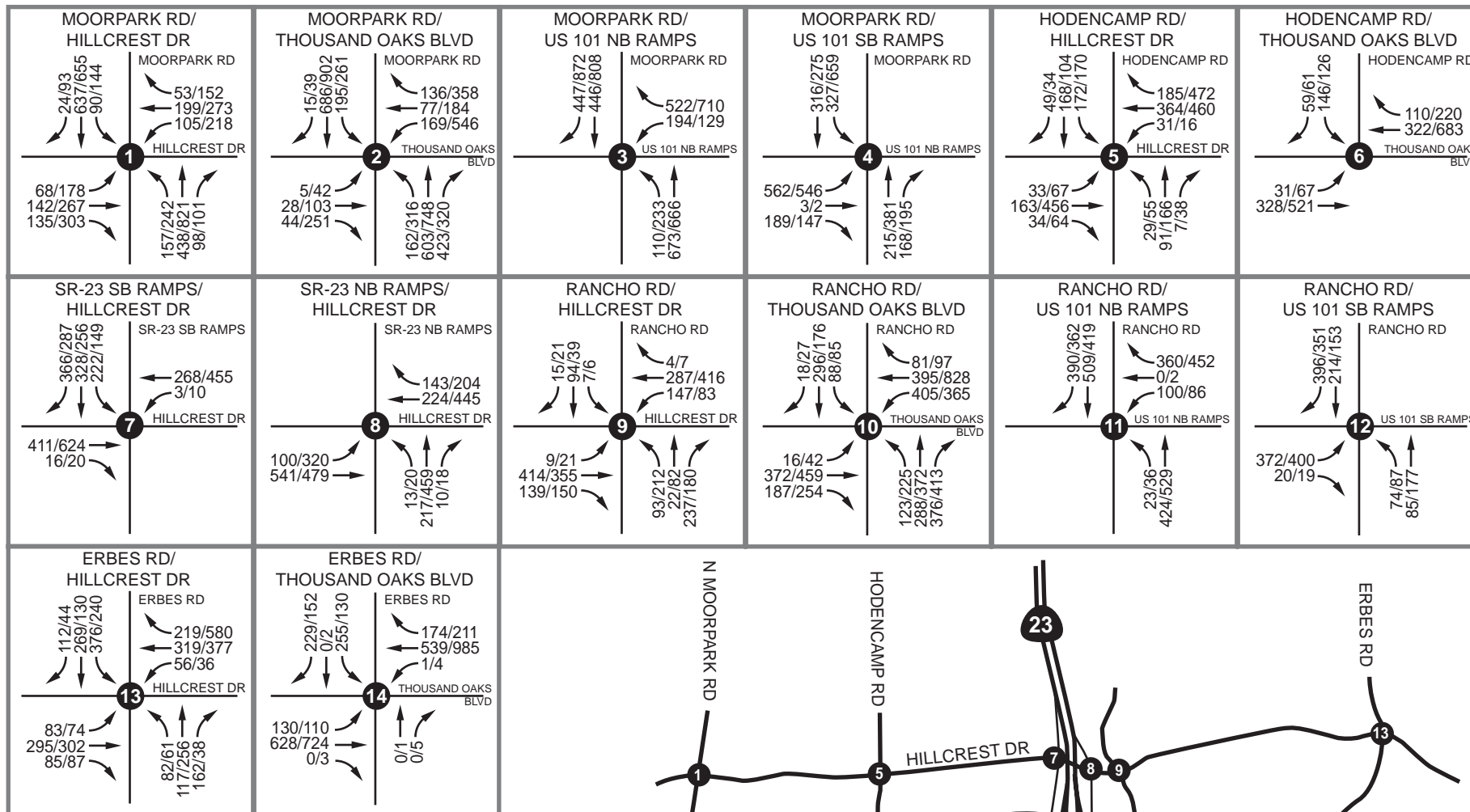
**Table 3**  
**Existing Conditions Intersection Peak Hour LOS**

Study Intersection	AM Peak Hour		PM Peak Hour	
	V/C (Delay)	LOS	V/C (Delay)	LOS
1 – Moorpark Rd/Hillcrest Dr	0.41	A	0.61	B
2 – Moorpark Rd/Thousand Oaks Blvd	0.34	A	0.53	A
5 – Hodencamp Rd/Hillcrest Dr	0.33	A	0.51	A
6 – Hodencamp Rd/Thousand Oaks Blvd	0.17	A	0.30	A
9 – Rancho Rd/Hillcrest Dr	0.42	A	0.37	A
10 – Rancho Rd/Thousand Oaks Blvd	0.41	A	0.51	A
13 – Erbes Rd/Hillcrest Dr	0.54	A	0.57	A
14 – Erbes Rd/Thousand Oaks Blvd	0.33	A	0.42	A
15 – Conejo School Rd/Hillcrest Dr	0.45	A	0.39	A
16 – Conejo School Rd/Thousand Oaks Blvd	0.34	A	0.45	A
17 – Skyline Dr/Hillcrest Dr	(17.4)	C	(22.0)	C
18 – Skyline Dr/Thousand Oaks Blvd	0.37	A	0.52	A
19 – Hampshire Rd/Thousand Oaks Blvd	0.76	C	0.78	C
22 – Duesenberg Dr/Hillcrest Dr	0.34	A	0.31	A
23 – Duesenberg Dr/Thousand Oaks Blvd	0.36	A	0.57	A
24 – Westlake Blvd/Hillcrest Dr	0.49	A	0.44	A
25 – Westlake Blvd/Thousand Oaks Blvd	0.47	A	0.63	B

**Note:** NB = Northbound; SB = Southbound.

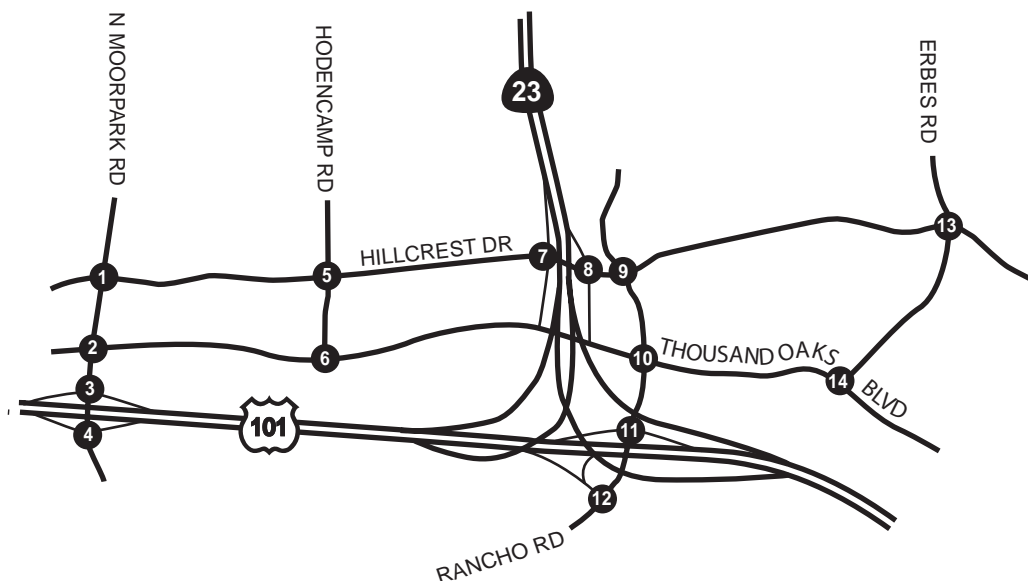
As shown in Table 3, the study intersections are currently operating at an acceptable LOS (LOS C or better) according to City of Thousand Oaks performance criteria.

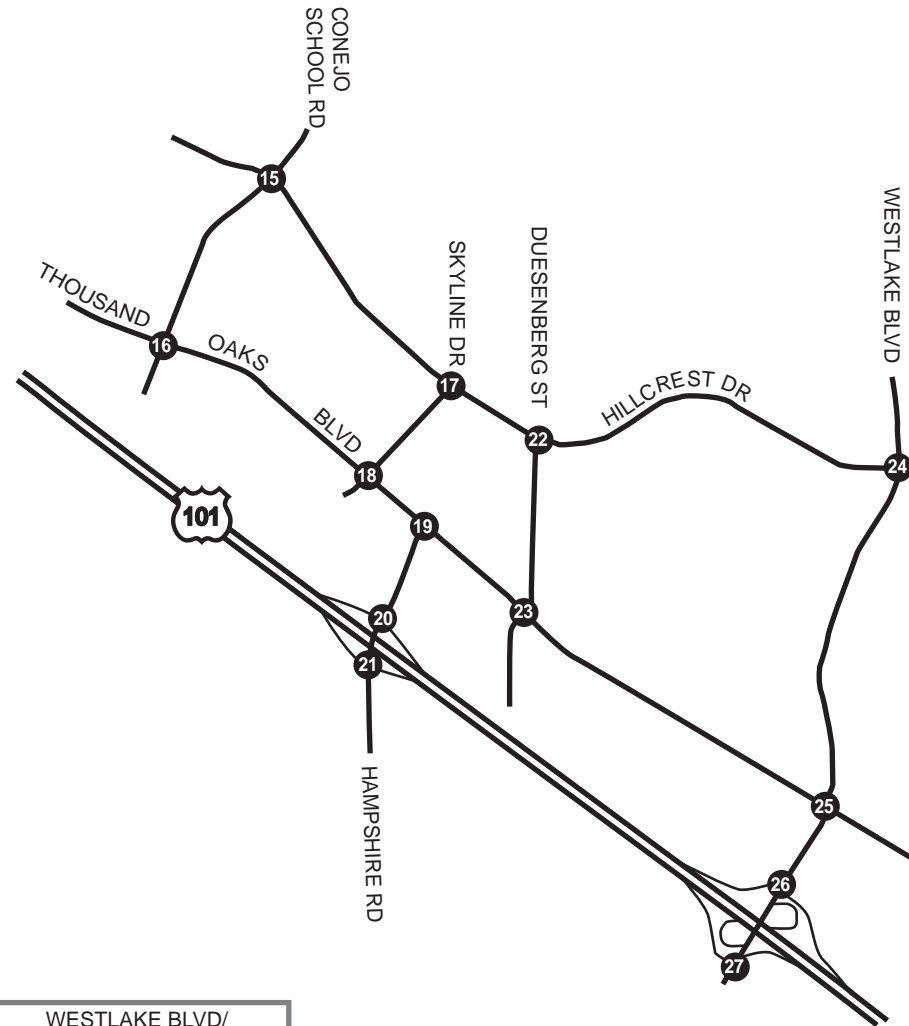
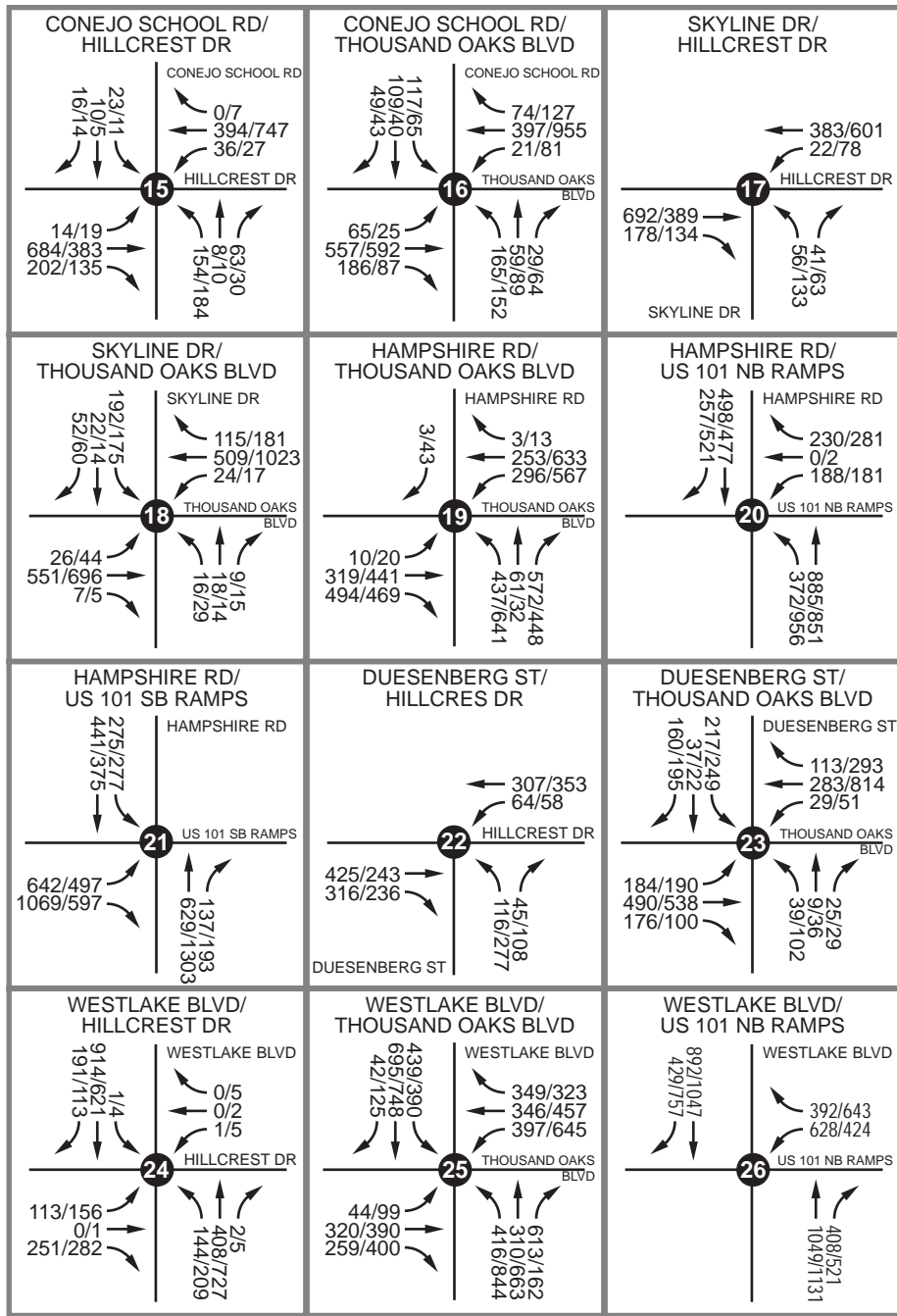




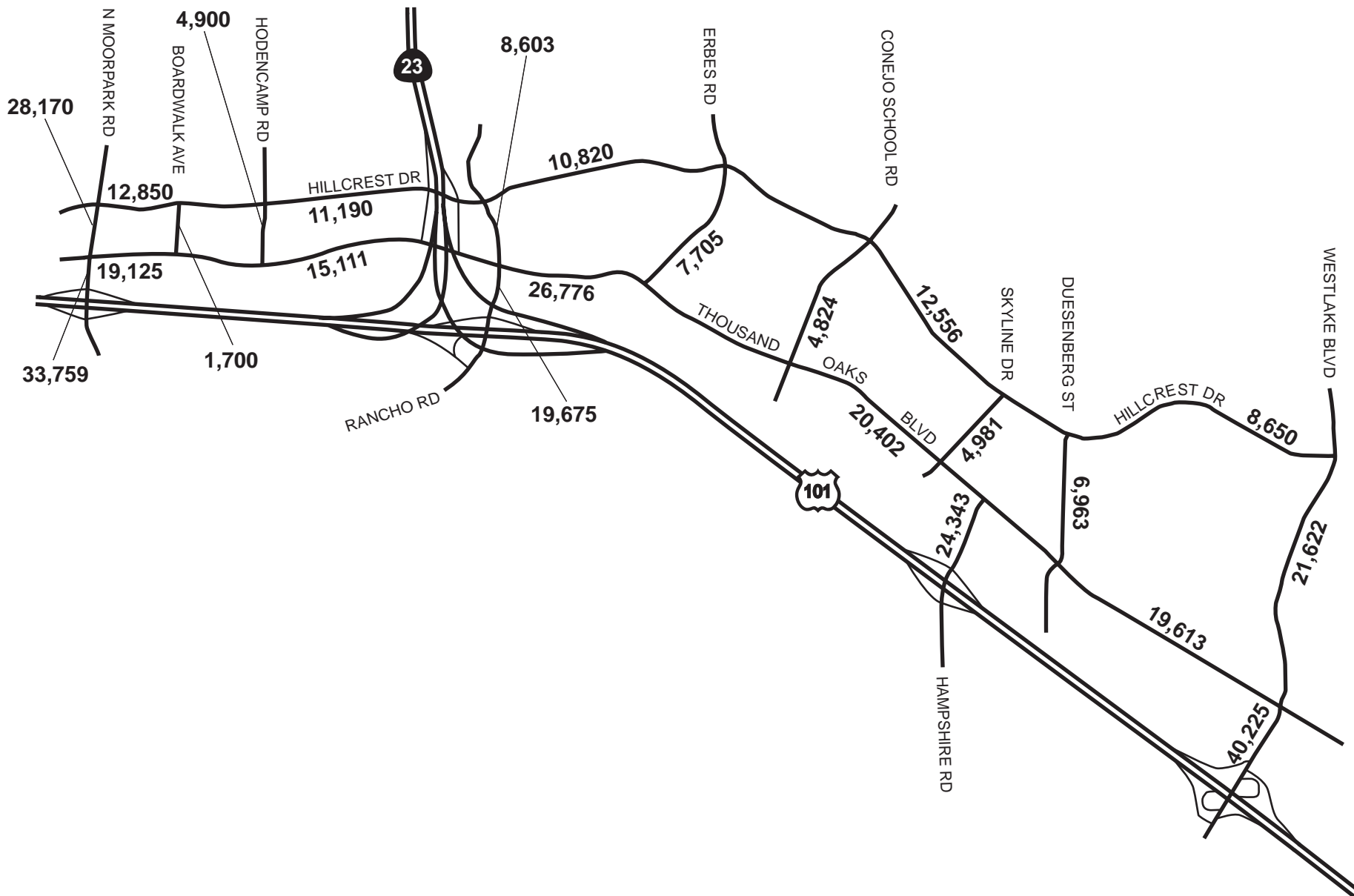
Legend:

XX/XX AM/PM Intersection Volumes





Legend:  
XX/XX AM/PM Intersection Volumes



Not to Scale



## **FORECAST EXISTING PLUS PROPOSED SPECIFIC PLAN CONDITIONS ASSUMING EXISTING STUDY INTERSECTION GEOMETRY/CONTROL**

Forecast existing plus proposed Specific Plan conditions assumes buildout of the combination of General Plan land use within the proposed Specific Plan area and proposed Specific Plan land use intensification within the Specific Plan area are added to existing conditions. The Specific Plan proposes special development regulations for the Thousand Oaks Boulevard area between Moorpark Road and Duesenberg Drive to allow somewhat more intense development than existing regulations, and will also encourage a more pedestrian-friendly environment through its proposed standards for building design and placement. Appendix C contains the City-provided location of the projects assuming General Plan buildout within the Specific Plan area and the proposed Specific Plan land use intensification.

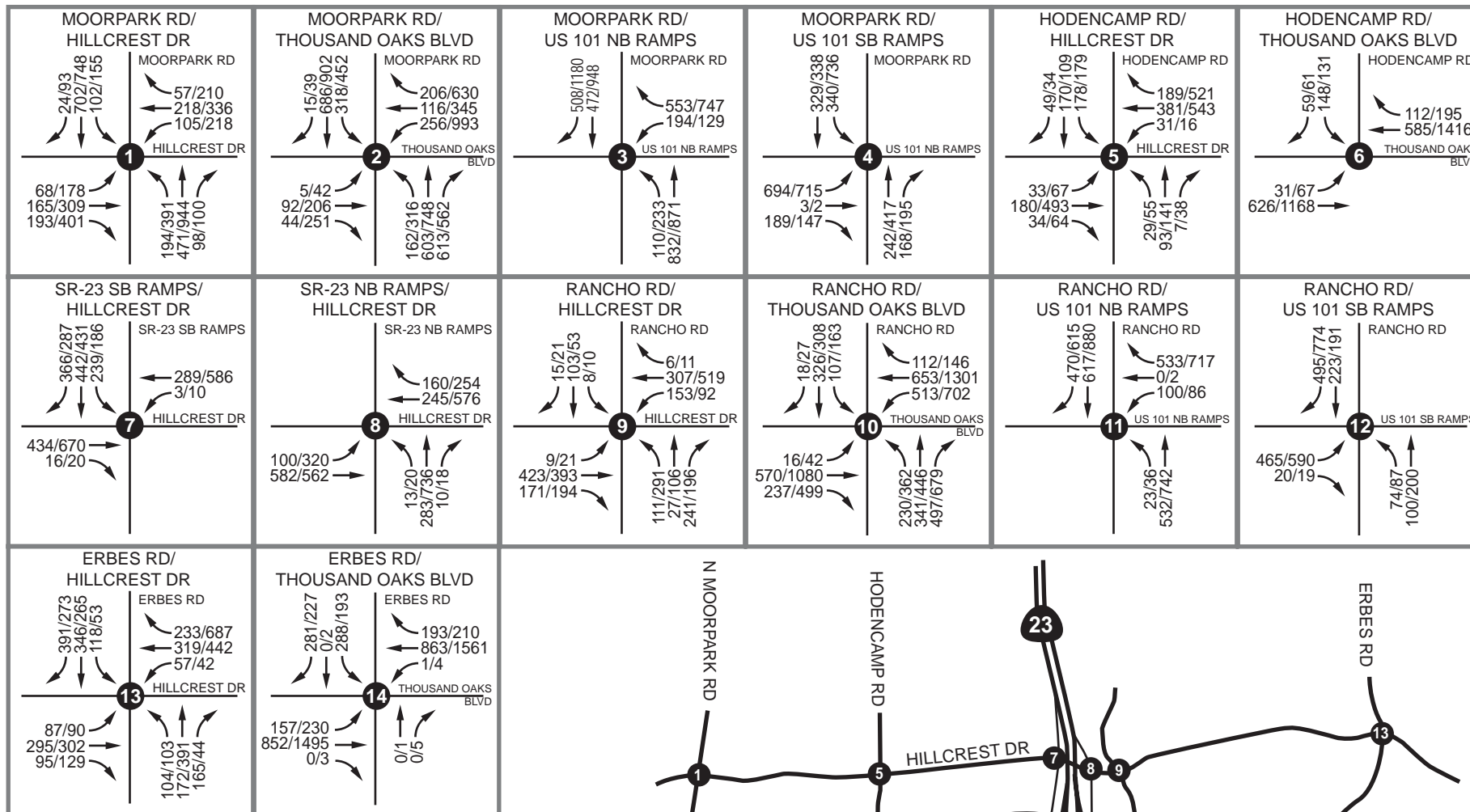
Forecast a.m. and p.m. peak hour volumes for existing plus proposed Specific Plan conditions assuming existing study intersection geometry/control were derived by adding trips forecast to be generated by buildout of the combination of General Plan land use within the Specific Plan area and proposed Specific Plan land use intensification within the Specific Plan area to existing traffic volumes.

Exhibits 8 and 9 show forecast existing plus proposed Specific Plan conditions a.m. and p.m. peak hour volumes at the study intersections.

Exhibit 10 shows forecast existing plus proposed Specific Plan conditions ADT volumes.

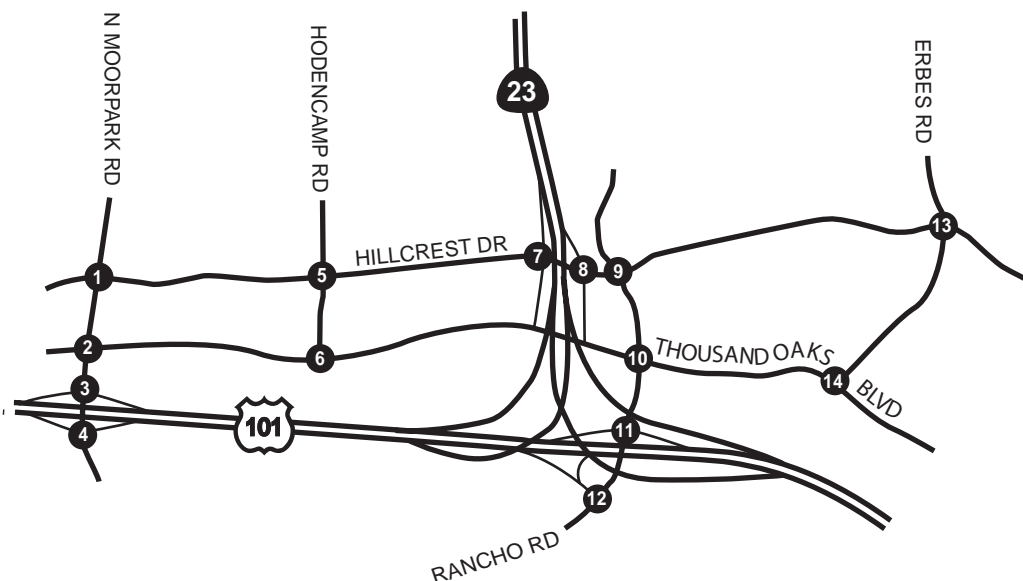
### **Forecast Existing Plus Proposed Specific Plan Conditions Intersection Level of Service Assuming Existing Study Intersection Geometry/Control**

Table 4 summarizes forecast existing plus proposed Specific Plan conditions a.m. and p.m. peak hour LOS of the study intersections assuming existing study intersection geometry/control; detailed LOS analysis sheets are contained in Appendix B.

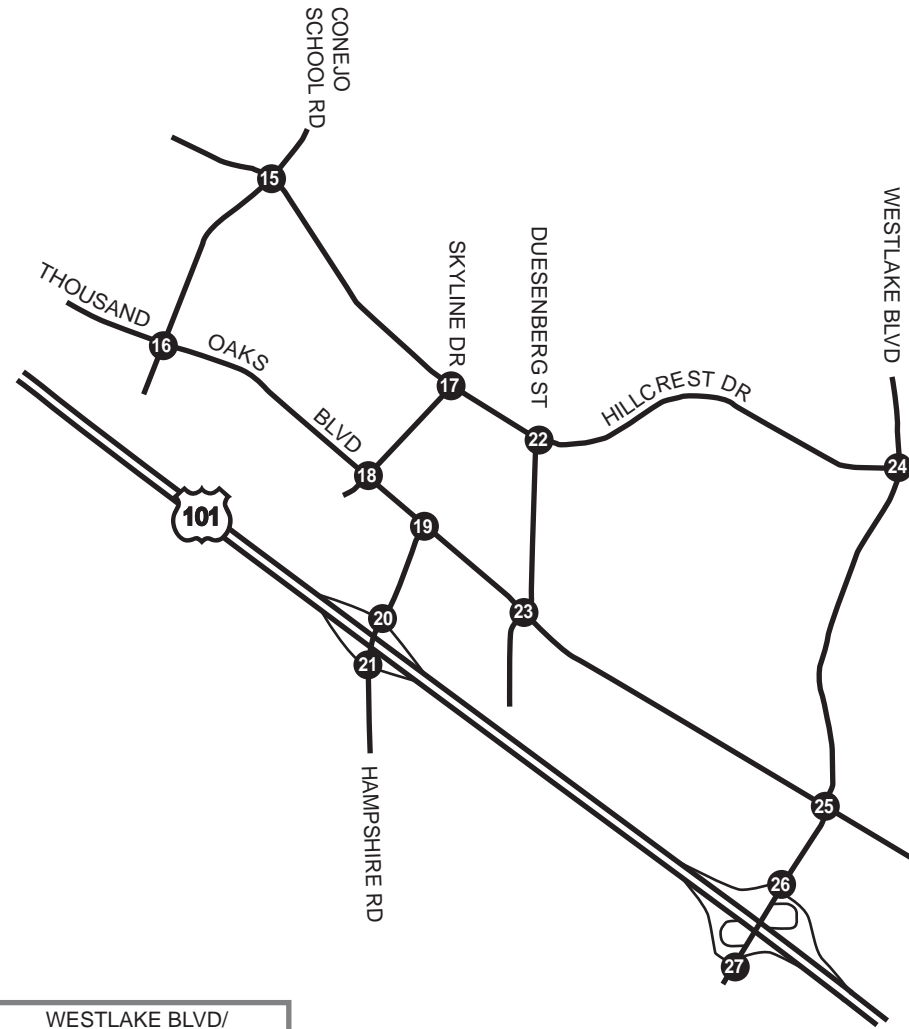
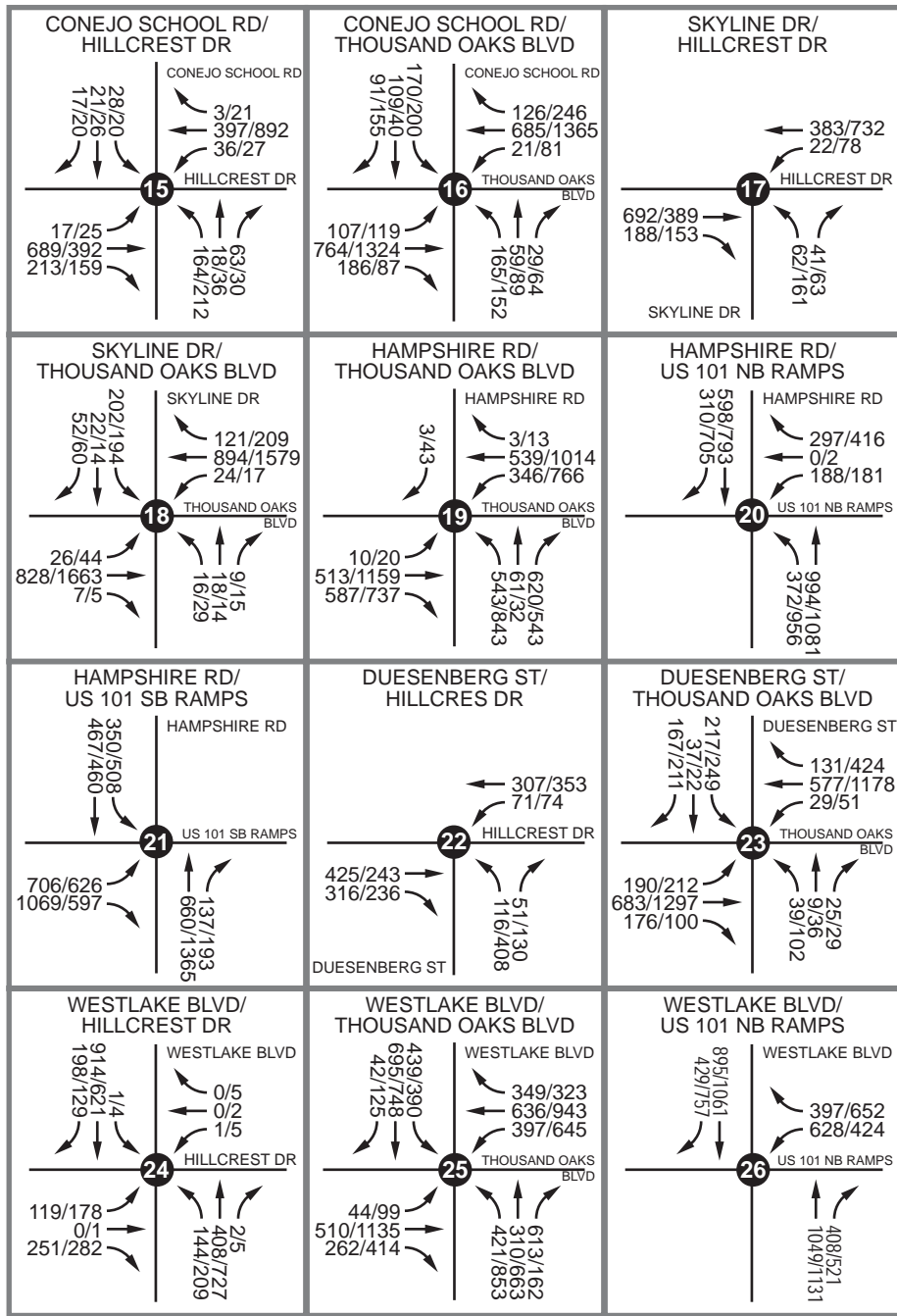


Legend:

XX/XX AM/PM Intersection Volumes

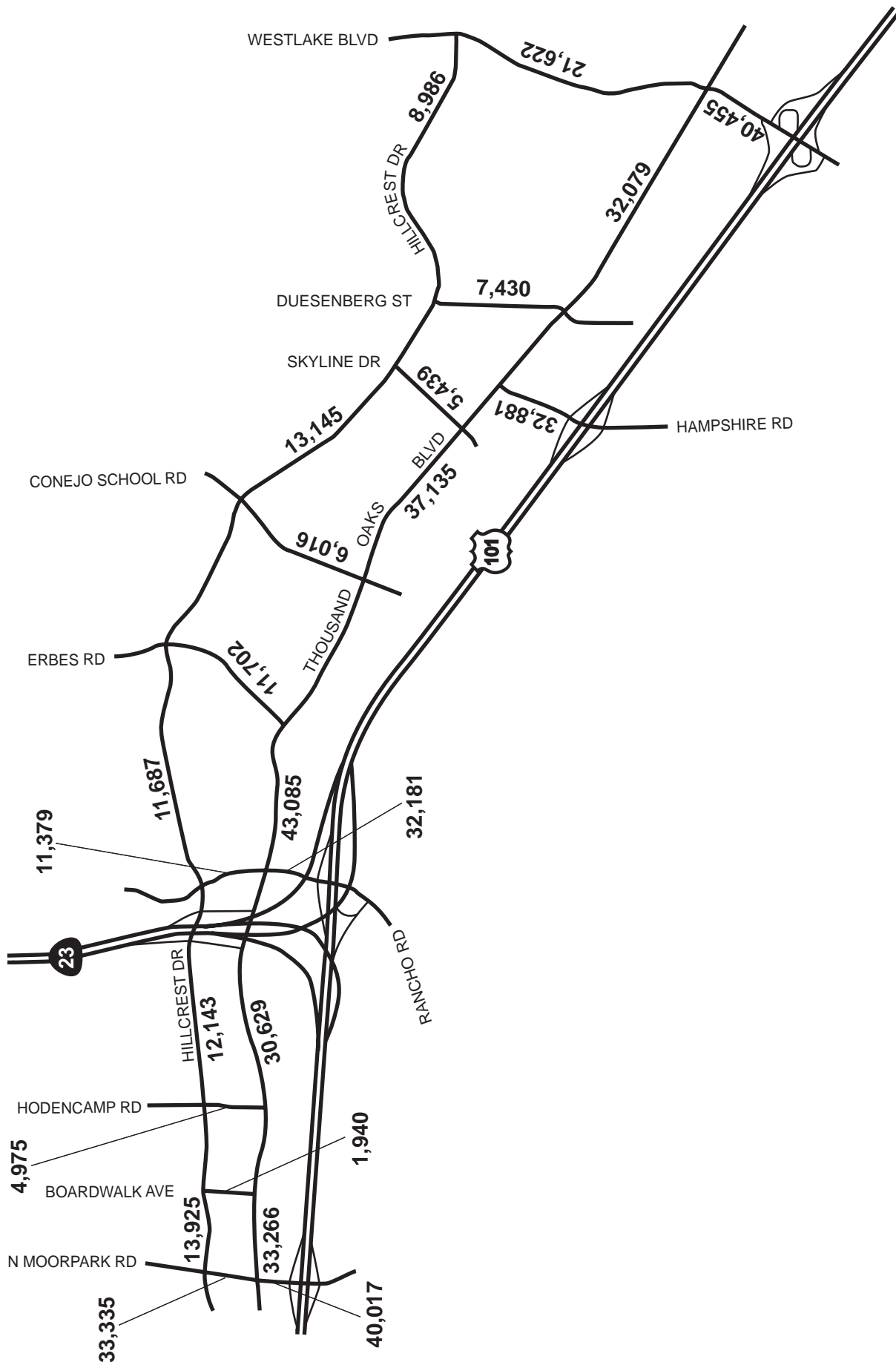


## Area 1 - Forecast Existing Plus Proposed Specific Plan Conditions AM/PM Peak Hour Intersection Volumes



Legend:  
XX/XX AM/PM Intersection Volumes

## Area 2 - Forecast Existing Plus Proposed Specific Plan Conditions AM/PM Peak Hour Intersection Volumes



Not to Scale



# Forecast Existing Plus Specific Plan Roadway Segment ADT Volumes

MAR/2011

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**Table 4**  
**Forecast Existing Plus Proposed Specific Plan Conditions**  
**Intersection Peak Hour LOS Assuming Existing Study Intersection Geometry/Control**

Study Intersection	Existing Conditions				Forecast Existing Plus Proposed Specific Plan Conditions				Significant Impact?
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		
	V/C (Delay)	LOS	V/C (Delay)	LOS	V/C (Delay)	LOS	V/C (Delay)	LOS	
1 – Moorpark Rd/Hillcrest Dr	0.41	A	0.61	B	0.46	A	0.71	C	Yes
2 – Moorpark Rd/Thousand Oaks Blvd	0.34	A	0.53	A	0.51	A	0.70	B	No
5 – Hodencamp Rd/Hillcrest Dr	0.33	A	0.51	A	0.34	A	0.54	A	No
6 – Hodencamp Rd/Thousand Oaks Blvd	0.17	A	0.30	A	0.24	A	0.53	A	No
9 – Rancho Rd/Hillcrest Dr	0.42	A	0.37	A	0.44	A	0.46	A	No
10 – Rancho Rd/Thousand Oaks Blvd	0.41	A	0.51	A	0.59	A	0.88	D	Yes
13 – Erbes Rd/Hillcrest Dr	0.54	A	0.57	A	0.61	B	0.73	C	Yes
14 – Erbes Rd/Thousand Oaks Blvd	0.33	A	0.42	A	0.46	A	0.70	B	No
15 – Conejo School Rd/Hillcrest Dr	0.45	A	0.39	A	0.48	A	0.49	A	No
16 – Conejo School Rd/Thousand Oaks Blvd	0.34	A	0.45	A	0.44	A	0.72	C	Yes
17 – Skyline Dr/Hillcrest Dr	(17.4)	C	(22.0)	C	(18.0)	C	(30.6)	D	Yes
18 – Skyline Dr/Thousand Oaks Blvd	0.37	A	0.52	A	0.48	A	0.72	C	Yes
19 – Hampshire Rd/Thousand Oaks Blvd	0.76	C	0.78	C	0.86	D	1.05	F	Yes
22 – Duesenberg Dr/Hillcrest Dr	0.34	A	0.31	A	0.35	A	0.35	A	No
23 – Duesenberg Dr/Thousand Oaks Blvd	0.36	A	0.57	A	0.46	A	0.71	C	Yes
24 – Westlake Blvd/Hillcrest Dr	0.49	A	0.44	A	0.49	A	0.44	A	No
25 – Westlake Blvd/Thousand Oaks Blvd	0.47	A	0.63	B	0.56	A	0.85	D	Yes

**Note:** Deficient intersection operation shown in **bold**.



As shown in Table 4, four (4) study intersections are forecast to operate at a deficient LOS (LOS D or worse) for forecast existing plus proposed Specific Plan conditions assuming existing study intersection geometry/control, based on City of Thousand Oaks performance criteria:

- Rancho Road/Thousand Oaks Boulevard (p.m. peak hour only);
- Skyline Drive/Hillcrest Drive (p.m. peak hour only);
- Hampshire Road/Thousand Oaks Boulevard (both a.m. and p.m. peak hours); and
- Westlake Boulevard/Thousand Oaks Boulevard (p.m. peak hour only).

As also shown in Table 4, nine (9) study intersections are forecast to be significantly impacted for forecast existing plus proposed Specific Plan conditions assuming existing study intersection geometry/control, based on City of Thousand Oaks thresholds of significance:

- Moorpark Road/Hillcrest Drive (p.m. peak hour only);
- Rancho Road/Thousand Oaks Boulevard (p.m. peak hour only);
- Erbes Road/Hillcrest Drive (p.m. peak hour only);
- Conejo School Road/Thousand Oaks Boulevard (p.m. peak hour only);
- Skyline Drive/Hillcrest Drive (p.m. peak hour only);
- Skyline Drive/Thousand Oaks Boulevard (p.m. peak hour only);
- Hampshire Road/Thousand Oaks Boulevard (both a.m. and p.m. peak hours);
- Duesenberg Drive/Thousand Oaks Boulevard (p.m. peak hour only); and
- Westlake Boulevard/Thousand Oaks Boulevard (p.m. peak hour only).

#### **Forecast Existing Plus Proposed Specific Plan Conditions Recommended Mitigation Measures**

The following mitigation measures are recommended to maintain acceptable LOS at the study intersections for forecast existing plus proposed Specific Plan conditions:

##### **Moorpark Road/Hillcrest Drive**

**Mitigation Measure No. 1** - The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program.

##### **Rancho Road/Thousand Oaks Boulevard**

**Mitigation Measure No. 2** - Widen the eastbound Thousand Oaks Boulevard approach from one left-turn lane, two through lanes, and one right-turn lane with overlap to consist of one left-turn lane, three through lanes, and one right-turn lane with overlap. The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program.

##### **Erbes Road/Hillcrest Drive**

**Mitigation Measure No. 3** – The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program.

### **Conejo School Road/Thousand Oaks Boulevard**

**Mitigation Measure No. 4** - The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program.

### **Skyline Drive/Hillcrest Drive**

**Mitigation Measure No. 5** – Signalization of the Skyline Drive/Hillcrest Drive intersection is recommended as mitigation to improve the intersection to an acceptable LOS (C or better).

### **Skyline Drive/Thousand Oaks Boulevard**

**Mitigation Measure No. 6** - The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program.

### **Hampshire Road/Thousand Oaks Boulevard**

**Mitigation Measure No. 7** - Modify the Hampshire Road/Thousand Oaks Boulevard intersection traffic signal to include a northbound Hampshire Road right-turn overlap, which will preclude u-turn movement on westbound to eastbound Thousand Oaks Boulevard. Widen the eastbound Thousand Oaks Boulevard approach from one left-turn lane, two through lanes, and one right turn-lane to consist of one left-turn lane, three through lanes, and one right-turn lane. Modify the Hampshire Road/Thousand Oaks Boulevard intersection traffic signal to include a eastbound Thousand Oaks Boulevard right-turn overlap, which will preclude u-turn movement on northbound to southbound Hampshire Road.

### **Duesenberg Drive/Thousand Oaks Boulevard**

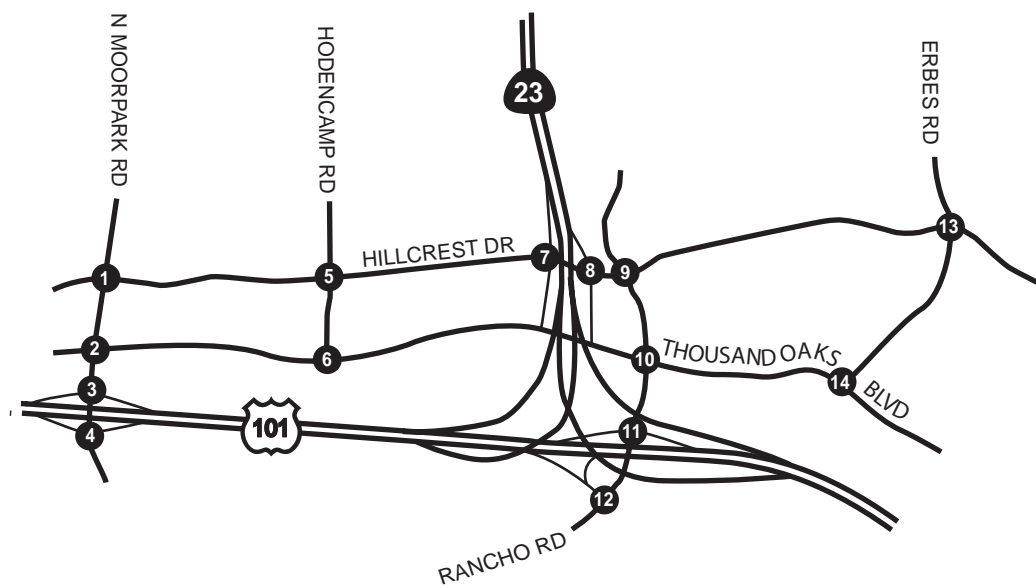
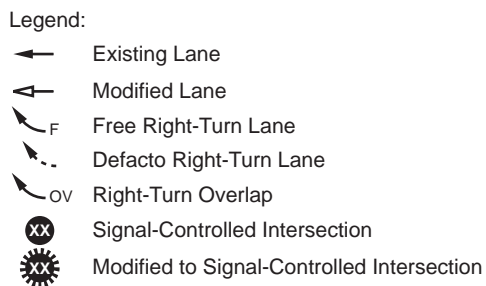
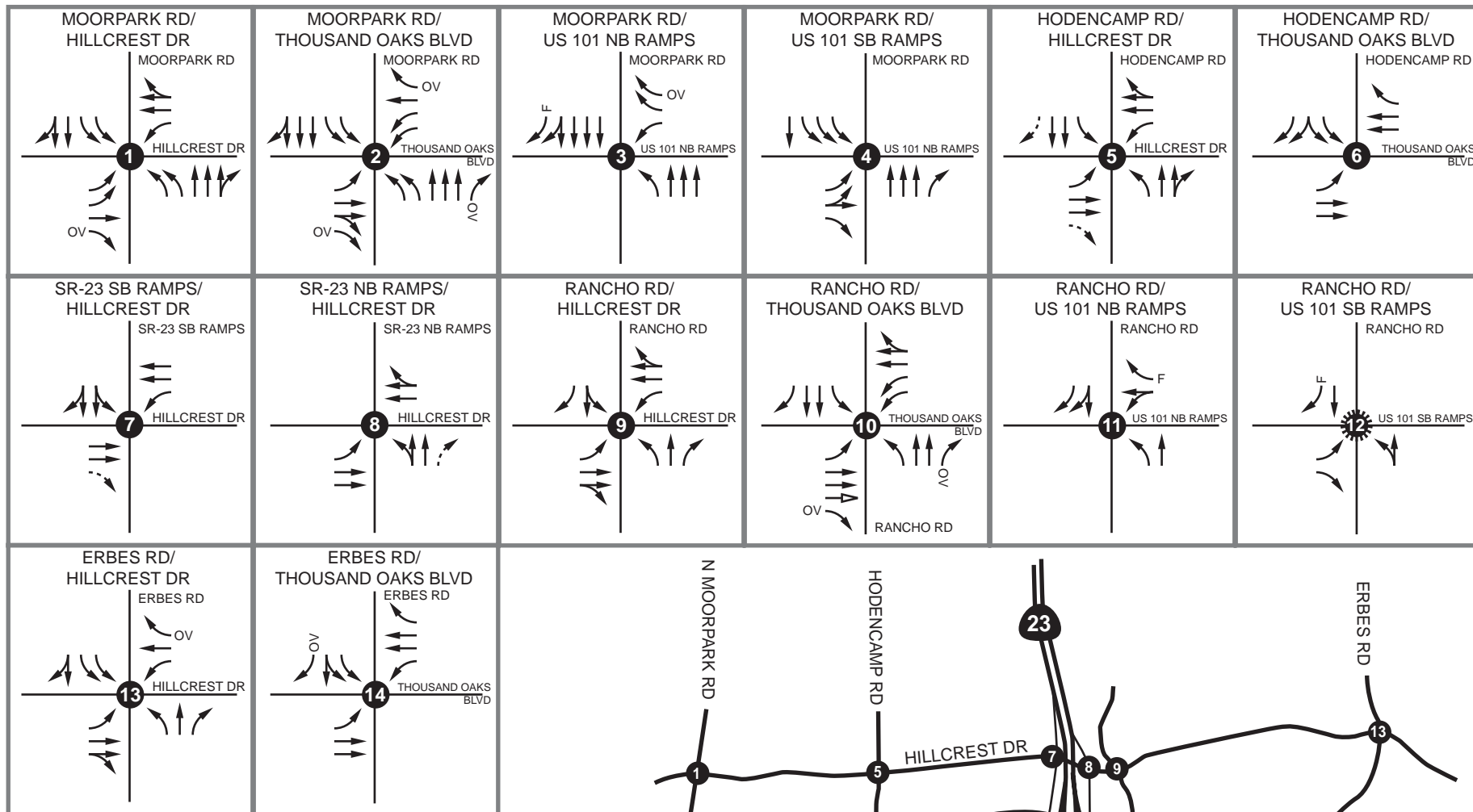
**Mitigation Measure No. 8** – The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program.

### **Westlake Boulevard/Thousand Oaks Boulevard**

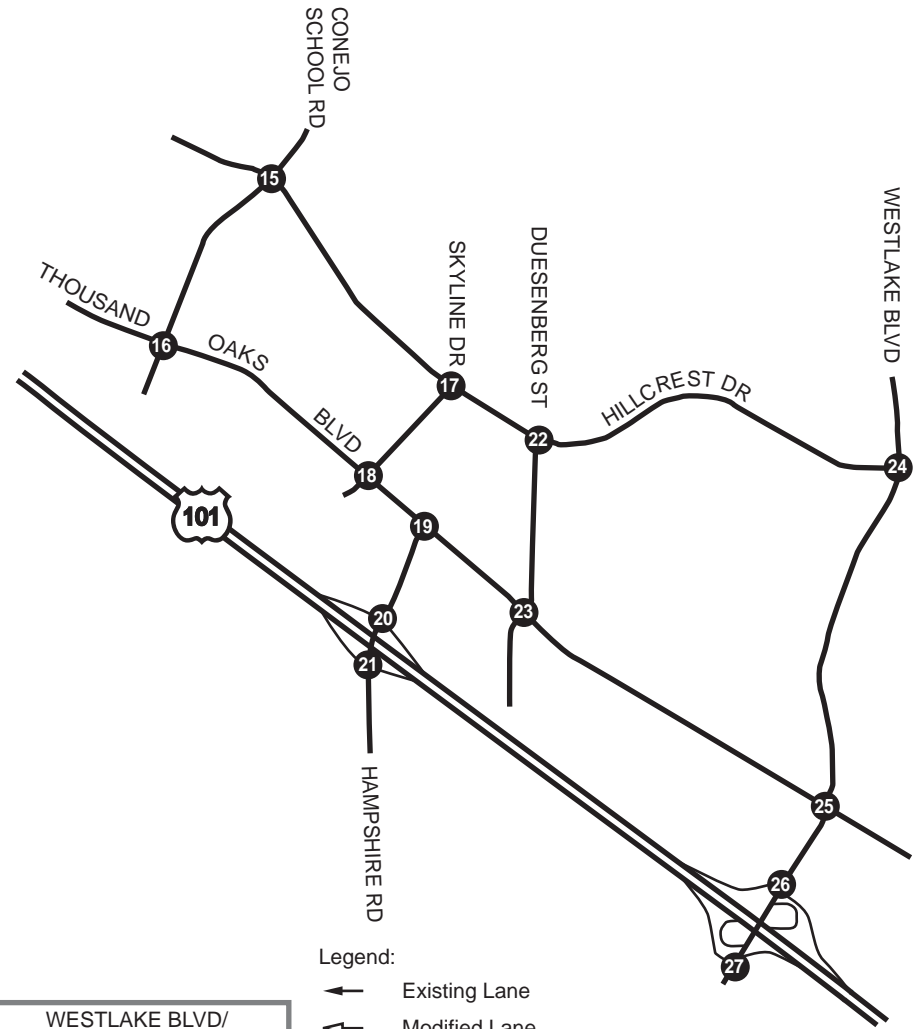
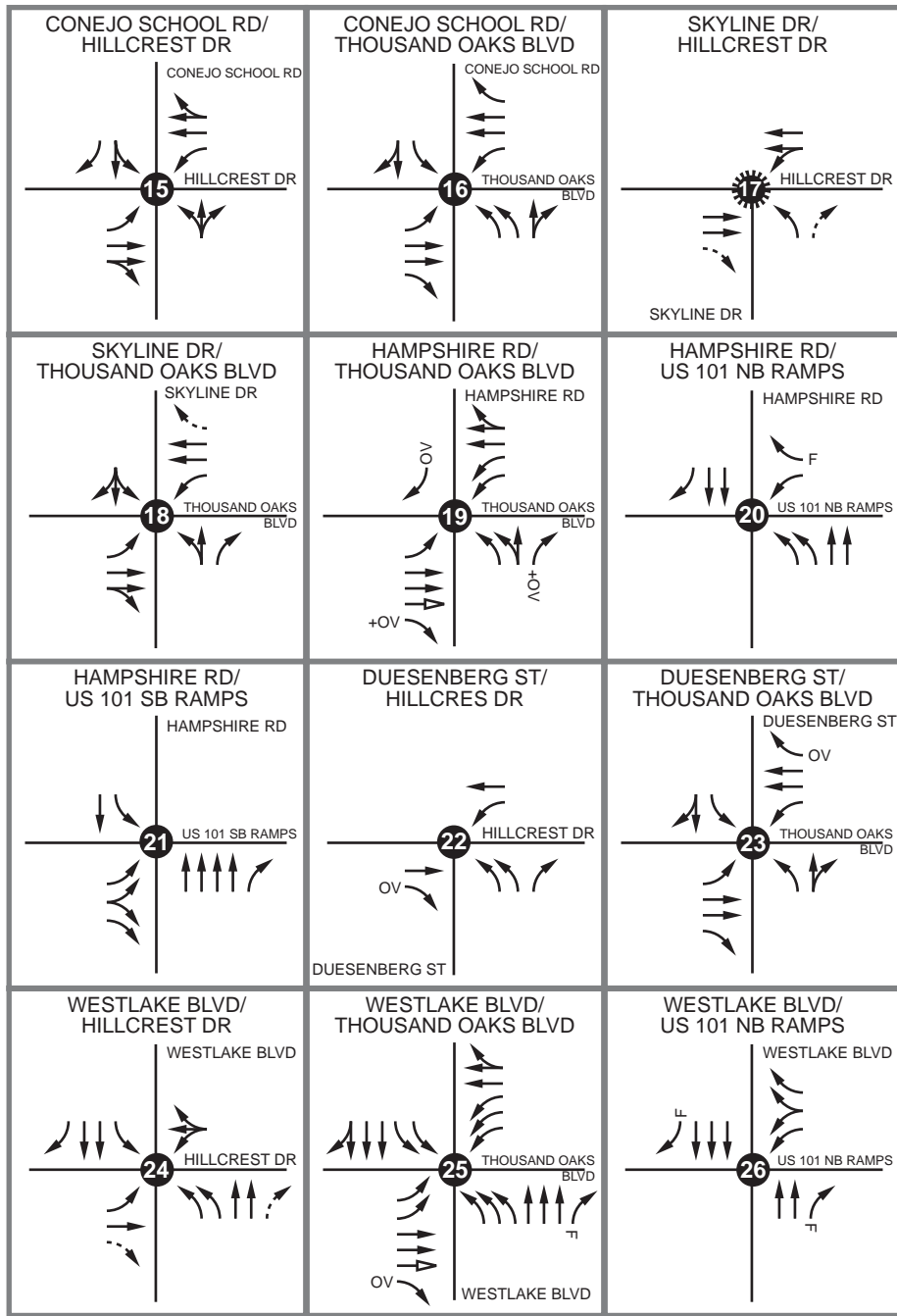
**Mitigation Measure No. 9** - Widen eastbound Thousand Oaks Boulevard approach from two left-turn lanes, two through lanes, and one right-turn with overlap to consist of two left-turn lanes, three through lanes, and one right-turn with overlap. The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program.

Exhibits 11 and 12 show the mitigated study intersection geometry/control to achieve an acceptable LOS at the study intersections for forecast existing plus proposed Specific Plan conditions.

Table 5 shows the forecast LOS of the mitigated study intersections for forecast existing plus proposed Specific Plan conditions; detailed LOS analysis sheets are contained in Appendix B.



# Area 1 - Mitigated Forecast Existing Plus Proposed Specific Plan Conditions Study Intersection Geometry



- Legend:**
- ← Existing Lane
  - ↗ Modified Lane
  - ↗ F Free Right-Turn Lane
  - ↗ Defacto Right-Turn Lane
  - ↗ OV Right-Turn Overlap
  - +OV Add Right-Turn Overlap
  - xx Stop-Controlled Intersection
  - xx Signal-Controlled Intersection
  - xx Modified to Signal-Controlled Intersection
  - STOP Stop-Controlled Approach

## Area 2 - Mitigated Forecast Existing Plus Proposed Specific Plan Conditions Study Intersection Geometry

**Table 5**  
**Mitigated Forecast Existing Plus Proposed Specific Plan Conditions Intersection Peak Hour LOS**

Study Intersection	Existing Conditions				Mitigated Forecast Existing Plus Proposed Specific Plan Conditions				Significant Impact?
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		
	V/C (Delay)	LOS	V/C (Delay)	LOS	V/C	LOS	V/C	LOS	
1 – Moorpark Rd/Hillcrest Dr	0.41	A	0.61	B	0.46	A	0.71	C	No
10 – Rancho Rd/Thousand Oaks Blvd	0.41	A	0.51	A	0.53	A	0.80	C	No
13 – Erbes Rd/Hillcrest Dr	0.54	A	0.57	A	0.61	B	0.73	C	No
16 – Conejo School Rd/Thousand Oaks Blvd	0.34	A	0.45	A	0.44	A	0.72	C	No
17 – Skyline Dr/Hillcrest Dr	(17.4)	C	(22.0)	C	0.27	A	0.35	A	No
18 – Skyline Dr/Thousand Oaks Blvd	0.37	A	0.52	A	0.48	A	0.72	C	No
19 – Hampshire Rd/Thousand Oaks Blvd	0.76	C	0.78	C	0.57	A	0.77	C	No
23 – Duesenberg Dr/Thousand Oaks Blvd	0.36	A	0.57	A	0.46	A	0.71	C	No
25 – Westlake Blvd/Thousand Oaks Blvd	0.47	A	0.63	B	0.56	A	0.79	C	No

**Note:** Deficient intersection operation shown in **bold**.

As shown in Table 5, assuming implementation of the recommended mitigation measures, the nine (9) study intersections are forecast to operate at an acceptable LOS (LOS C or better) for forecast existing plus proposed Specific Plan conditions.

## **FORECAST EXISTING PLUS PROPOSED DOWNTOWN ALTERNATIVE CONDITIONS ASSUMING EXISTING STUDY INTERSECTION GEOMETRY/CONTROL**

Forecast existing plus proposed Downtown Alternative conditions assumes buildout of the combination of General Plan land use within the proposed Specific Plan area and proposed Downtown Alternative land use intensification within the Specific Plan area are added to existing conditions. The Downtown Alternative proposes special development regulations for the Thousand Oaks Boulevard area between Moorpark Road and Duesenberg Drive to allow somewhat more intense development than existing regulations, and will also encourage a more pedestrian-friendly environment through its proposed standards for building design and placement. Appendix C contains the City-provided location of the projects assuming General Plan buildout within the Specific Plan area and the proposed Downtown Alternative land use intensification.

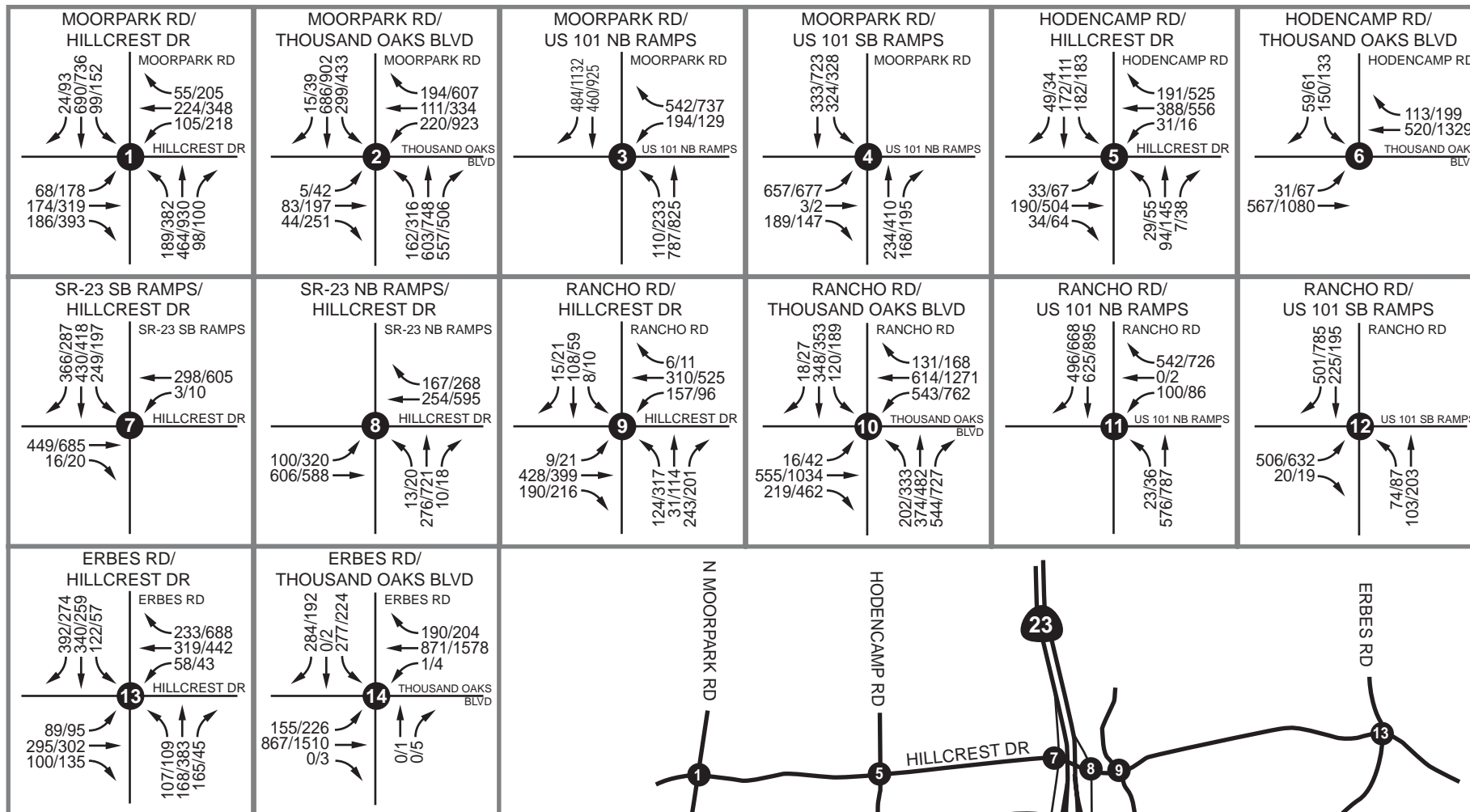
Forecast a.m. and p.m. peak hour volumes for existing plus proposed Downtown Alternative conditions assuming existing study intersection geometry/control were derived by adding trips forecast to be generated by buildout of the combination of General Plan land use within the Specific Plan area and proposed Downtown Alternative land use intensification within the Specific Plan area to existing traffic volumes.

Exhibits 13 and 14 show forecast existing plus proposed Downtown Alternative conditions a.m. and p.m. peak hour volumes at the study intersections.

Exhibit 15 shows forecast existing plus proposed Downtown Alternative conditions ADT volumes.

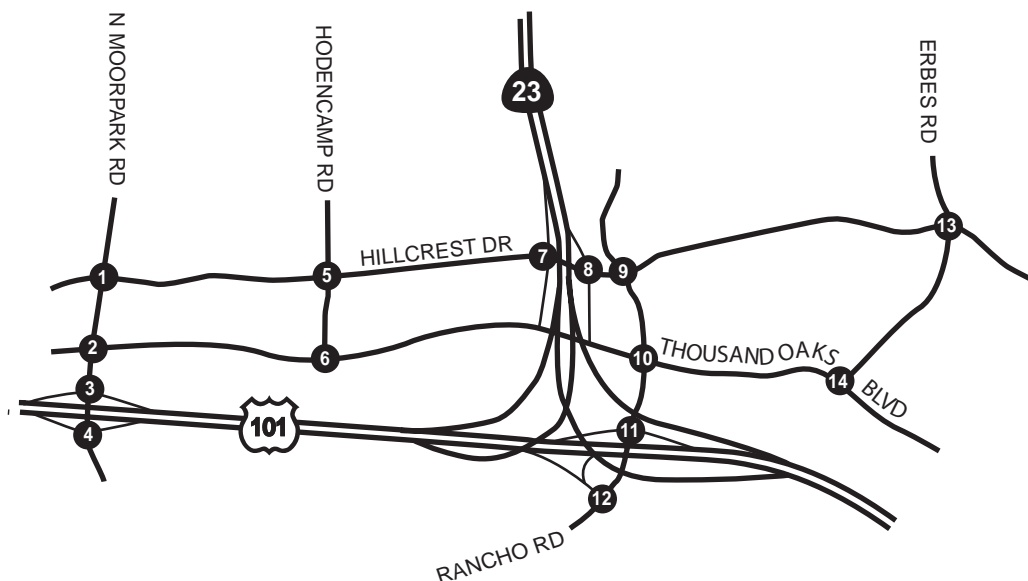
### **Forecast Existing Plus Proposed Downtown Alternative Conditions Intersection Level of Service Assuming Existing Study Intersection Geometry/Control**

Table 6 summarizes forecast existing plus proposed Downtown Alternative conditions a.m. and p.m. peak hour LOS of the study intersections assuming existing study intersection geometry/control; detailed LOS analysis sheets are contained in Appendix B.

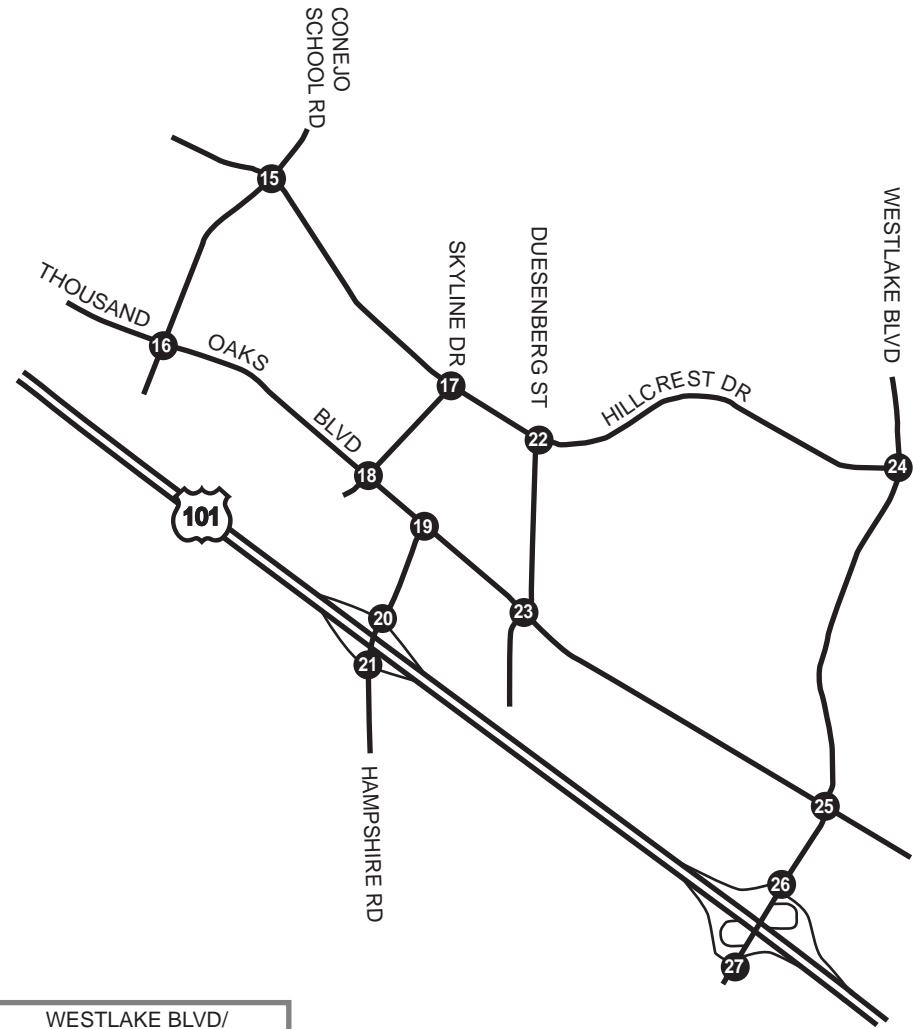
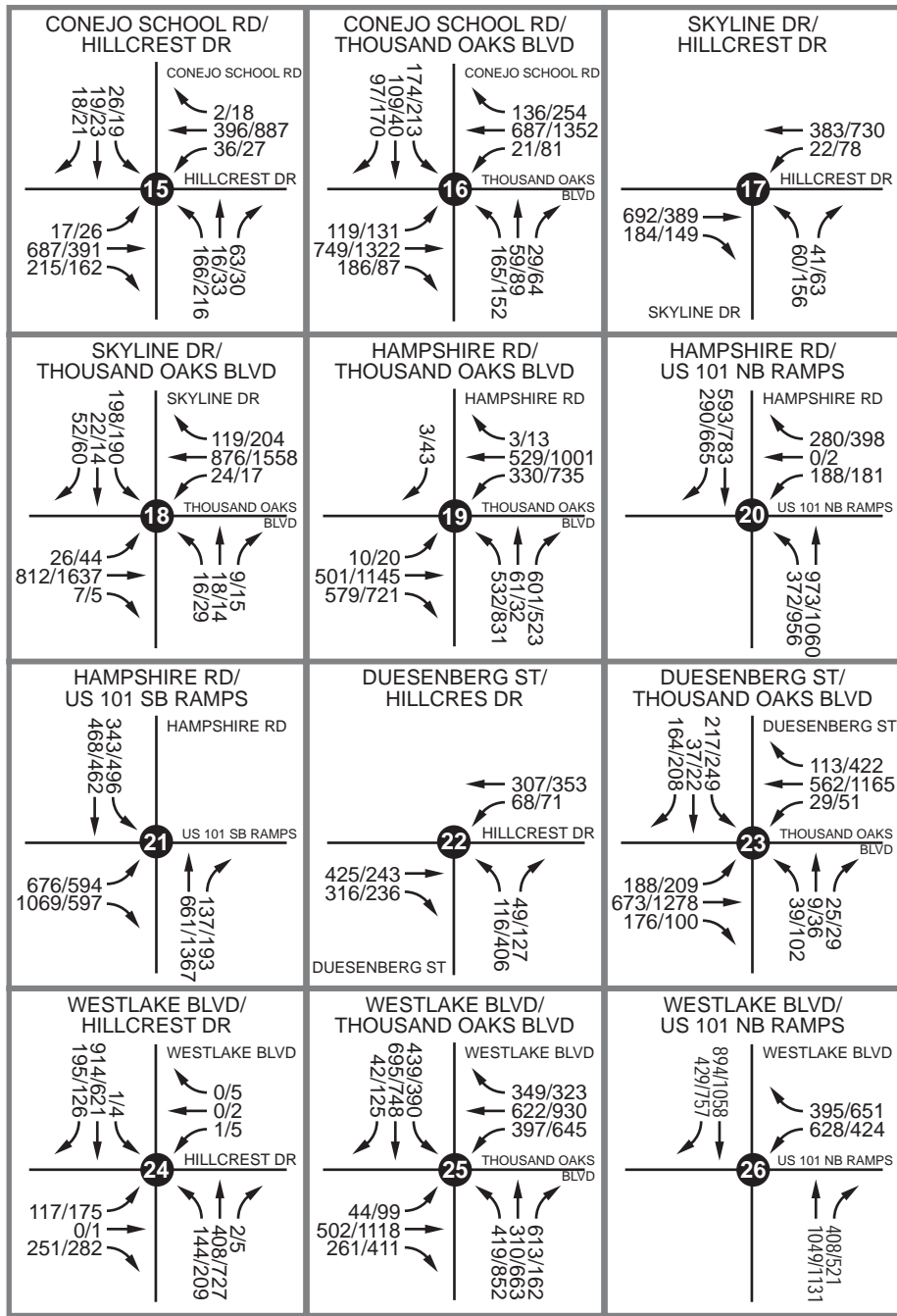


Legend:

XX/XX AM/PM Intersection Volumes



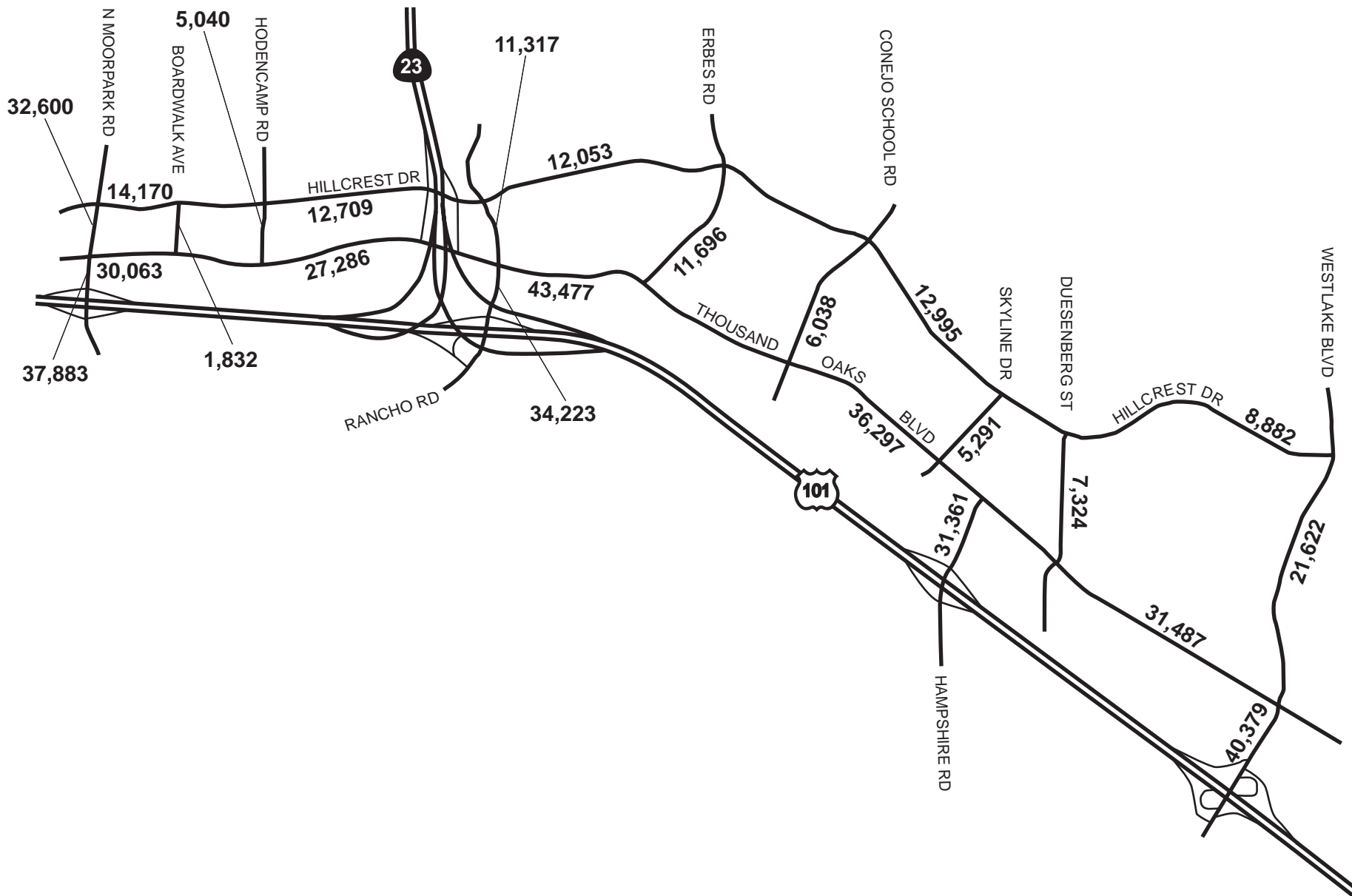
## Area 1 - Forecast Existing Plus Proposed Downtown Alternative Conditions AM/PM Peak Hour Intersection Volumes



Legend:  
XX/XX AM/PM Intersection Volumes

## Area 2 - Forecast Existing Plus Proposed Downtown Alternative Conditions AM/PM Peak Hour Intersection Volumes





Not to Scale



## Forecast Existing Plus Downtown Alternative Roadway Segment ADT Volumes

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MAR/2011

Exhibit 15

**Table 6**  
**Forecast Existing Plus Proposed Downtown Alternative**  
**Conditions Intersection Peak Hour LOS Assuming Existing Study Intersection Geometry/Control**

Study Intersection	Existing Conditions				Forecast Existing Plus Proposed Downtown Alternative Conditions				Significant Impact?
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		
	V/C (Delay)	LOS	V/C (Delay)	LOS	V/C (Delay)	LOS	V/C (Delay)	LOS	
1 – Moorpark Rd/Hillcrest Dr	0.41	A	0.61	B	0.46	A	0.71	C	Yes
2 – Moorpark Rd/Thousand Oaks Blvd	0.34	A	0.53	A	0.47	A	0.67	B	No
5 – Hodencamp Rd/Hillcrest Dr	0.33	A	0.51	A	0.35	A	0.55	A	No
6 – Hodencamp Rd/Thousand Oaks Blvd	0.17	A	0.30	A	0.23	A	0.50	A	No
9 – Rancho Rd/Hillcrest Dr	0.42	A	0.37	A	0.44	A	0.49	A	No
10 – Rancho Rd/Thousand Oaks Blvd	0.41	A	0.51	A	0.59	A	<b>0.90</b>	<b>D</b>	Yes
13 – Erbes Rd/Hillcrest Dr	0.54	A	0.57	A	0.61	B	0.73	C	Yes
14 – Erbes Rd/Thousand Oaks Blvd	0.33	A	0.42	A	0.46	A	0.70	B	No
15 – Conejo School Rd/Hillcrest Dr	0.45	A	0.39	A	0.47	A	0.49	A	No
16 – Conejo School Rd/Thousand Oaks Blvd	0.34	A	0.45	A	0.47	A	0.73	C	Yes
17 – Skyline Dr/Hillcrest Dr	(17.4)	C	(22.0)	C	(17.8)	C	<b>(29.4)</b>	<b>D</b>	Yes
18 – Skyline Dr/Thousand Oaks Blvd	0.37	A	0.52	A	0.47	A	0.70	B	No
19 – Hampshire Rd/Thousand Oaks Blvd	0.76	C	0.78	C	<b>0.84</b>	<b>D</b>	<b>1.02</b>	<b>F</b>	Yes
22 – Duesenberg Dr/Hillcrest Dr	0.34	A	0.31	A	0.34	A	0.35	A	No
23 – Duesenberg Dr/Thousand Oaks Blvd	0.36	A	0.57	A	0.45	A	0.69	B	No
24 – Westlake Blvd/Hillcrest Dr	0.49	A	0.44	A	0.49	A	0.44	A	No
25 – Westlake Blvd/Thousand Oaks Blvd	0.47	A	0.63	B	0.56	A	<b>0.84</b>	<b>D</b>	Yes

**Note:** Deficient intersection operation shown in **bold**.

As shown in Table 6, four (4) study intersections are forecast to operate at a deficient LOS (LOS D or worse) for forecast existing plus proposed Downtown Alternative conditions assuming existing study intersection geometry/control, based on City of Thousand Oaks performance criteria:

- Rancho Road/Thousand Oaks Boulevard (p.m. peak hour only);
- Skyline Drive/Hillcrest Drive (p.m. peak hour only);
- Hampshire Road/Thousand Oaks Boulevard (both a.m. and p.m. peak hours); and
- Westlake Boulevard/Thousand Oaks Boulevard (p.m. peak hour only).

As also shown in Table 6, seven (7) study intersections are forecast to be significantly impacted for forecast existing plus proposed Downtown Alternative conditions assuming existing study intersection geometry/control, based on City of Thousand Oaks thresholds of significance:

- Moorpark Road/Hillcrest Drive (p.m. peak hour only);
- Rancho Road/Thousand Oaks Boulevard (p.m. peak hour only);
- Erbes Road/Hillcrest Drive (p.m. peak hour only);
- Conejo School Road/Thousand Oaks Boulevard (p.m. peak hour only);
- Skyline Drive/Hillcrest Drive (p.m. peak hour only);
- Hampshire Road/Thousand Oaks Boulevard (both a.m. and p.m. peak hours);
- Westlake Boulevard/Thousand Oaks Boulevard (p.m. peak hour only).

#### **Forecast Existing Plus Proposed Downtown Alternative Conditions Recommended Mitigation Measures**

The following mitigation measures are recommended to maintain acceptable LOS at the study intersections for forecast existing plus proposed Downtown Alternative conditions:

##### **Moorpark Road/Hillcrest Drive**

**Mitigation Measure No. 10** - The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program.  
*[Identical to Mitigation Measure No. 1]*

##### **Rancho Road/Thousand Oaks Boulevard**

**Mitigation Measure No. 11** - Widen the eastbound Thousand Oaks Boulevard approach from one left-turn lane, two through lanes, and one right-turn lane with overlap to consist of one left-turn lane, three through lanes, and one right-turn lane with overlap. Widen the westbound Thousand Oaks Boulevard approach from two left-turn lanes, one through lane, and one shared through/right-turn lane to consist of two left-turn lanes, two through lanes, and one right-turn lane. The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program.

##### **Erbes Road/Hillcrest Drive**

**Mitigation Measure No. 12** – The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program.  
*[Identical to Mitigation Measure No. 3]*

### **Conejo School Road/Thousand Oaks Boulevard**

**Mitigation Measure No. 13** - The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program. *[Identical to Mitigation Measure No. 4]*

### **Skyline Drive/Hillcrest Drive**

**Mitigation Measure No. 14** – Signalization of the Skyline Drive/Hillcrest Drive intersection is recommended as mitigation to improve the intersection to an acceptable LOS (C or better). *[Identical to Mitigation Measure No. 5]*

### **Hampshire Road/Thousand Oaks Boulevard**

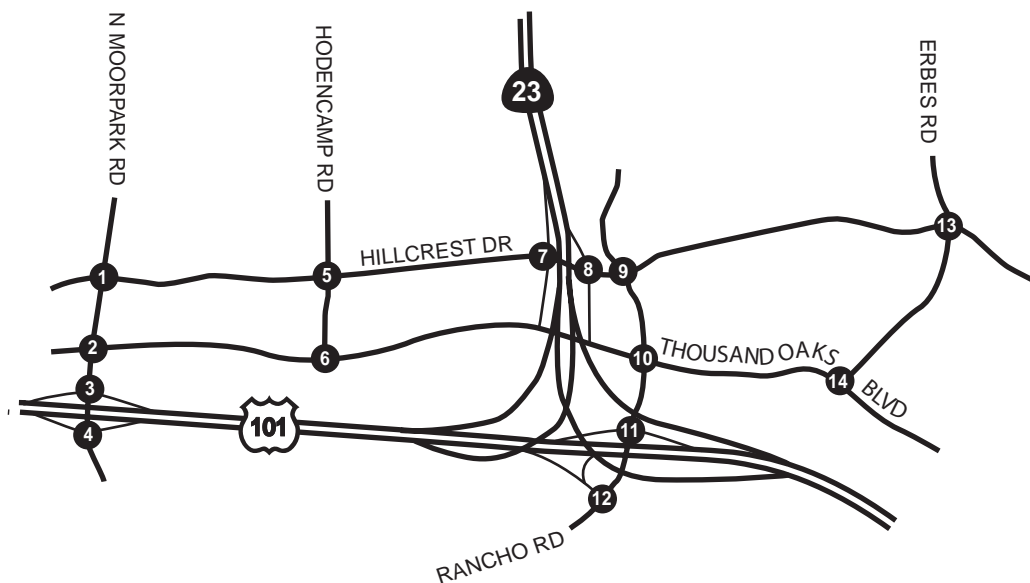
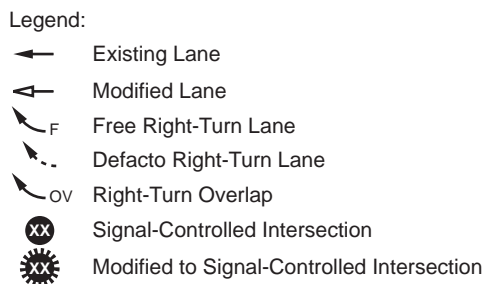
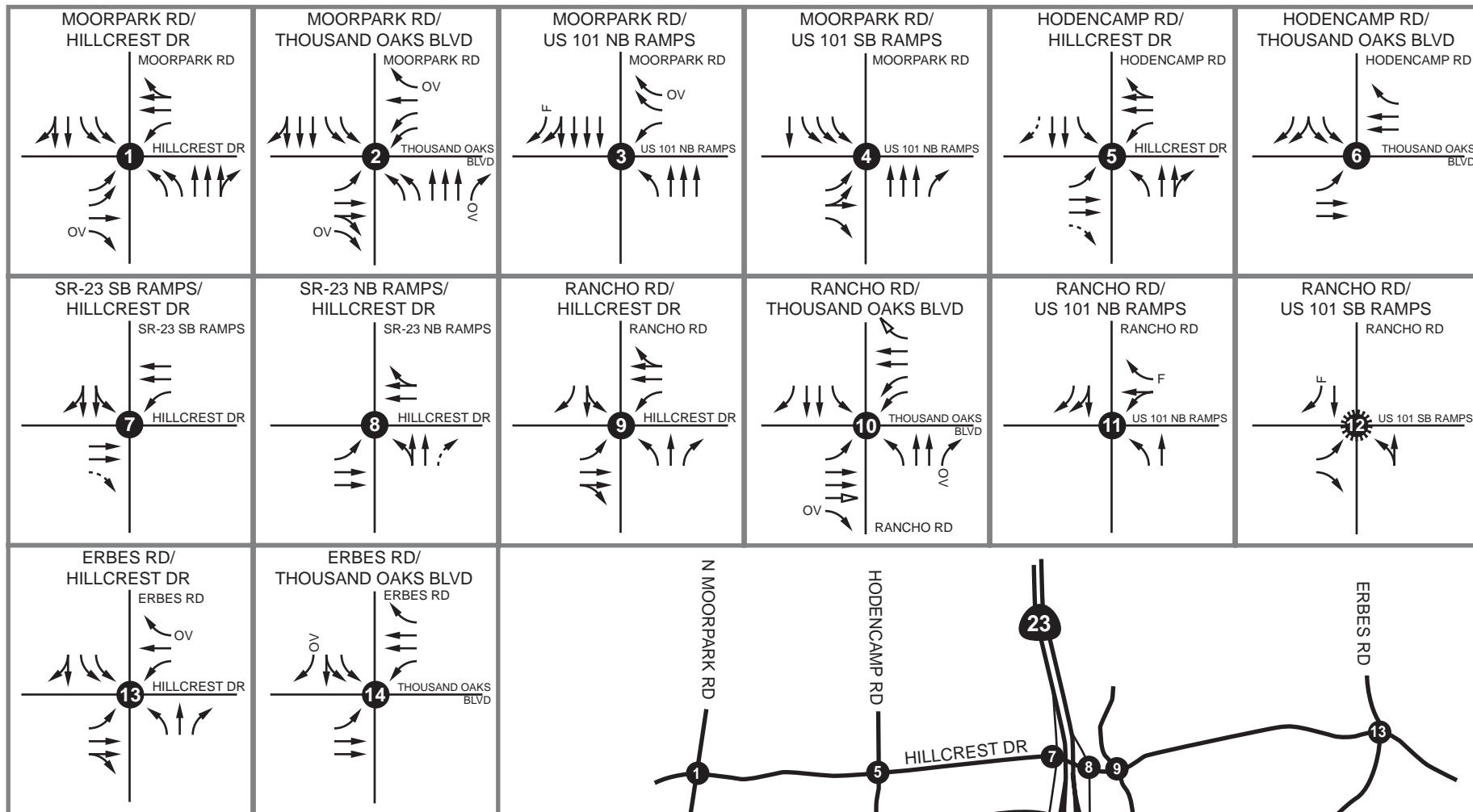
**Mitigation Measure No. 15** - Modify the Hampshire Road/Thousand Oaks Boulevard intersection traffic signal to include a northbound Hampshire Road right-turn overlap, which will preclude u-turn movement on westbound to eastbound Thousand Oaks Boulevard. Widen the eastbound Thousand Oaks Boulevard approach from one left-turn lane, two through lanes, and one right turn-lane to consist of one left-turn lane, three through lanes, and one right-turn lane. Modify the Hampshire Road/Thousand Oaks Boulevard intersection traffic signal to include a eastbound Thousand Oaks Boulevard right-turn overlap, which will preclude u-turn movement on northbound to southbound Hampshire Road. The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program.

### **Westlake Boulevard/Thousand Oaks Boulevard**

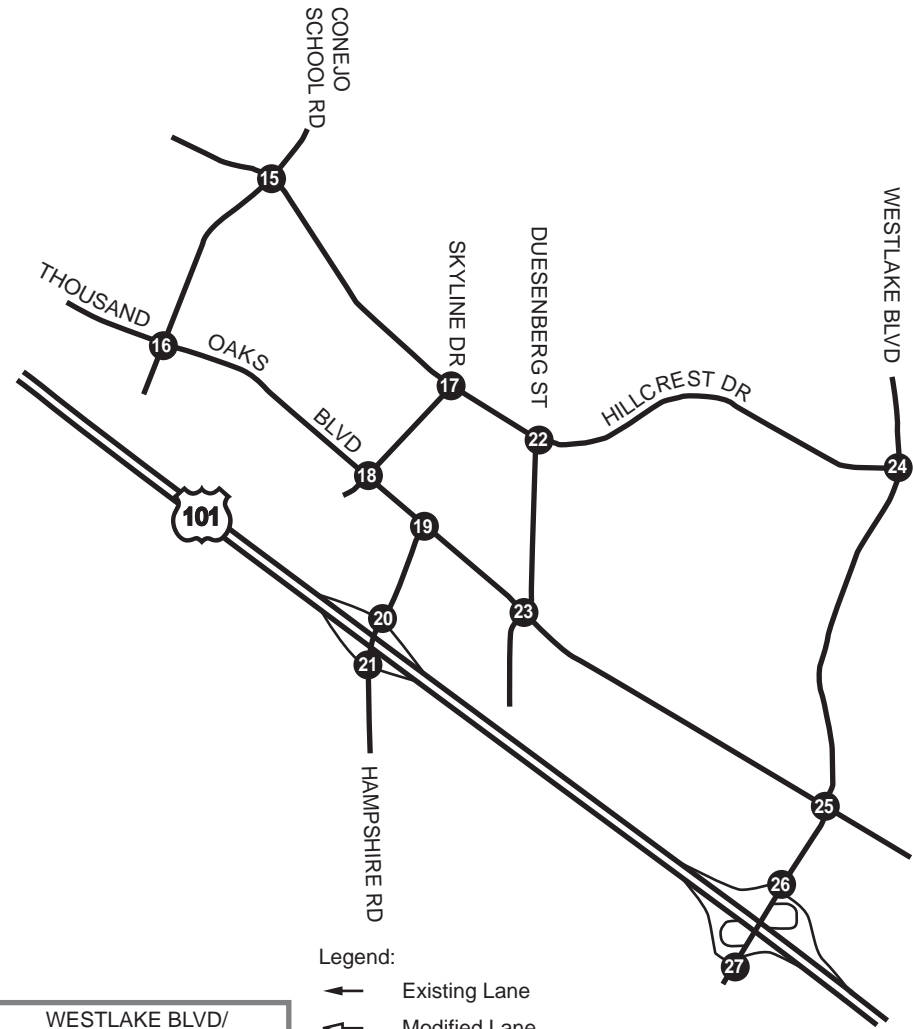
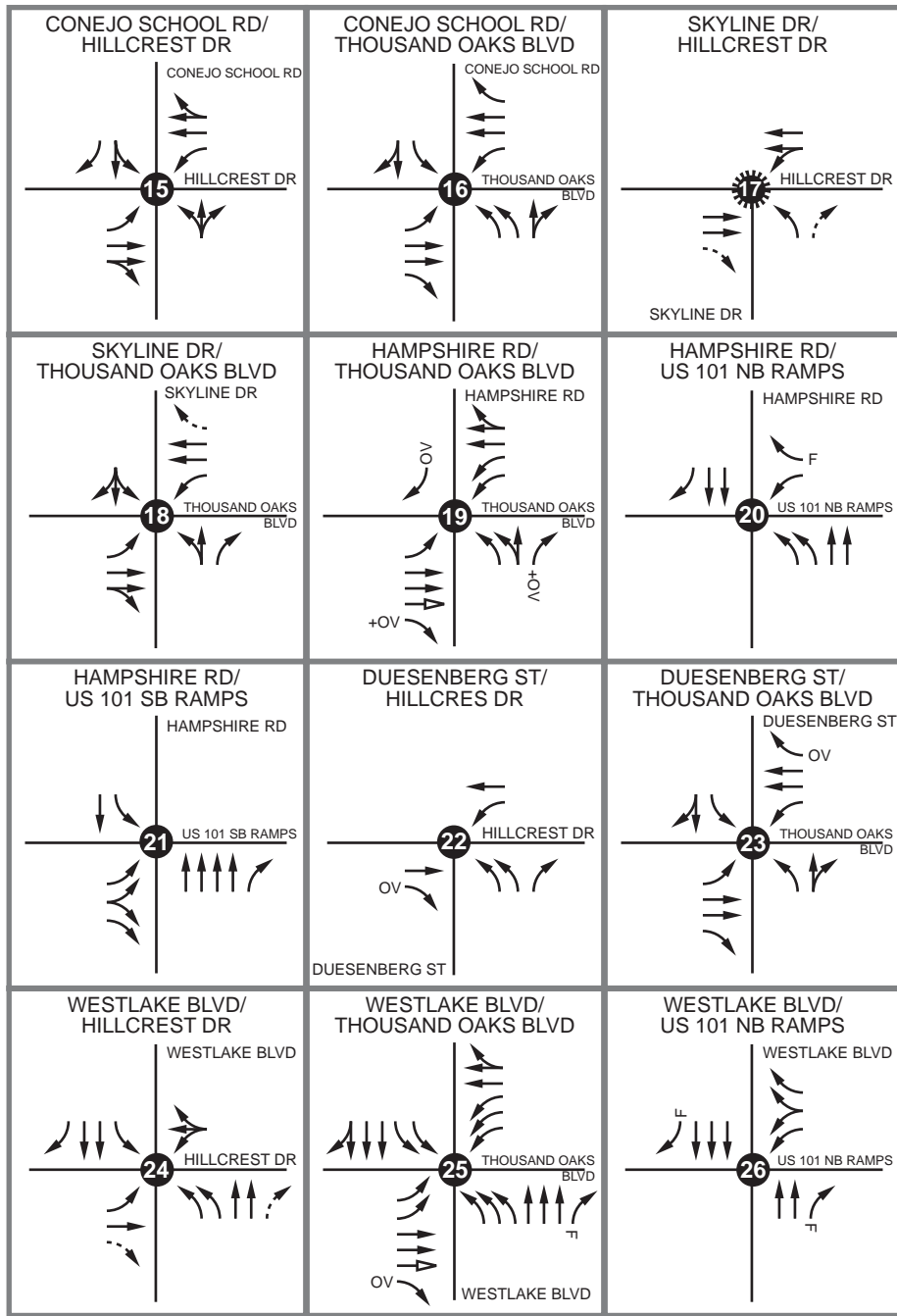
**Mitigation Measure No. 16** - Widen eastbound Thousand Oaks Boulevard approach from two left-turn lanes, two through lanes, and one right-turn with overlap to consist of two left-turn lanes, three through lanes, and one right-turn with overlap. The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program. *[Identical to Mitigation Measure No. 9]*

Exhibits 16 and 17 show the mitigated forecast existing plus proposed Downtown Alternative conditions study intersection geometry.

Table 7 shows the forecast LOS of the mitigated study intersections for forecast existing plus proposed Downtown Alternative conditions; detailed LOS analysis sheets are contained in Appendix B.



## Area 1 - Mitigated Forecast Existing Plus Proposed Downtown Alternative Conditions Study Intersection Geometry



- Legend:
- ← Existing Lane
  - ↗ Modified Lane
  - ↗ F Free Right-Turn Lane
  - ↗ Defacto Right-Turn Lane
  - ↗ ov Right-Turn Overlap
  - +OV Add Right-Turn Overlap
  - ⬢ xx Stop-Controlled Intersection
  - ⬢ xx Signal-Controlled Intersection
  - ⬢ xx Modified to Signal-Controlled Intersection
  - STOP Stop-Controlled Approach

## Area 2 - Mitigated Forecast Existing Plus Proposed Downtown Alternative Conditions Study Intersection Geometry

**Table 7**  
**Mitigated Forecast Existing Plus Proposed Downtown Alternative Conditions Intersection Peak Hour LOS**

Study Intersection	Existing Conditions				Mitigated Forecast Existing Plus Proposed Downtown Alternative Conditions				Significant Impact?
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		
	V/C (Delay)	LOS	V/C (Delay)	LOS	V/C	LOS	V/C	LOS	
1 – Moorpark Rd/Hillcrest Dr	0.41	A	0.61	B	0.46	A	0.71	C	No
10 – Rancho Rd/Thousand Oaks Blvd	0.41	A	0.51	A	0.53	A	0.79	C	No
13 – Erbes Rd/Hillcrest Dr	0.54	A	0.57	A	0.61	B	0.73	C	No
16 – Conejo School Rd/Thousand Oaks Blvd	0.34	A	0.45	A	0.47	A	0.73	C	No
17 – Skyline Dr/Hillcrest Dr	(17.4)	C	(22.0)	C	0.27	A	0.35	A	No
19 – Hampshire Rd/Thousand Oaks Blvd	0.76	C	0.78	C	0.55	A	0.75	C	No
25 – Westlake Blvd/Thousand Oaks Blvd	0.47	A	0.63	B	0.56	A	0.78	C	No

**Note:** Deficient intersection operation shown in **bold**.

As shown in Table 7, assuming implementation of the recommended mitigation measures, the seven (7) study intersections are forecast to operate at an acceptable LOS (LOS C or better) for forecast existing plus proposed Downtown Alternative conditions.

## **FORECAST EXISTING PLUS PROPOSED REDUCED INTENSITY ALTERNATIVE CONDITIONS ASSUMING EXISTING STUDY INTERSECTION GEOMETRY/CONTROL**

Forecast existing plus proposed Reduced Intensity Alternative conditions assumes buildout of the combination of General Plan land use within the proposed Specific Plan area and proposed Reduced Intensity Alternative land use intensification within the Specific Plan area are added to existing conditions. The Reduced Intensity Alternative proposes special development regulations for the Thousand Oaks Boulevard area between Moorpark Road and Duesenberg Drive to allow somewhat more intense development than existing regulations, and will also encourage a more pedestrian-friendly environment through its proposed standards for building design and placement. Appendix C contains the City-provided location of the projects assuming General Plan buildout within the Specific Plan area and the proposed Reduced Intensity Alternative land use intensification.

Forecast a.m. and p.m. peak hour volumes for existing plus proposed Reduced Intensity Alternative conditions assuming existing study intersection geometry/control were derived by adding trips forecast to be generated by buildout of the combination of General Plan land use within the Specific Plan area and proposed Reduced Intensity Alternative land use intensification within the Specific Plan area to existing traffic volumes.

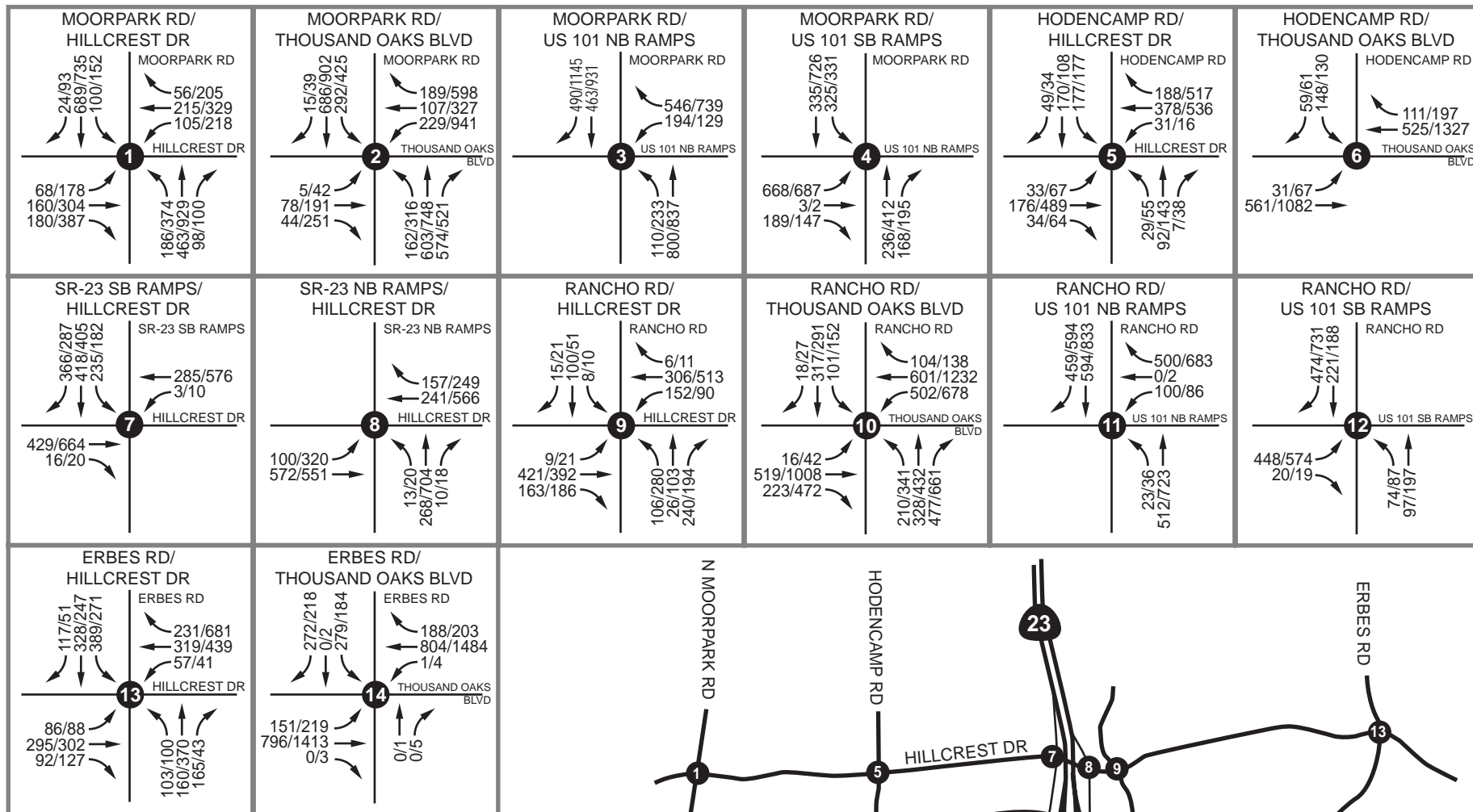
Exhibits 18 and 19 show forecast existing plus proposed Reduced Intensity Alternative conditions a.m. and p.m. peak hour volumes at the study intersections.

Exhibit 20 shows forecast existing plus proposed Reduced Intensity Alternative conditions ADT volumes.

### **Forecast Existing Plus Proposed Reduced Intensity Alternative Conditions Intersection Level of Service Assuming Existing Study Intersection Geometry/Control**

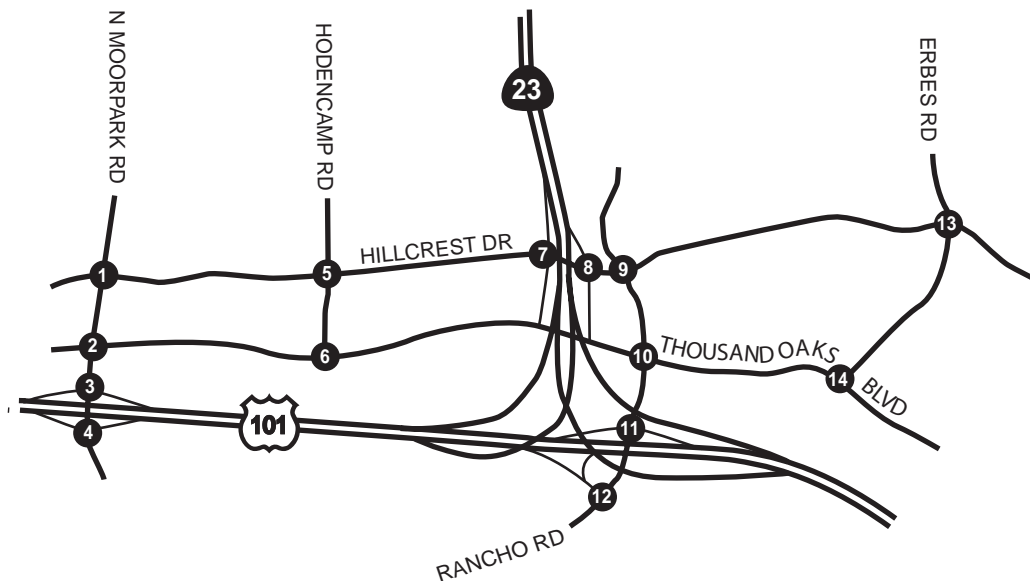
Table 8 summarizes forecast existing plus proposed Reduced Intensity Alternative conditions a.m. and p.m. peak hour LOS of the study intersections assuming existing study intersection geometry/control; detailed LOS analysis sheets are contained in Appendix B.



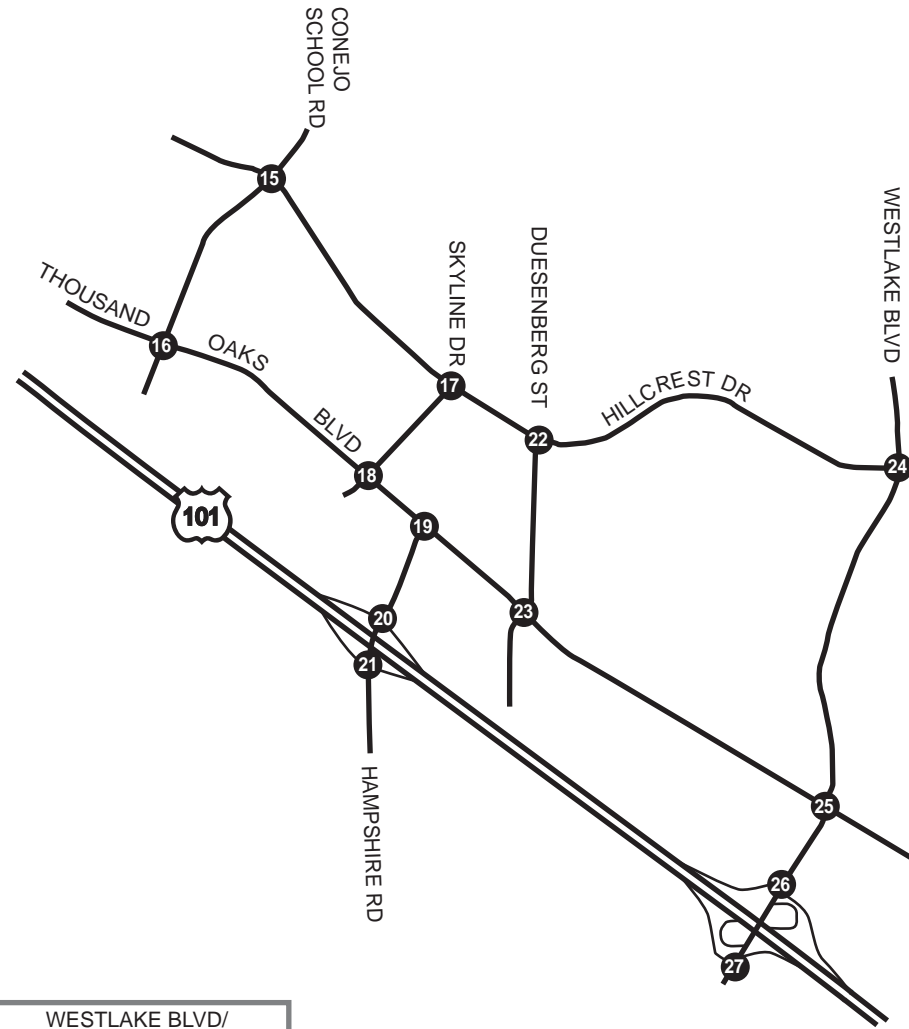
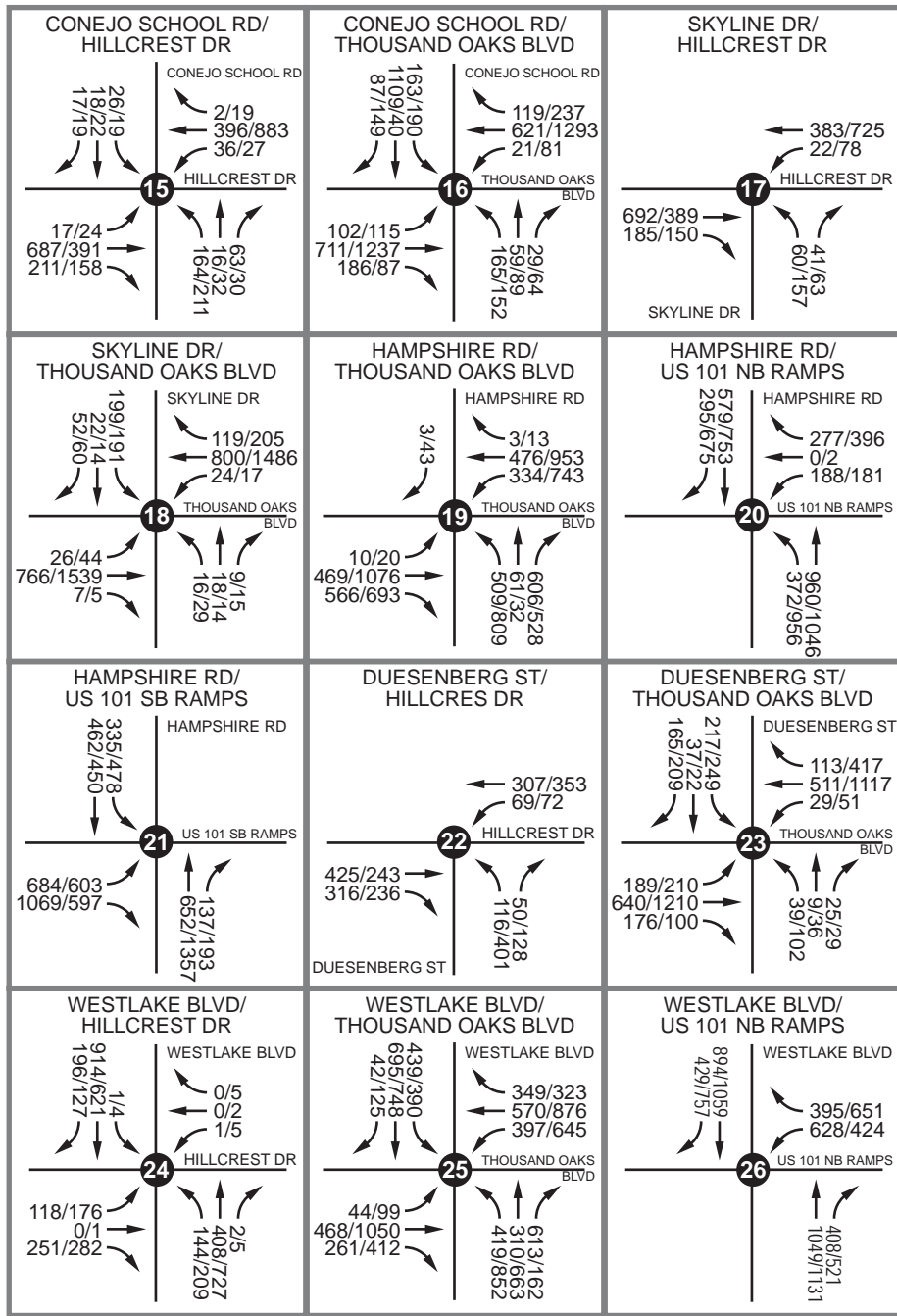


Legend:

XX/XX AM/PM Intersection Volumes

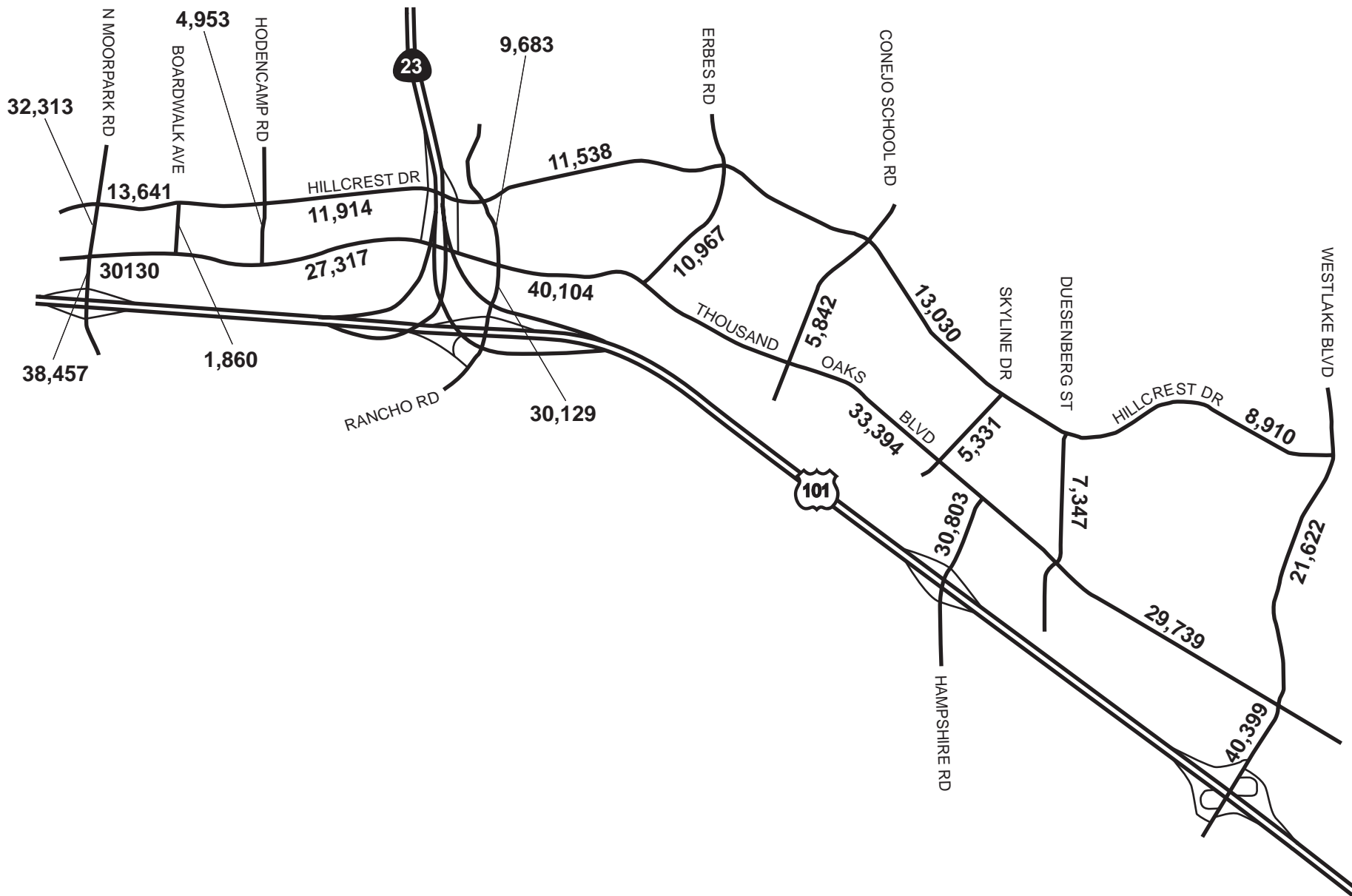


## Area 1 - Forecast Existing Plus Proposed Reduced Intensity Alternative Conditions AM/PM Peak Hour Intersection Volumes



Legend:  
XX/XX AM/PM Intersection Volumes

## Area 2 - Forecast Existing Plus Proposed Reduced Intensity Alternative Conditions AM/PM Peak Hour Intersection Volumes



Not to Scale



## Forecast Existing Plus Reduced Intensity Alternative Roadway Segment ADT Volumes

**Table 8**  
**Forecast Existing Plus Proposed Reduced Intensity Alternative**  
**Conditions Intersection Peak Hour LOS Assuming Existing Study Intersection Geometry/Control**

Study Intersection	Existing Conditions				Forecast Existing Plus Proposed Reduced Intensity Alternative Conditions				Significant Impact?
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		
	V/C (Delay)	LOS	V/C (Delay)	LOS	V/C (Delay)	LOS	V/C (Delay)	LOS	
1 – Moorpark Rd/Hillcrest Dr	0.41	A	0.61	B	0.45	A	0.70	C	Yes
2 – Moorpark Rd/Thousand Oaks Blvd	0.34	A	0.53	A	0.48	A	0.68	B	No
5 – Hodencamp Rd/Hillcrest Dr	0.33	A	0.51	A	0.34	A	0.54	A	No
6 – Hodencamp Rd/Thousand Oaks Blvd	0.17	A	0.30	A	0.23	A	0.50	A	No
9 – Rancho Rd/Hillcrest Dr	0.42	A	0.37	A	0.43	A	0.45	A	No
10 – Rancho Rd/Thousand Oaks Blvd	0.41	A	0.51	A	0.55	A	0.82	D	Yes
13 – Erbes Rd/Hillcrest Dr	0.54	A	0.57	A	0.60	A	0.71	C	Yes
14 – Erbes Rd/Thousand Oaks Blvd	0.33	A	0.42	A	0.43	A	0.66	B	No
15 – Conejo School Rd/Hillcrest Dr	0.45	A	0.39	A	0.47	A	0.48	A	No
16 – Conejo School Rd/Thousand Oaks Blvd	0.34	A	0.45	A	0.43	A	0.69	B	No
17 – Skyline Dr/Hillcrest Dr	(17.4)	C	(22.0)	C	(17.8)	C	(29.3)	D	Yes
18 – Skyline Dr/Thousand Oaks Blvd	0.37	A	0.52	A	0.45	A	0.68	B	No
19 – Hampshire Rd/Thousand Oaks Blvd	0.76	C	0.78	C	0.84	D	1.01	F	Yes
22 – Duesenberg Dr/Hillcrest Dr	0.34	A	0.31	A	0.35	A	0.35	A	No
23 – Duesenberg Dr/Thousand Oaks Blvd	0.36	A	0.57	A	0.44	A	0.68	B	No
24 – Westlake Blvd/Hillcrest Dr	0.49	A	0.44	A	0.49	A	0.44	A	No
25 – Westlake Blvd/Thousand Oaks Blvd	0.47	A	0.63	B	0.54	A	0.82	D	Yes

**Note:** Deficient intersection operation shown in **bold**.

As shown in Table 8, four (4) study intersections are forecast to operate at a deficient LOS (LOS D or worse) for forecast existing plus proposed Reduced Intensity Alternative conditions assuming existing study intersection geometry/control, based on City of Thousand Oaks performance criteria:

- Rancho Road/Thousand Oaks Boulevard (p.m. peak hour only);
- Skyline Drive/Hillcrest Drive (p.m. peak hour only);
- Hampshire Road/Thousand Oaks Boulevard (both a.m. and p.m. peak hours); and
- Westlake Boulevard/Thousand Oaks Boulevard (p.m. peak hour only).

As also shown in Table 8, six (6) study intersections are forecast to be significantly impacted for forecast existing plus proposed Reduced Intensity Alternative conditions assuming existing study intersection geometry/control, based on City of Thousand Oaks thresholds of significance:

- Moorpark Road/Hillcrest Drive (p.m. peak hour only);
- Rancho Road/Thousand Oaks Boulevard (p.m. peak hour only);
- Erbes Road/Hillcrest Drive (p.m. peak hour only);
- Skyline Drive/Hillcrest Drive (p.m. peak hour only);
- Hampshire Road/Thousand Oaks Boulevard (both a.m. and p.m. peak hours);
- Westlake Boulevard/Thousand Oaks Boulevard (p.m. peak hour only).

#### **Forecast Existing Plus Proposed Reduced Intensity Alternative Conditions Recommended Mitigation Measures**

The following mitigation measures are recommended to maintain acceptable LOS at the study intersections for forecast existing plus proposed Reduced Intensity Alternative conditions:

##### **Moorpark Road/Hillcrest Drive**

**Mitigation Measure No. 17** - The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program.  
*[Identical to Mitigation Measure No. 1 and 10]*

##### **Rancho Road/Thousand Oaks Boulevard**

**Mitigation Measure No. 18** - Widen the eastbound Thousand Oaks Boulevard approach from one left-turn lane, two through lanes, and one right-turn lane with overlap to consist of one left-turn lane, three through lanes, and one right-turn lane with overlap. The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program. *[Identical to Mitigation Measure No. 2]*

##### **Erbes Road/Hillcrest Drive**

**Mitigation Measure No. 19** – The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program.  
*[Identical to Mitigation Measure No. 3 and 12]*

##### **Skyline Drive/Hillcrest Drive**

**Mitigation Measure No. 20** – Signalization of the Skyline Drive/Hillcrest Drive intersection is recommended as mitigation to improve the intersection to an acceptable LOS (C or better).

*[Identical to Mitigation Measure No. 5 and 14]*

#### **Hampshire Road/Thousand Oaks Boulevard**

**Mitigation Measure No. 21** - Modify the Hampshire Road/Thousand Oaks Boulevard intersection traffic signal to include a northbound Hampshire Road right-turn overlap, which will preclude u-turn movement on westbound to eastbound Thousand Oaks Boulevard. Widen the eastbound Thousand Oaks Boulevard approach from one left-turn lane, two through lanes, and one right turn-lane to consist of one left-turn lane, three through lanes, and one right-turn lane. Modify the Hampshire Road/Thousand Oaks Boulevard intersection traffic signal to include a eastbound Thousand Oaks Boulevard right-turn overlap, which will preclude u-turn movement on northbound to southbound Hampshire Road. The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program.

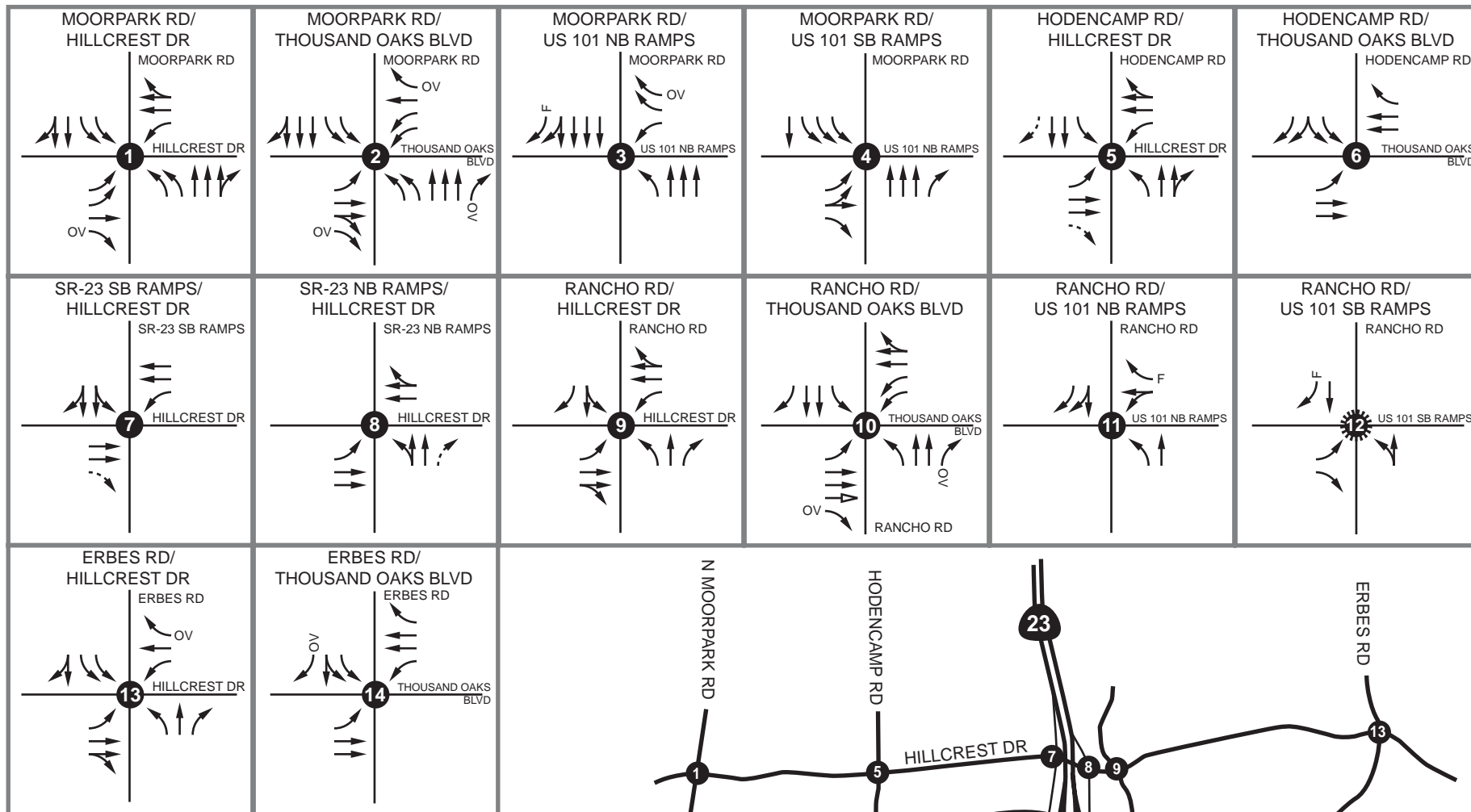
*[Identical to Mitigation Measure No. 15]*

#### **Westlake Boulevard/Thousand Oaks Boulevard**

**Mitigation Measure No. 22** - Widen eastbound Thousand Oaks Boulevard approach from two left-turn lanes, two through lanes, and one right-turn with overlap to consist of two left-turn lanes, three through lanes, and one right-turn with overlap. The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program. *[Identical to Mitigation Measure No. 9 and 16]*

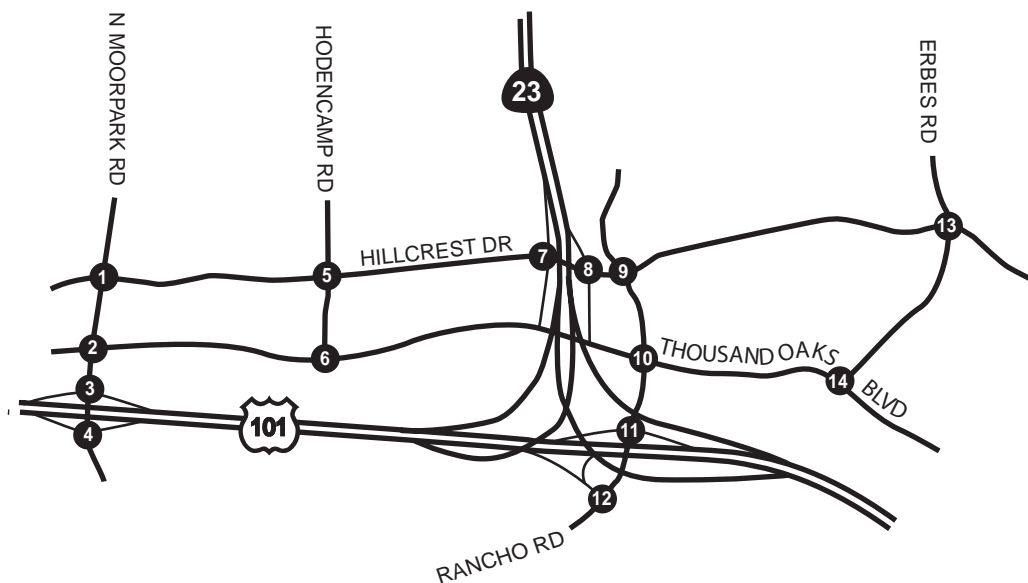
Exhibits 21 and 22 show the mitigated forecast existing plus proposed Reduced Intensity Alternative conditions study intersection geometry.

Table 9 shows the forecast LOS of the mitigated study intersections for forecast existing plus proposed Reduced Intensity Alternative conditions; detailed LOS analysis sheets are contained in Appendix B.

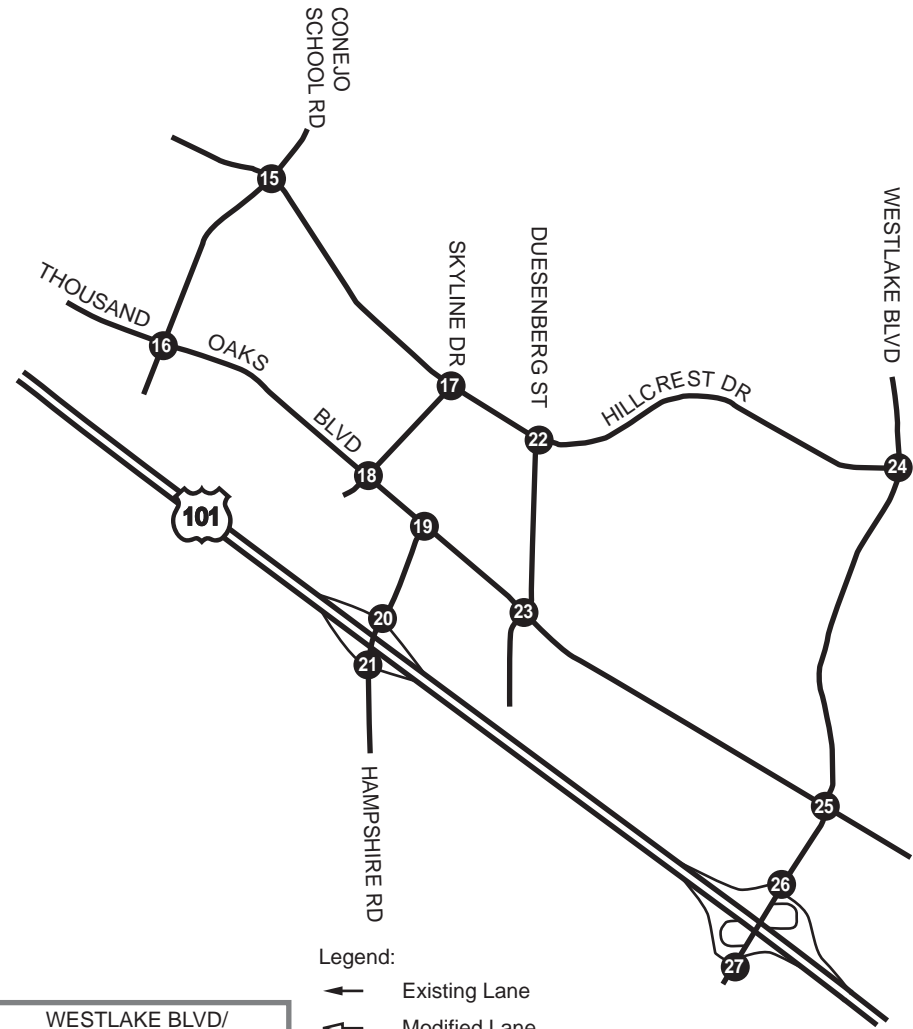
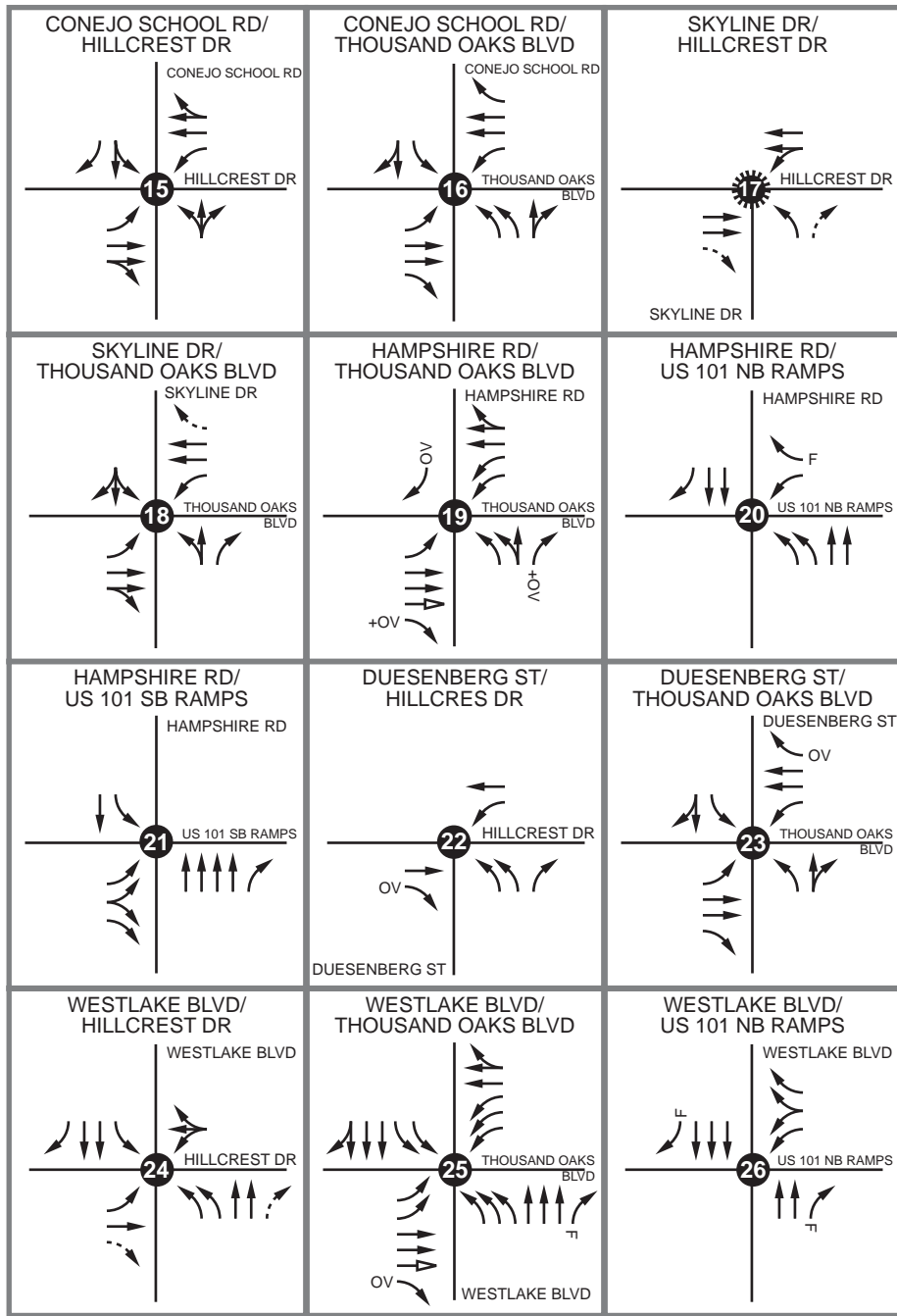


Legend:

- ← Existing Lane
- ↔ Modified Lane
- ↔<sup>F</sup> Free Right-Turn Lane
- ↔<sup>D</sup> Defacto Right-Turn Lane
- ↔<sup>OV</sup> Right-Turn Overlap
- XX Signal-Controlled Intersection
- XX Modified to Signal-Controlled Intersection



## Area 1 - Mitigated Forecast Existing Plus Proposed Reduced Intensity Alternative Conditions Study Intersection Geometry



- Legend:
- ← Existing Lane
  - Modified Lane
  - F Free Right-Turn Lane
  - Defacto Right-Turn Lane
  - ov Right-Turn Overlap
  - +OV Add Right-Turn Overlap
  - xx Stop-Controlled Intersection
  - xx Signal-Controlled Intersection
  - xx Modified to Signal-Controlled Intersection
  - STOP Stop-Controlled Approach

## Area 2 - Mitigated Forecast Existing Plus Proposed Reduced Intensity Alternative Conditions Study Intersection Geometry



**Table 9**  
**Mitigated Forecast Existing Plus Proposed Reduced Intensity Alternative Conditions Intersection Peak Hour LOS**

Study Intersection	Existing Conditions				Mitigated Forecast Existing Plus Proposed Reduced Intensity Alternative Conditions				Significant Impact?
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		
	V/C (Delay)	LOS	V/C (Delay)	LOS	V/C	LOS	V/C	LOS	
1 – Moorpark Rd/Hillcrest Dr	0.41	A	0.61	B	0.45	A	0.70	C	No
10 – Rancho Rd/Thousand Oaks Blvd	0.41	A	0.51	A	0.50	A	0.75	C	No
13 – Erbes Rd/Hillcrest Dr	0.54	A	0.57	A	0.60	A	0.71	C	No
17 – Skyline Dr/Hillcrest Dr	(17.4)	C	(22.0)	C	0.27	A	0.33	A	No
19 – Hampshire Rd/Thousand Oaks Blvd	0.76	C	0.78	C	0.55	A	0.73	C	No
25 – Westlake Blvd/Thousand Oaks Blvd	0.47	A	0.63	B	0.54	A	0.77	C	No

**Note:** Deficient intersection operation shown in **bold**.

As shown in Table 9, assuming implementation of the recommended mitigation measures, the seven (7) study intersections are forecast to operate at an acceptable LOS (LOS C or better) for forecast existing plus proposed Downtown Alternative conditions.

## **FORECAST GENERAL PLAN LAND USE BUILDOUT CONDITIONS ASSUMING EXISTING STUDY INTERSECTION GEOMETRY/CONTROL EXCEPT SIGNALIZATION OF THE SKYLINE DRIVE/HILLCREST DRIVE INTERSECTION**

This section identifies forecast traffic conditions associated with buildout of related projects pursuant to the City of Thousand Oaks General Plan assuming existing intersection geometry/control except signalization of the Skyline Drive/Hillcrest Drive intersection. Appendix C contains the City-provided location of the projects forecast to be built assuming buildout of the City General Plan Land Use Element.

The City of Thousand Oaks has established a roadway fee program to provide funding for future capital improvement projects. It is expected that the related projects identified in this study will contribute to the Thousand Oaks Road Improvement Fee program when development occurs.

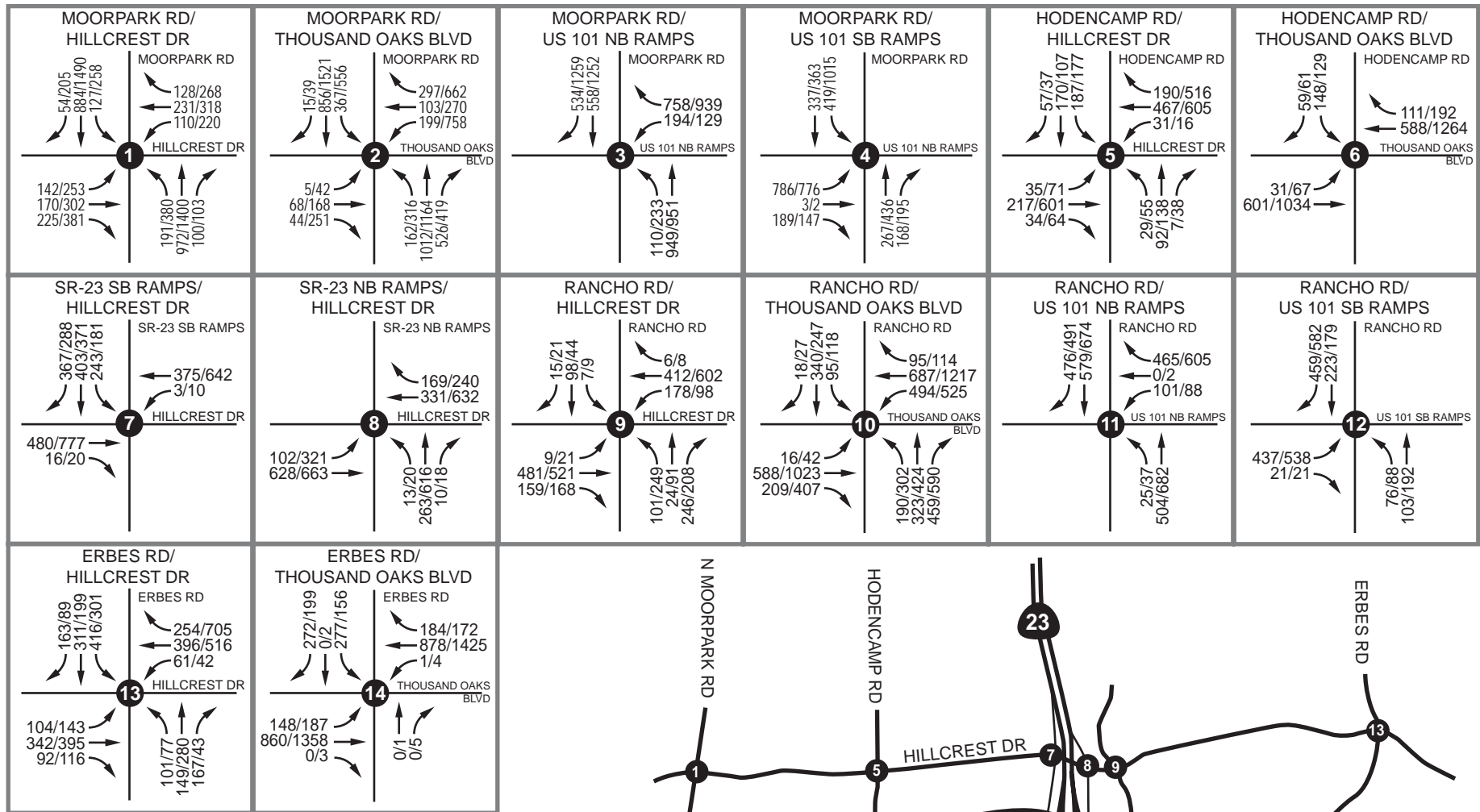
Forecast a.m. and p.m. peak hour volumes for General Plan land use buildout conditions assuming existing study intersection geometry/control except signalization of the Skyline/Hillcrest Drive intersection were derived by adding trips forecast to be generated by buildout of the General Plan Land Use Element to existing traffic volumes.

Exhibits 23 and 24 show forecast General Plan land use buildout conditions a.m. and p.m. peak hour volumes at the study intersections.

Exhibit 25 shows forecast General Plan land use buildout conditions ADT volumes.

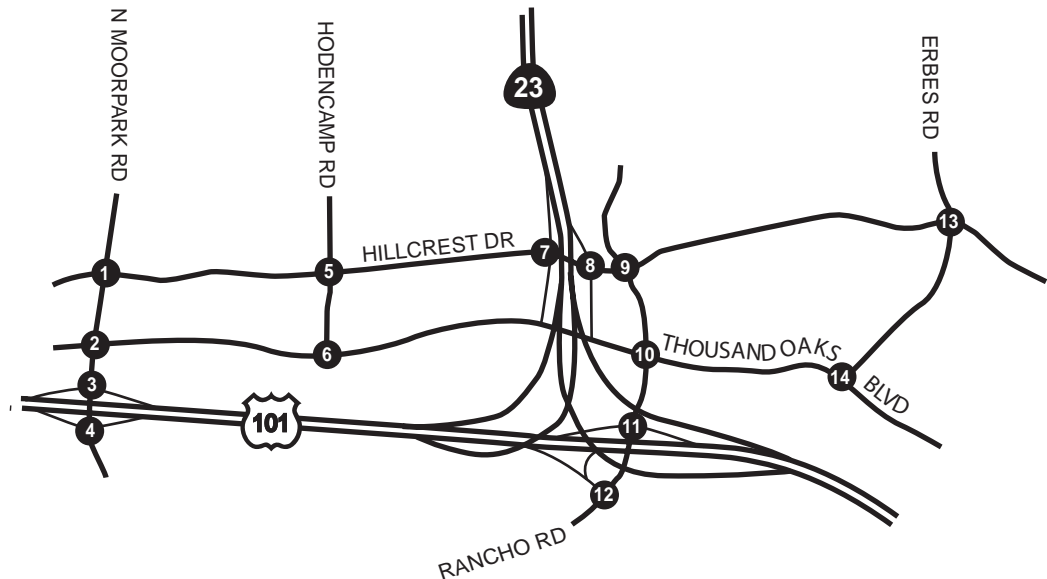
### **Forecast General Plan Land Use Buildout Conditions Intersection Level of Service Assuming Existing Study Intersection Geometry/Control Except Signalization of the Skyline Drive/Hillcrest Drive intersection**

Table 10 summarizes forecast General Plan land use buildout conditions a.m. and p.m. peak hour LOS of the study intersections assuming existing study intersection geometry/control except signalization of the Skyline Drive/Hillcrest Drive intersection; detailed LOS analysis sheets are contained in Appendix B.

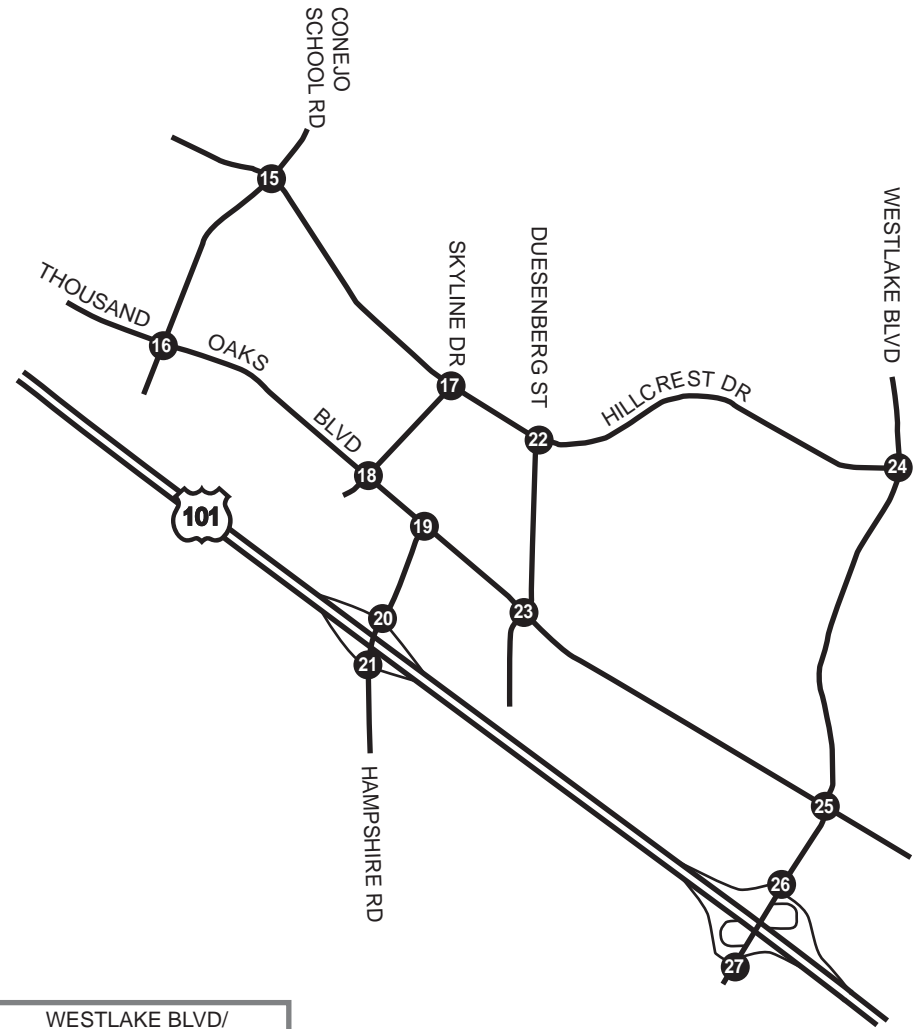
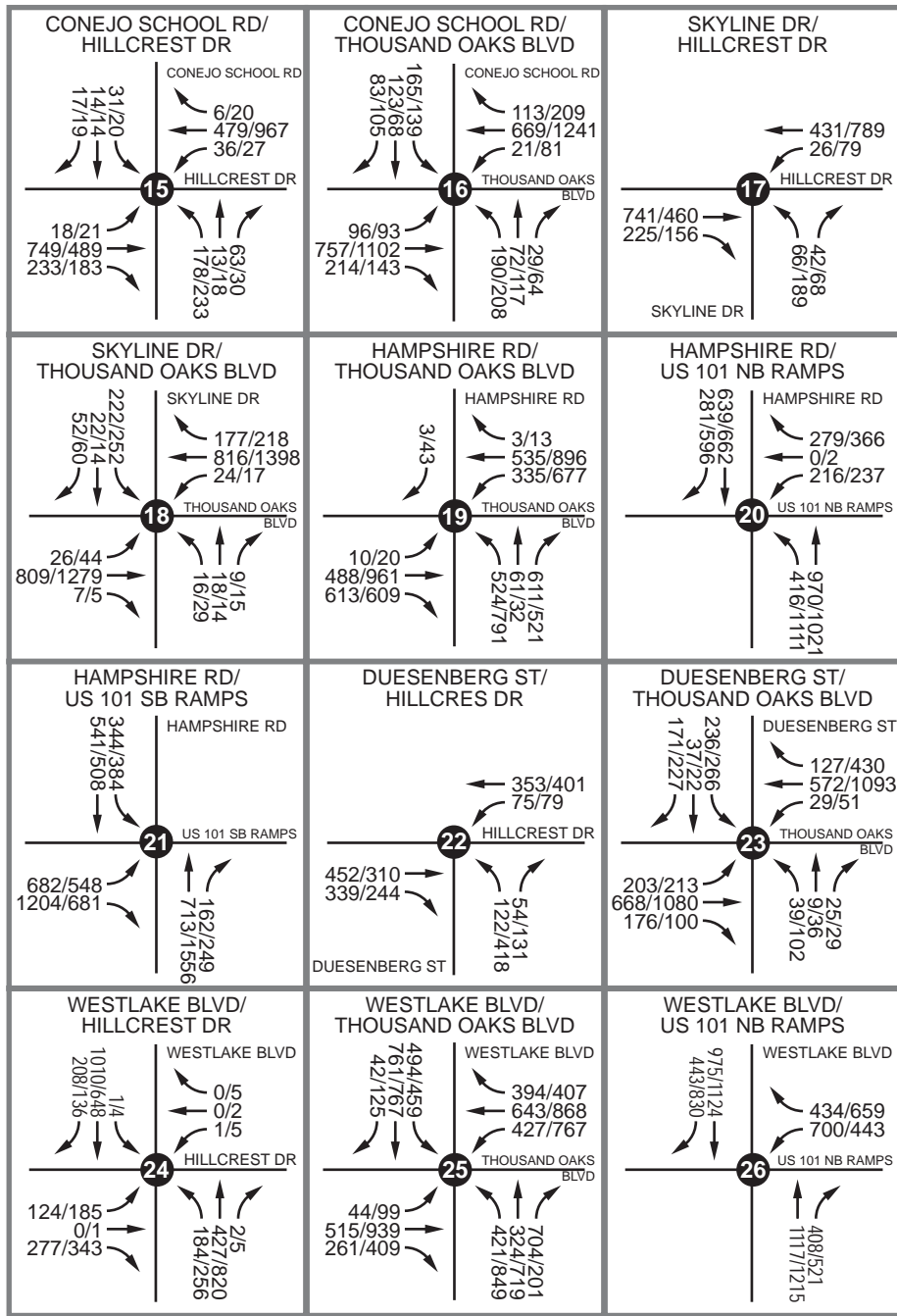


Legend:

XX/XX AM/PM Intersection Volumes



## Area 1 - Forecast General Plan Land Use Buildout Conditions AM/PM Peak Hour Intersection Volumes



Legend:  
XX/XX AM/PM Intersection Volumes

## Area 2 - Forecast General Plan Land Use Buildout Conditions AM/PM Peak Hour Intersection Volumes



**RBF**

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Exhibit 25

**Table 10**  
**Forecast General Plan Land Use Buildout Conditions Intersection Peak Hour LOS Assuming**  
**Existing Study Intersection Geometry/Control Except Signalization of the Skyline Drive/Hillcrest Drive Intersection**

Study Intersection	Existing Conditions				Forecast General Plan Land Use Buildout Conditions				Deficient?
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		
	V/C (Delay)	LOS	V/C (Delay)	LOS	V/C (Delay)	LOS	V/C (Delay)	LOS	
1 – Moorpark Rd/Hillcrest Dr	0.41	A	0.61	B	0.53	A	0.98	E	Yes
2 – Moorpark Rd/Thousand Oaks Blvd	0.34	A	0.53	A	0.47	A	0.75	C	No
5 – Hodencamp Rd/Hillcrest Dr	0.33	A	0.51	A	0.38	A	0.56	A	No
6 – Hodencamp Rd/Thousand Oaks Blvd	0.17	A	0.30	A	0.25	A	0.48	A	No
9 – Rancho Rd/Hillcrest Dr	0.42	A	0.37	A	0.47	A	0.47	A	No
10 – Rancho Rd/Thousand Oaks Blvd	0.41	A	0.51	A	0.56	A	0.75	C	No
13 – Erbes Rd/Hillcrest Dr	0.54	A	0.57	A	0.67	B	0.71	C	No
14 – Erbes Rd/Thousand Oaks Blvd	0.33	A	0.42	A	0.45	A	0.62	B	No
15 – Conejo School Rd/Hillcrest Dr	0.45	A	0.39	A	0.51	A	0.51	A	No
16 – Conejo School Rd/Thousand Oaks Blvd	0.34	A	0.45	A	0.46	A	0.65	B	No
17 – Skyline Dr/Hillcrest Dr	(17.4)	C	(22.0)	C	0.29	A	0.37	A	No
18 – Skyline Dr/Thousand Oaks Blvd	0.37	A	0.52	A	0.47	A	0.69	B	No
19 – Hampshire Rd/Thousand Oaks Blvd	0.76	C	0.78	C	0.87	D	0.93	E	Yes
22 – Duesenberg Dr/Hillcrest Dr	0.34	A	0.31	A	0.37	A	0.38	A	No
23 – Duesenberg Dr/Thousand Oaks Blvd	0.36	A	0.57	A	0.47	A	0.69	B	No
24 – Westlake Blvd/Hillcrest Dr	0.49	A	0.44	A	0.55	A	0.50	A	No
25 – Westlake Blvd/Thousand Oaks Blvd	0.47	A	0.63	B	0.59	A	0.82	D	Yes

**Note:** Deficient intersection operation shown in **bold**.

As shown in Table 10, three (3) study intersections are forecast to operate at a deficient LOS (LOS D or worse) for forecast General Plan land use buildout conditions assuming existing study intersection geometry/control except signalization of the Skyline Drive/Hillcrest Drive intersection, based on City of Thousand Oaks performance criteria:

- Moorpark Road/Hillcrest Drive (p.m. peak hour only);
- Hampshire Road/Thousand Oaks Boulevard (both a.m. and p.m. peak hours); and
- Westlake Boulevard/Thousand Oaks Boulevard (p.m. peak hour only).

### **Forecast General Plan Land Use Buildout Conditions Recommended Intersection Improvements**

The following intersection improvements are recommended to maintain acceptable LOS at the study intersections for forecast General Plan land use buildout conditions:

#### **Moorpark Road/Hillcrest Drive**

**Improvement No. 1** - Widen southbound Moorpark Road approach from two left-turn lanes, one through lane, and one shared through/right-turn lane to consist of two left-turn lanes, two through lanes, and one shared through/right- turn lane.

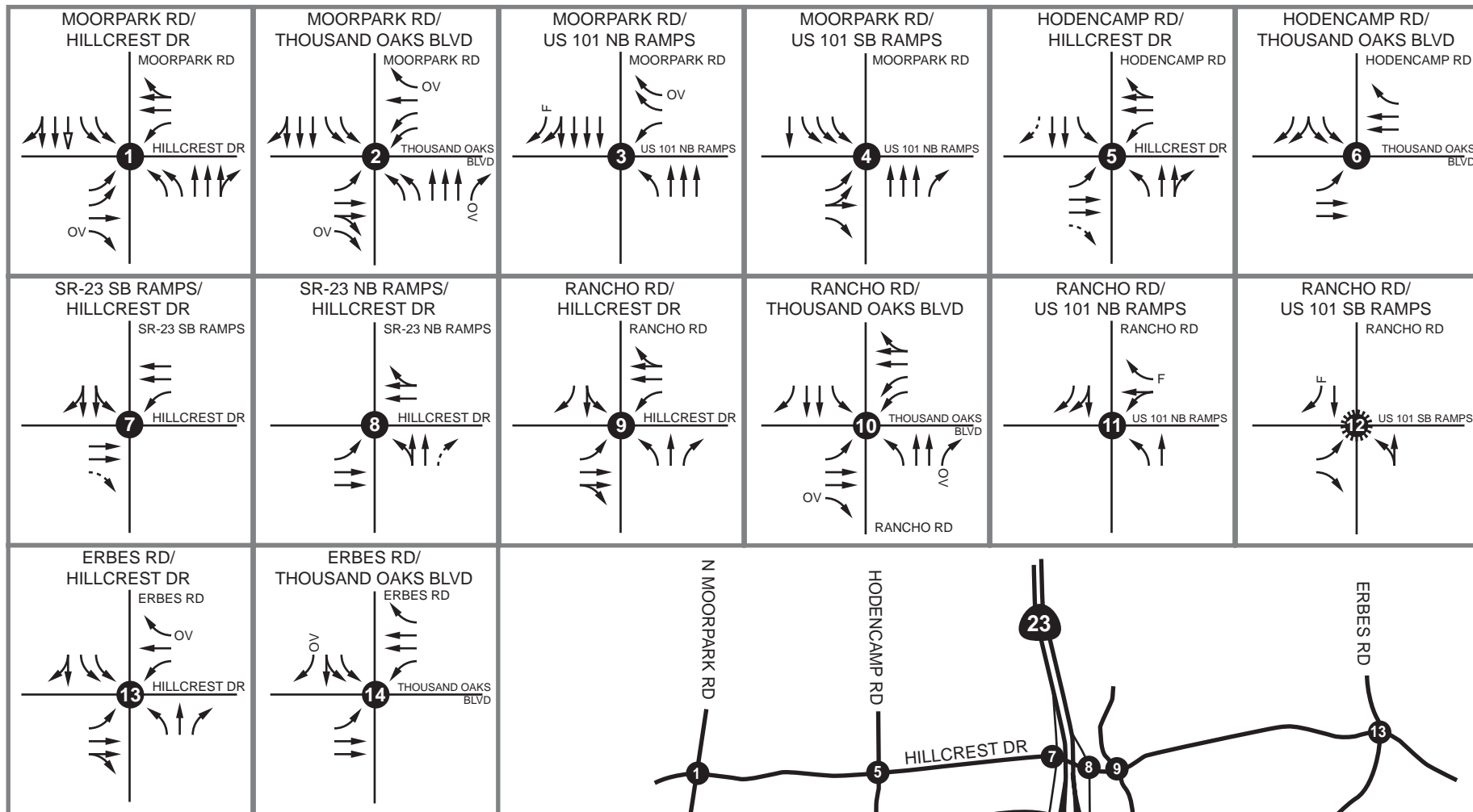
#### **Hampshire Road/Thousand Oaks Boulevard**

**Improvement No. 2** - Modify the Hampshire Road/Thousand Oaks Boulevard intersection traffic signal to include an eastbound Thousand Oaks Boulevard right-turn overlap, which will preclude u-turn movement on northbound to southbound Hampshire Road. Modify the Hampshire Road/Thousand Oaks Boulevard intersection traffic signal to include a northbound Hampshire Road right-turn overlap, which will preclude U-turn movement on westbound to eastbound Thousand Oaks Boulevard. Note: traffic signal equipment currently exists at the Hampshire Road/Thousand Oaks Boulevard intersection to implement a right-turn overlap for eastbound Thousand Oaks Boulevard and northbound Hampshire Road, but neither are being utilized.

#### **Westlake Boulevard/Thousand Oaks Boulevard**

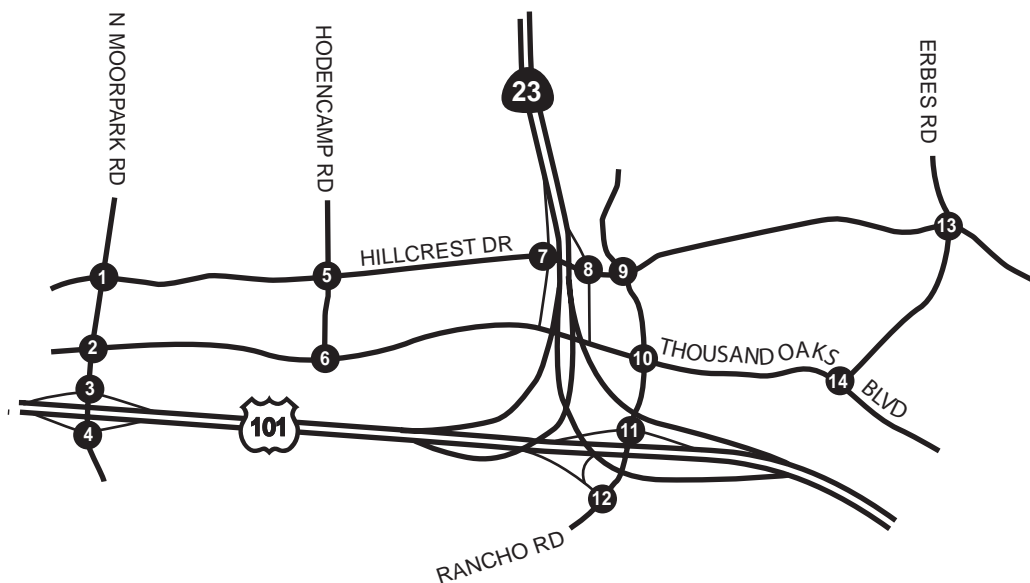
**Improvement No. 3** - Widen southbound Westlake Boulevard approach from two left-turn lanes, two through lanes, and one shared through/right-turn lane to consist of two left-turn lanes, three through lanes, and one right-turn lane.

Exhibits 26 and 27 show the recommended improved study intersection geometry to achieve an acceptable LOS at the study intersections for forecast General Plan land use buildout conditions.



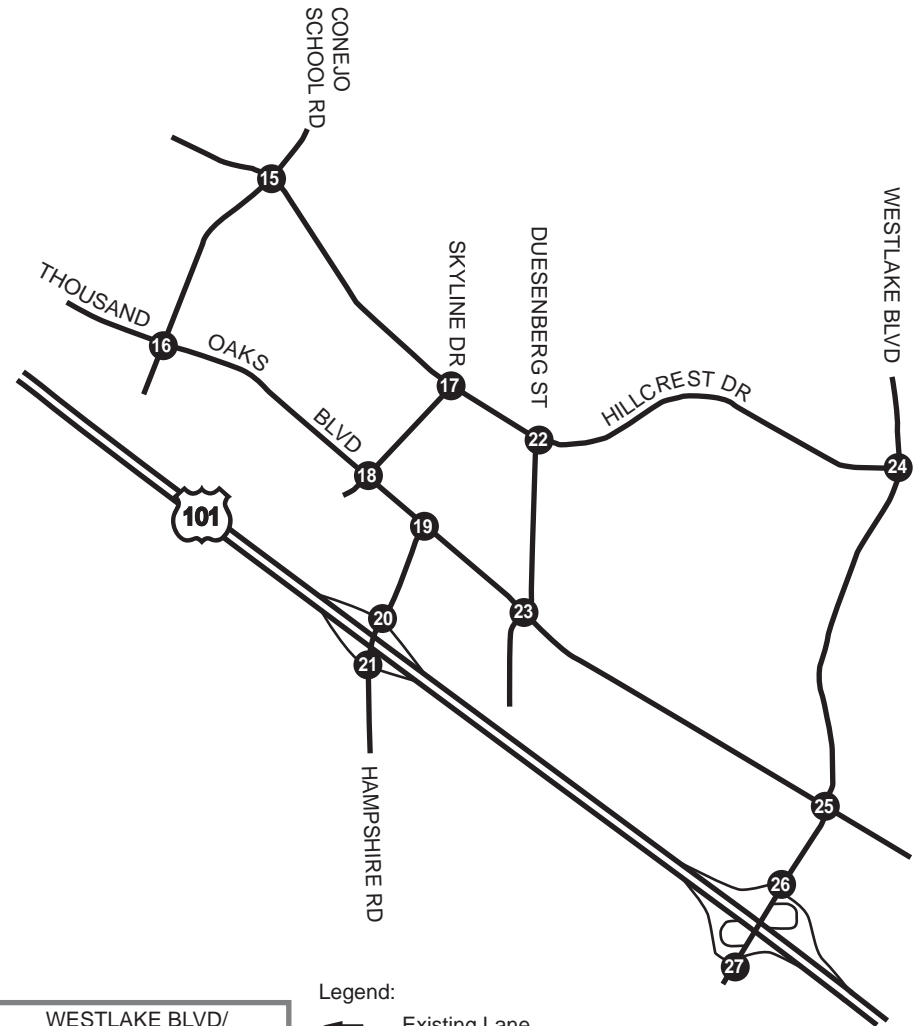
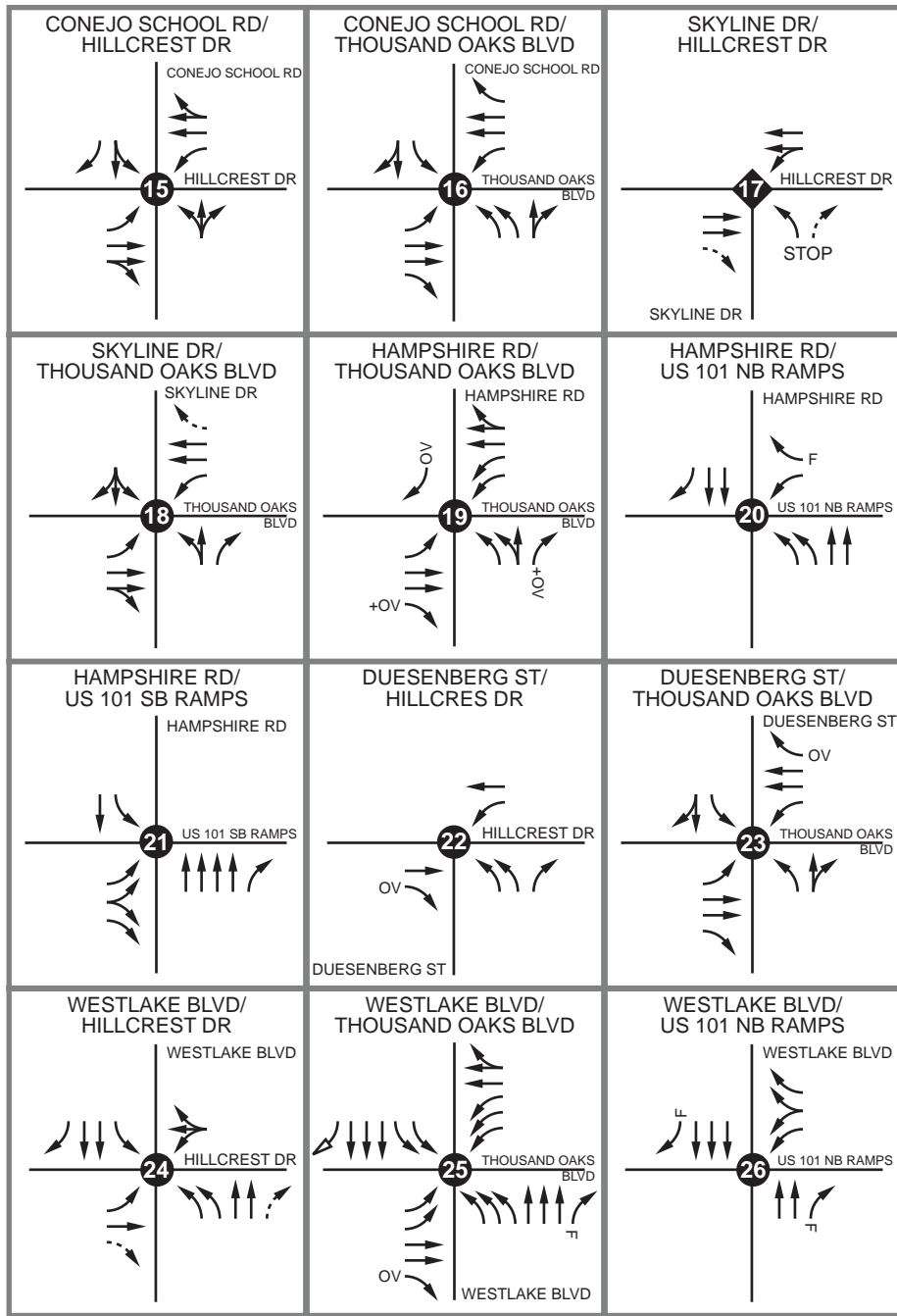
Legend:

- ← Existing Lane
- ↔ Modified Lane
- ↔<sup>F</sup> Free Right-Turn Lane
- ↔<sup>D</sup> Defacto Right-Turn Lane
- ↔<sup>OV</sup> Right-Turn Overlap
- ⬢<sup>XX</sup> Stop-Controlled Intersection
- ⬢<sup>XX</sup> Signal-Controlled Intersection
- ⬢<sup>XX</sup> Modified to Signal-Controlled Intersection



## Area 1 - Improved Forecast General Plan Land Use Buildout Conditions Study Intersection Geometry





- Legend:
- Existing Lane
  - Modified Lane
  - Free Right-Turn Lane
  - Defacto Right-Turn Lane
  - Right-Turn Overlap
  - Add Right-Turn Overlap
  - Stop-Controlled Intersection
  - Signal-Controlled Intersection
  - STOP Stop-Controlled Approach

## Area 2 - Improved Forecast General Plan Land Use Buildout Conditions Study Intersection Geometry

Table 11 shows the forecast LOS of the improved study intersections for forecast General Plan land use buildout conditions.

**Table 11**  
**Improved Forecast General Plan Land Use Buildout Conditions Intersection Peak Hour LOS**

Study Intersection	Existing Conditions				Improved Forecast General Plan Land Use Buildout Conditions				Deficient?
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		
	V/C (Delay)	LOS	V/C (Delay)	LOS	V/C	LOS	V/C	LOS	
1 – Moorpark Rd/Hillcrest Dr	0.41	A	0.61	B	0.43	A	0.80	C	No
19 – Hampshire Rd/Thousand Oaks Blvd	0.76	C	0.78	C	0.58	A	0.78	C	No
25 – Westlake Blvd/Thousand Oaks Blvd	0.47	A	0.63	B	0.58	A	0.79	C	No

**Note:** Deficient intersection operation shown in **bold**.

As shown in Table 11, assuming implementation of the recommended improvements, the three (3) study intersections are forecast to operate at an acceptable LOS (LOS C or better) for forecast General Plan land use buildout conditions; detailed LOS analysis sheets are contained in Appendix B.

**FORECAST GENERAL PLAN LAND USE BUILDOUT PLUS PROPOSED SPECIFIC PLAN CONDITIONS ASSUMING EXISTING STUDY INTERSECTION GEOMETRY/CONTROL EXCEPT SIGNALIZATION OF THE SKYLINE DRIVE/HILLCREST DRIVE INTERSECTION**

Forecast General Plan land use buildout plus proposed Specific Plan conditions assumes buildout of related projects pursuant to the City of Thousand Oaks General Plan and the proposed Specific Plan land use intensification within the Specific Plan area assuming existing study intersection geometry/control except signalization of the Skyline Drive/Hillcrest Drive intersection. The Specific Plan proposes special development regulations for the Thousand Oaks Boulevard area between Moorpark Road and Duesenberg Drive to allow somewhat more intense development than existing regulations, and will also encourage a more pedestrian-friendly environment through its proposed standards for building design and placement. Appendix C contains the City-provided location of the projects assuming buildout of the General Plan Land Use Element and the proposed Specific Plan land use intensification.

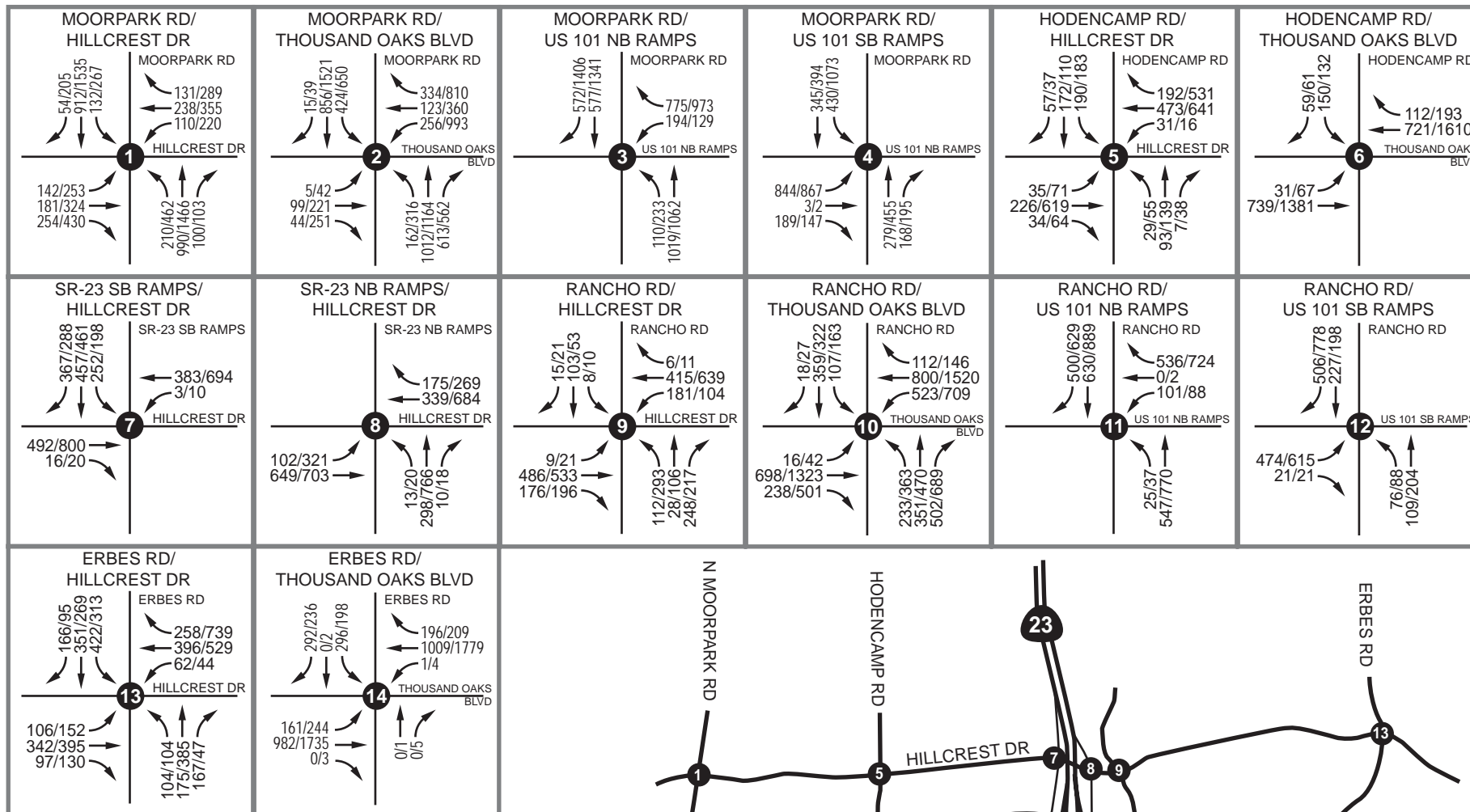
Forecast a.m. and p.m. peak hour volumes for General Plan land use buildout plus proposed Specific Plan conditions assuming existing study intersection geometry/control except signalization of the Skyline Drive/Hillcrest Drive intersection were derived by adding trips forecast to be generated by the Specific Plan to General Plan Land use buildout conditions traffic volumes.

Exhibits 28 and 29 show forecast General Plan land use buildout plus proposed Specific Plan conditions a.m. and p.m. peak hour volumes at the study intersections.

Exhibit 30 shows forecast General Plan land use buildout plus proposed Specific Plan conditions ADT volumes.

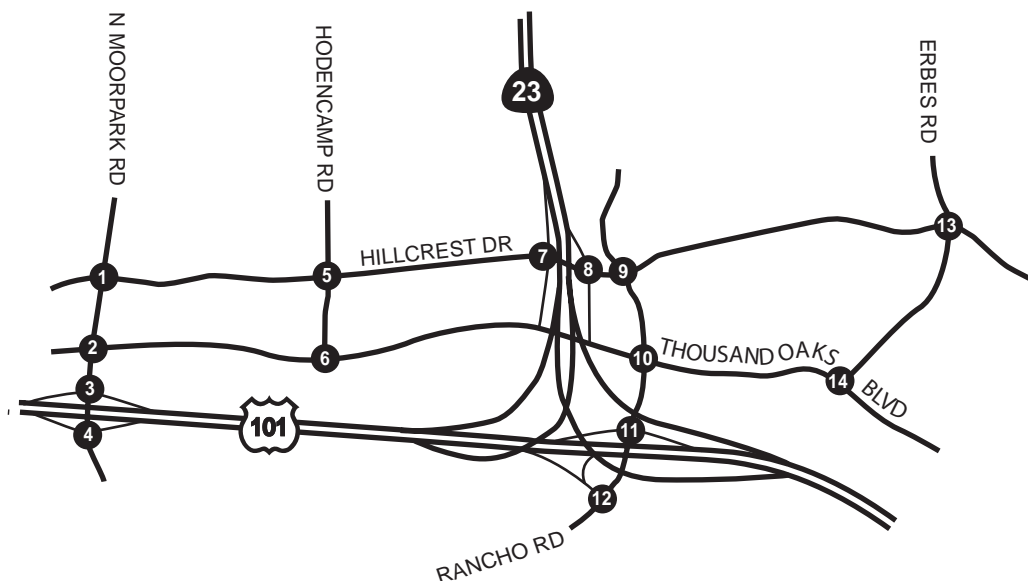
**Forecast General Plan Land Use Buildout Plus Proposed Specific Plan Conditions Intersection Level of Service Assuming Existing Study Intersection Geometry/Control Except Signalization of the Skyline Drive/Hillcrest Drive intersection**

Table 12 summarizes forecast General Plan land use buildout plus proposed Specific Plan conditions a.m. and p.m. peak hour LOS of the study intersections assuming existing study intersection geometry/control except signalization of the Skyline Drive/Hillcrest Drive intersection; detailed LOS analysis sheets are contained in Appendix B.

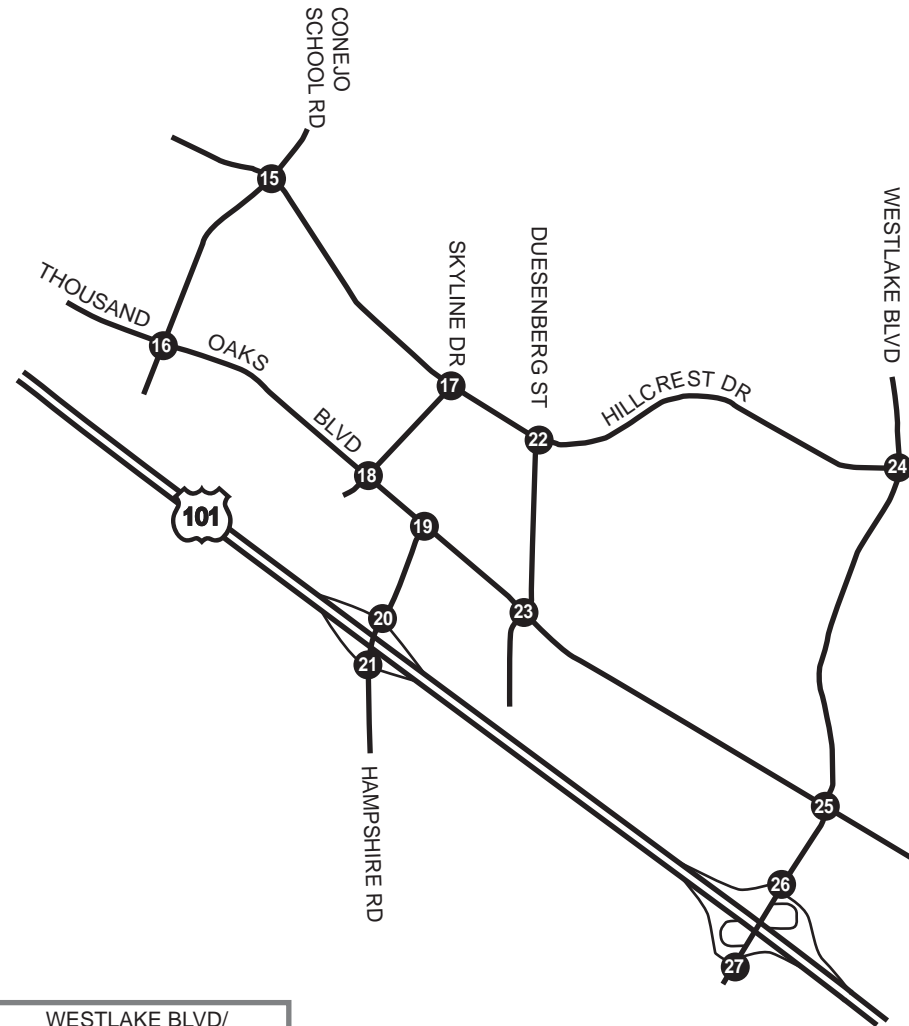
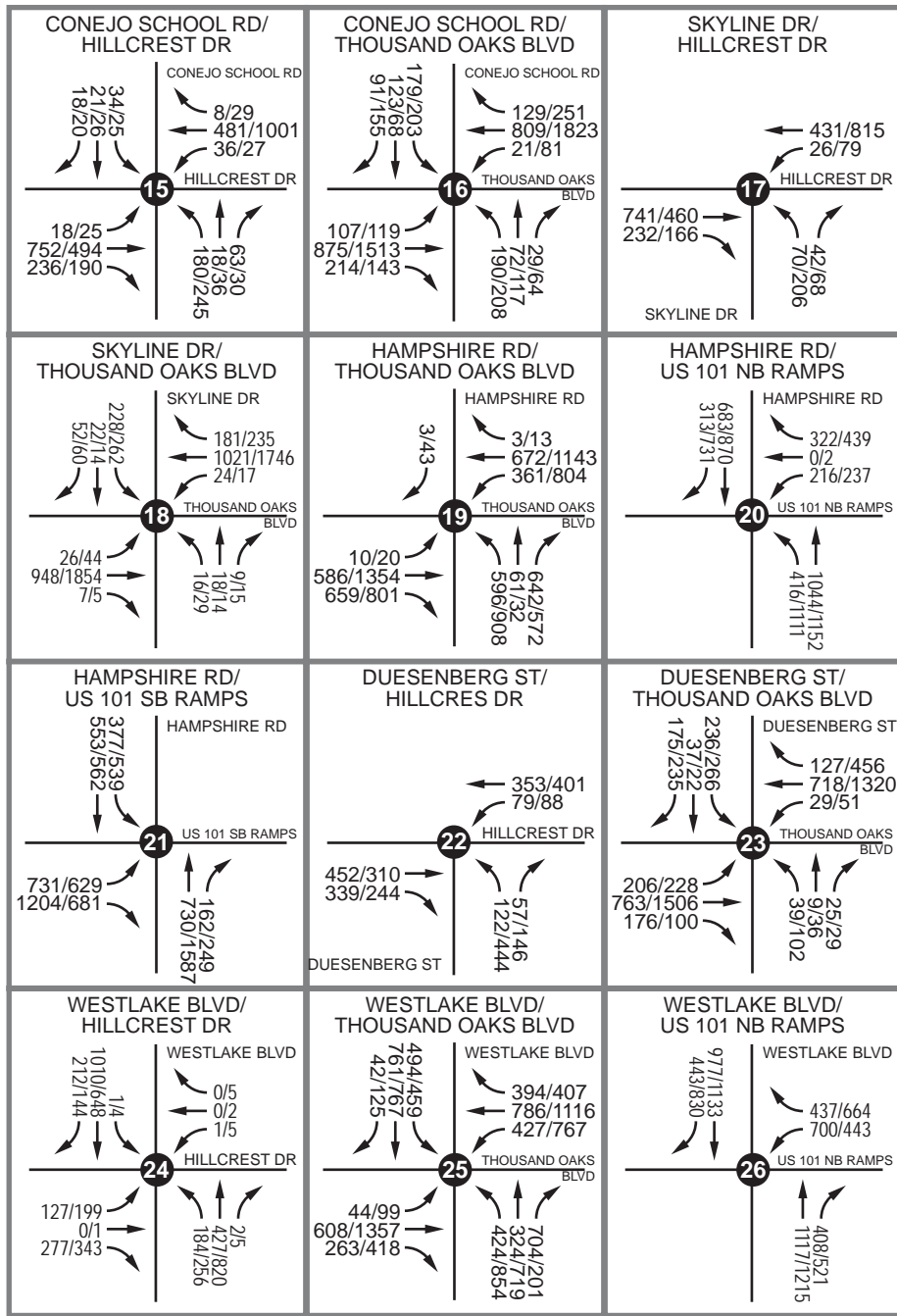


Legend:

XX/XX AM/PM Intersection Volumes

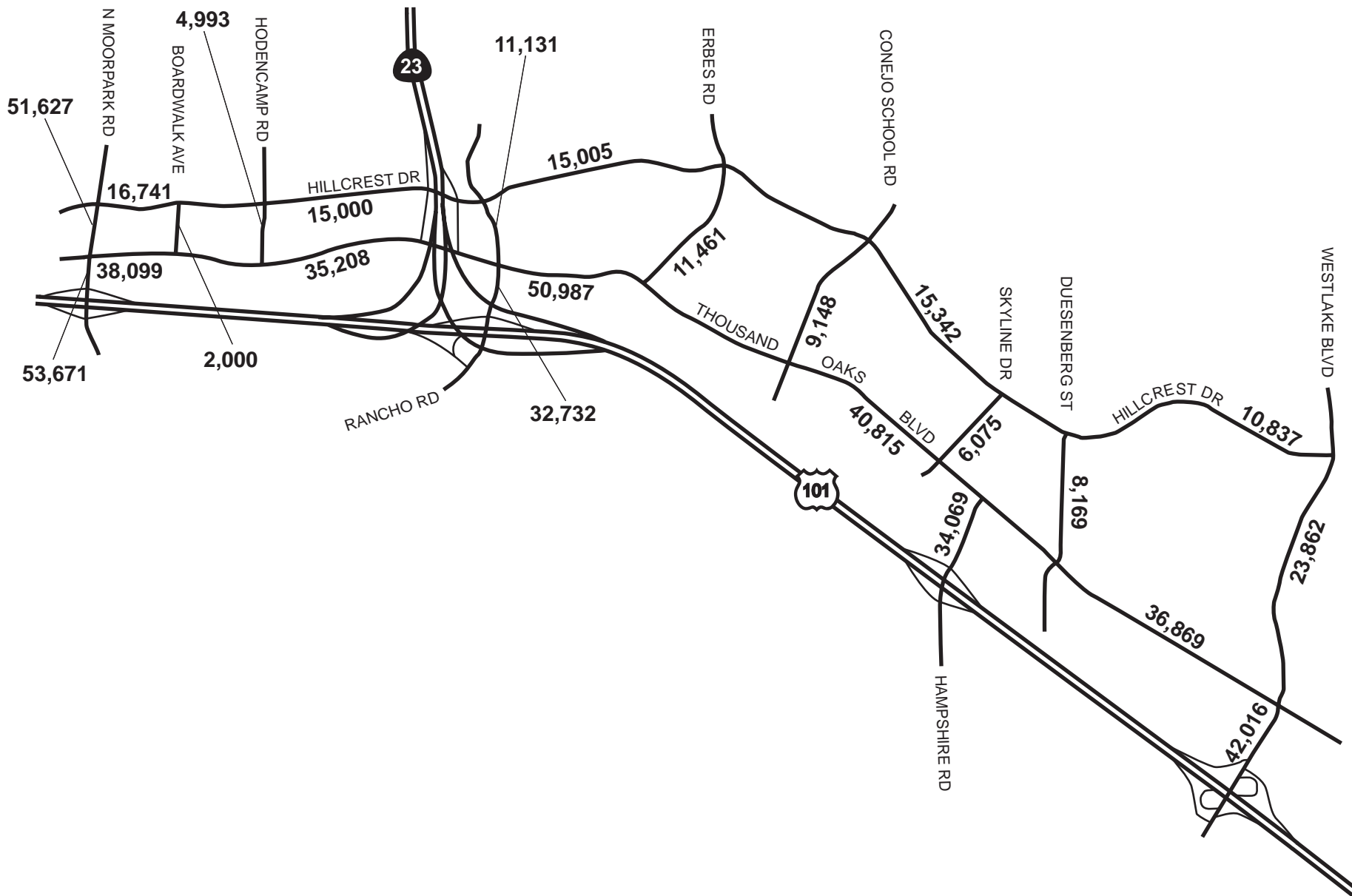


## Area 1 - Forecast General Plan Land Use Buildout Plus Proposed Specific Plan Conditions AM/PM Peak Hour Intersection Volumes



Legend:  
XX/XX AM/PM Intersection Volumes

## Area 2 - Forecast General Plan Land Use Buildout Plus Proposed Specific Plan Conditions AM/PM Peak Hour Intersection Volumes



**Table 12**  
**Forecast General Plan Land Use Buildout Plus Proposed Specific Plan Conditions Intersection Peak Hour LOS Assuming Existing Study Intersection Geometry/Control Except Signalization of the Skyline Drive/Hillcrest Drive Intersection**

Study Intersection	Existing Conditions				Forecast General Plan Land Use Buildout Plus Proposed Specific Plan Conditions				Significant Impact?
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		
	V/C (Delay)	LOS	V/C (Delay)	LOS	V/C (Delay)	LOS	V/C (Delay)	LOS	
1 – Moorpark Rd/Hillcrest Dr	0.41	A	0.61	B	0.55	A	1.03	F	Yes
2 – Moorpark Rd/Thousand Oaks Blvd	0.34	A	0.53	A	0.55	A	0.85	D	Yes
5 – Hodencamp Rd/Hillcrest Dr	0.33	A	0.51	A	0.38	A	0.58	A	No
6 – Hodencamp Rd/Thousand Oaks Blvd	0.17	A	0.30	A	0.29	A	0.59	A	No
9 – Rancho Rd/Hillcrest Dr	0.42	A	0.37	A	0.48	A	0.52	A	No
10 – Rancho Rd/Thousand Oaks Blvd	0.41	A	0.51	A	0.64	B	0.96	E	Yes
13 – Erbes Rd/Hillcrest Dr	0.54	A	0.57	A	0.70	C	0.80	C	Yes
14 – Erbes Rd/Thousand Oaks Blvd	0.33	A	0.42	A	0.51	A	0.78	C	Yes
15 – Conejo School Rd/Hillcrest Dr	0.45	A	0.39	A	0.52	A	0.55	A	No
16 – Conejo School Rd/Thousand Oaks Blvd	0.34	A	0.45	A	0.51	A	0.88	D	Yes
17 – Skyline Dr/Hillcrest Dr	(17.4)	C	(22.0)	C	0.29	A	0.41	A	No
18 – Skyline Dr/Thousand Oaks Blvd	0.37	A	0.52	A	0.53	A	0.82	D	Yes
19 – Hampshire Rd/Thousand Oaks Blvd	0.76	C	0.78	C	0.93	E	1.12	F	Yes
22 – Duesenberg Dr/Hillcrest Dr	0.34	A	0.31	A	0.37	A	0.39	A	No
23 – Duesenberg Dr/Thousand Oaks Blvd	0.36	A	0.57	A	0.52	A	0.78	C	Yes
24 – Westlake Blvd/Hillcrest Dr	0.49	A	0.44	A	0.55	A	0.50	A	No
25 – Westlake Blvd/Thousand Oaks Blvd	0.47	A	0.63	B	0.64	B	0.95	E	Yes

**Note:** Deficient intersection operation shown in **bold**.

As shown in Table 12, seven (7) study intersections are forecast to operate at a deficient LOS (LOS D or worse) for forecast General Plan land use buildout plus proposed Specific Plan conditions assuming existing study intersection geometry/control except signalization of the Skyline Drive/Hillcrest Drive intersection, based on City of Thousand Oaks performance criteria:

- Moorpark Road/Hillcrest Drive (p.m. peak hour only);
- Moorpark Road/Thousand Oaks Boulevard (p.m. peak hour only);
- Rancho Road/Thousand Oaks Boulevard (p.m. peak hour only);
- Conejo School Road/Thousand Oaks Boulevard (p.m. peak hour only);
- Skyline Drive/Thousand Oaks Boulevard (p.m. peak hour only);
- Hampshire Road/Thousand Oaks Boulevard (both a.m. and p.m. peak hours); and
- Westlake Boulevard/Thousand Oaks Boulevard (p.m. peak hour only).

As also shown in Table 12, ten (10) study intersections are forecast to be significantly impacted for forecast General Plan land use buildout plus proposed Specific Plan conditions assuming existing study intersection geometry/control except signalization of the Skyline Drive/Hillcrest Drive intersection, based on City of Thousand Oaks thresholds of significance:

- Moorpark Road/Hillcrest Drive (p.m. peak hour only);
- Moorpark Road/Thousand Oaks Boulevard (p.m. peak hour only);
- Rancho Road/Thousand Oaks Boulevard (p.m. peak hour only);
- Erbes Road/Hillcrest Drive (a.m. and p.m. peak hours);
- Erbes Road/Thousand Oaks Boulevard (p.m. peak hour only);
- Conejo School Road/Thousand Oaks Boulevard (p.m. peak hour only);
- Skyline Drive/Thousand Oaks Boulevard (p.m. peak hour only);
- Hampshire Road/Thousand Oaks Boulevard (both a.m. and p.m. peak hours);
- Duesenberg Drive/Thousand Oaks Boulevard (p.m. peak hour only); and
- Westlake Boulevard/Thousand Oaks Boulevard (p.m. peak hour only).

### **Forecast General Plan Land Use Buildout Plus Proposed Specific Plan Conditions Recommended Mitigation Measures**

The following mitigation measures are recommended to maintain acceptable LOS at the study intersections for forecast General Plan land use buildout plus proposed Specific Plan conditions:

#### **Moorpark Road/Hillcrest Drive**

**Mitigation Measure No. 23** - Widen southbound Moorpark Road approach from two left-turn lanes, one through lane, and one shared through/right-turn lane to consist of two left-turn lanes, two through lanes, and one shared through/right-lane. Widen westbound Hillcrest Drive approach from one left-turn lane, one through lane and one shared through/right-turn lane to consist of two left-turn lanes, one through lane and one shared through/right-turn. The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program.



### **Moorpark Road/Thousand Oaks Boulevard**

**Mitigation Measure No. 24** - Widen westbound Thousand Oaks Boulevard approach from two left-turn lanes, one through lane, and one right-turn lane with overlap to consist of three left-turn lanes, one through lane, and one right-turn lane with overlap. The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program.

### **Rancho Road/Thousand Oaks Boulevard**

**Mitigation Measure No. 25** - Widen the northbound Rancho Road approach from one left-turn lane, two through lanes, and one right-turn lane with overlap to consist of two left-turn lanes, two through lanes, and one free right-turn lane. Widen the eastbound Thousand Oaks Boulevard approach from one left-turn lane, two through lanes, and one right-turn lane with overlap to consist of one left-turn lane, three through lanes, and one right-turn lane with overlap. The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program.

### **Erbes Road/Hillcrest Drive**

**Mitigation Measure No. 26** – The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program. *[Identical to Mitigation Measure No. 3, 12, and 19]*

### **Erbes Road/Thousand Oaks Boulevard**

**Mitigation Measure No. 27** – The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program.

### **Conejo School Road/Thousand Oaks Boulevard**

**Mitigation Measure No. 28** – Re-stripe the westbound Thousand Oaks Boulevard approach from one left-turn lane, two through lanes, and one right-turn lane to consist of one left-turn lane, two through lanes, and one shared through/right-turn lane. *This assumes on-street parking is prohibited on the north side west of the intersection.* The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program.

### **Skyline Drive/Thousand Oaks Boulevard**

**Mitigation Measure No. 29** - Widen the eastbound Thousand Oaks Boulevard approach from one left-turn lane, one through lane, and one shared through/right-turn lane to consist of one left-turn lane, two through lanes, and one shared through/right-turn lane. The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program.

### **Hampshire Road/Thousand Oaks Boulevard**

**Mitigation Measure No. 30** - Widen the northbound Hampshire Road approach from one left-turn lane, one shared through/left-turn lane, and one right-turn lane to consist of two left-turn lanes, one shared through/left-turn lane, and one right turn-lane. Widen the eastbound Thousand Oaks Boulevard approach from one left-turn lane, two through lanes, and one right turn-lane to consist of one left-turn lane, three through lanes, and one right-turn lane. Modify the Hampshire Road/Thousand Oaks Boulevard intersection traffic signal to include an eastbound Thousand Oaks Boulevard right-turn overlap, which will preclude u-turn movement on northbound to southbound Hampshire Road.

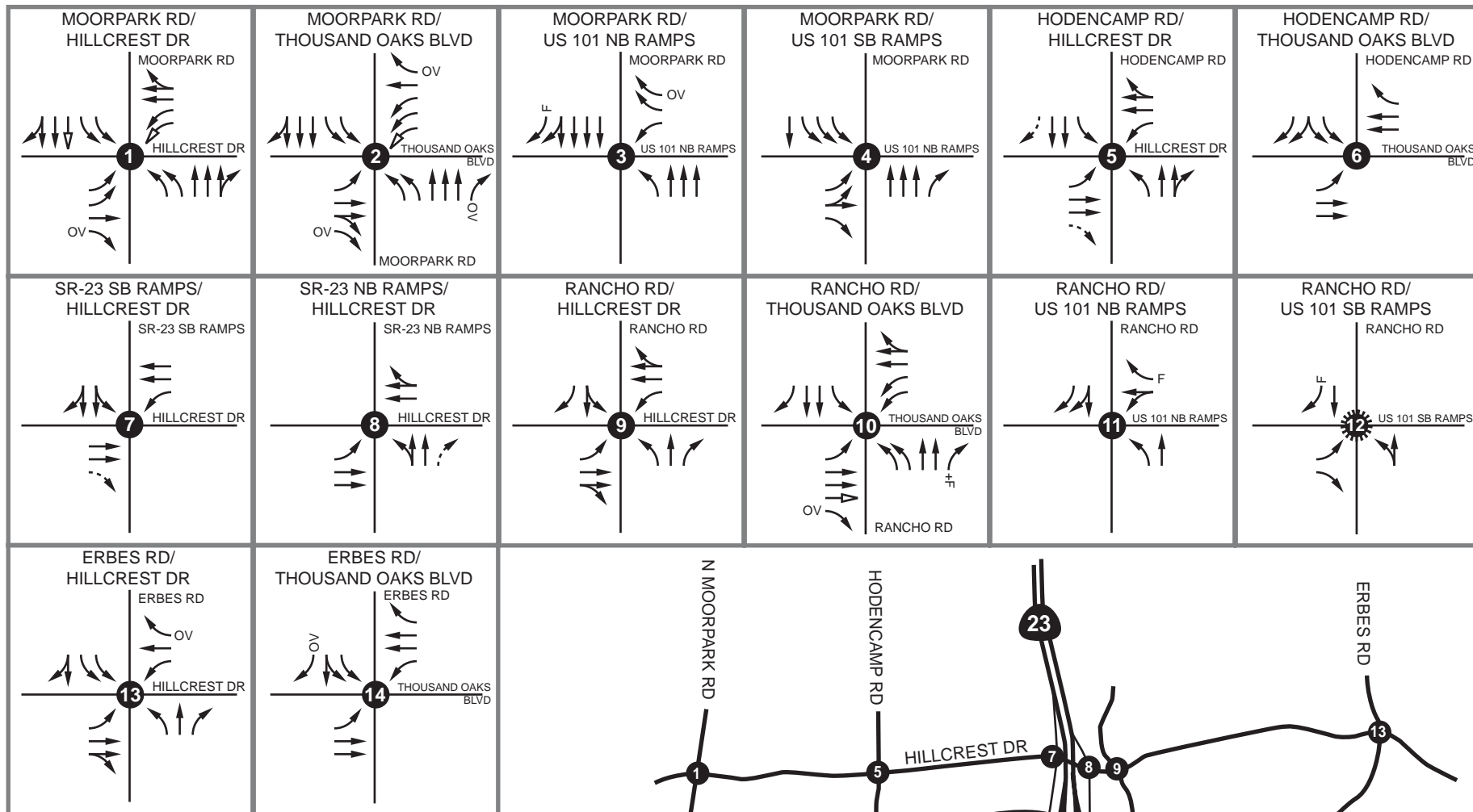
### **Duesenberg Drive/Thousand Oaks Boulevard**

**Mitigation Measure No. 31** – The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program.  
*[Identical to Mitigation Measure No. 8]*

### **Westlake Boulevard/Thousand Oaks Boulevard**

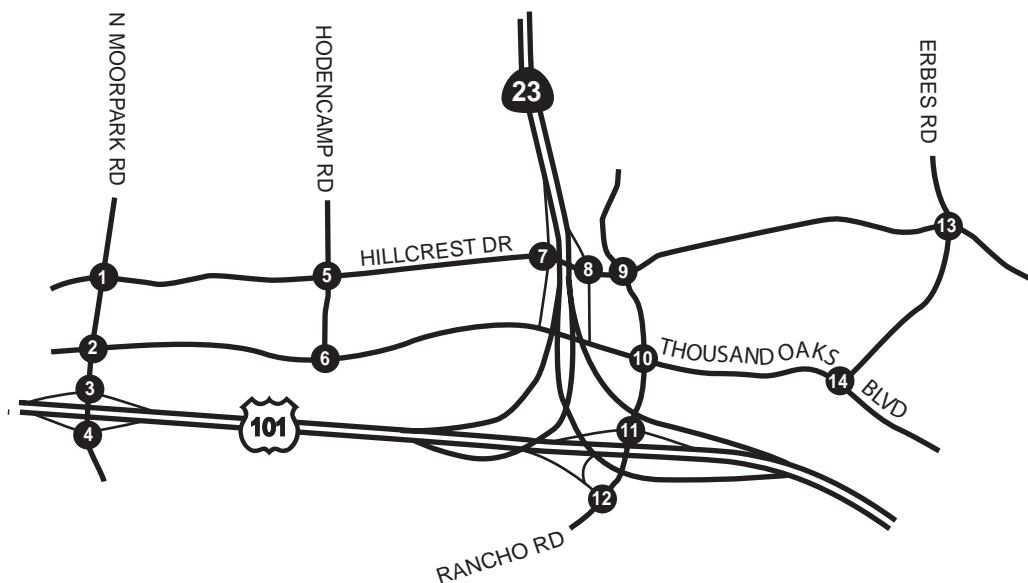
**Mitigation Measure No. 32** - Widen southbound Westlake Boulevard approach from two left-turn lanes, two through lanes, and one shared through/right-turn lane to consist of two left-turn lanes, three through lanes, and one right-turn lane. Widen eastbound Thousand Oaks Boulevard approach from two left-turn lanes, two through lanes, and one right-turn with overlap to consist of two left-turn lanes, three through lanes, and one right-turn with overlap. Widen westbound Thousand Oaks Boulevard approach from three left-turn lanes, one through lane, and one shared through/right-turn lane to consist of three left turn lanes, two through lanes, and one right-turn lane. The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program.

Exhibits 31 and 32 show the mitigated study intersection geometry to achieve an acceptable LOS at the study intersections for forecast General Plan land use buildout with proposed Specific Plan conditions.

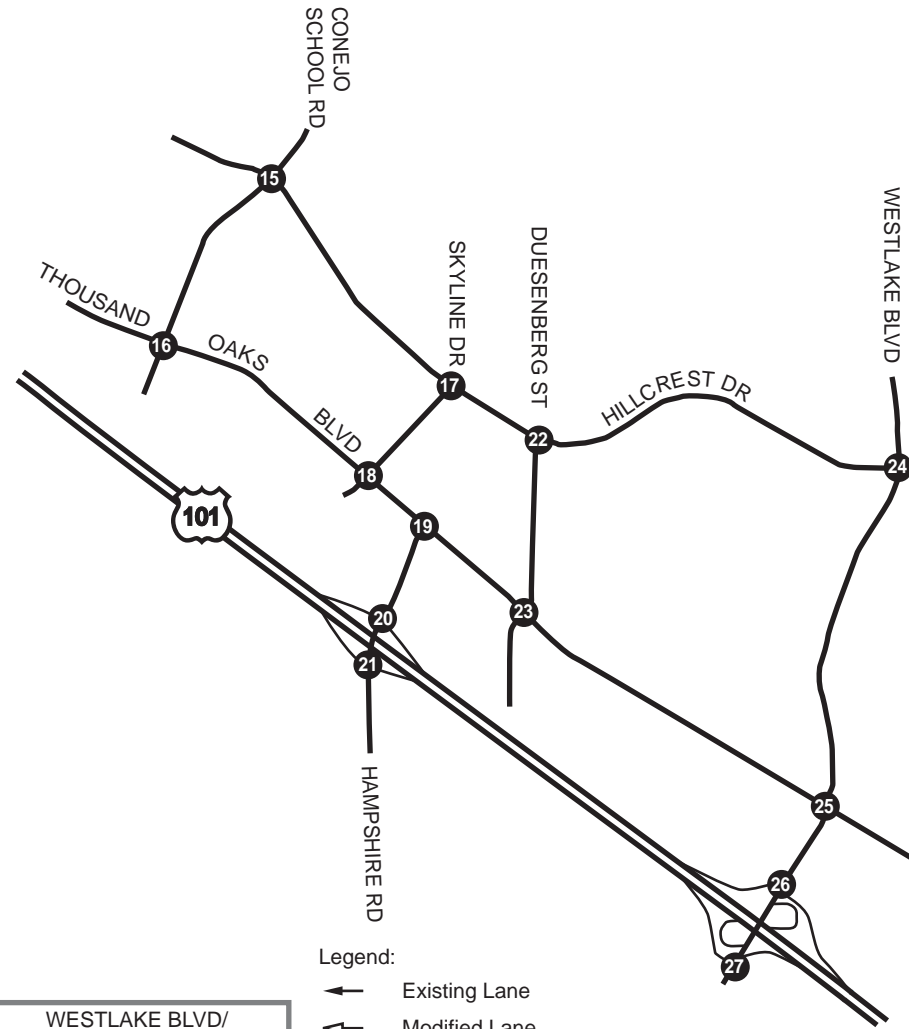
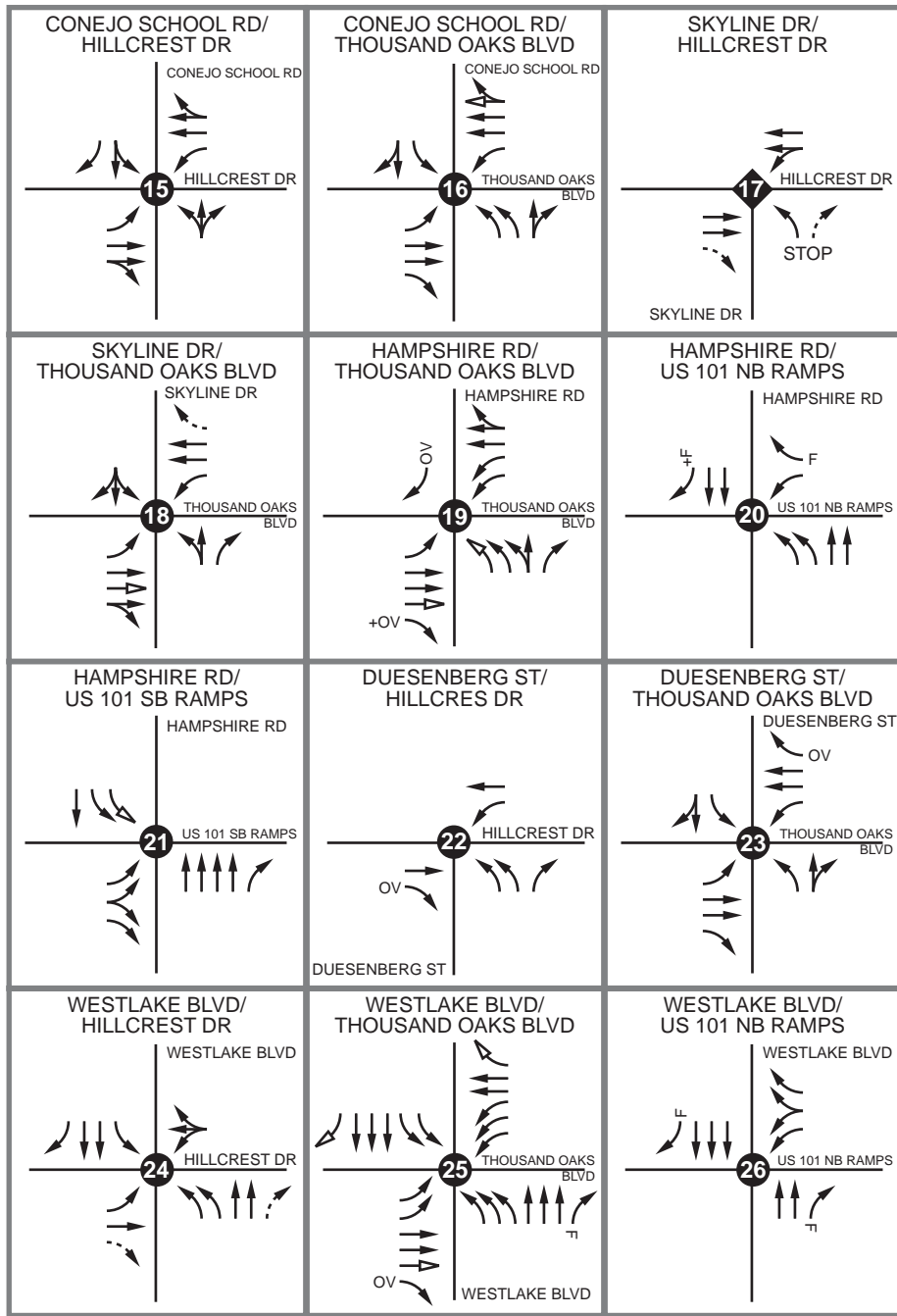


**Legend:**

- ← Existing Lane
- ↔ Modified Lane
- ↔<sup>F</sup> Free Right-Turn Lane
- ↔<sup>D</sup> Defacto Right-Turn Lane
- ↔<sup>OV</sup> Right-Turn Overlap
- +<sup>F</sup> Modify to Free Right-Turn Lane
- <sup>XX</sup> Signal-Controlled Intersection
- <sup>XX</sup> Modified to Signal-Controlled Intersection



## Area 1 - Mitigated Forecast General Plan Land Use Buildout Plus Proposed Specific Plan Conditions Study Intersection Geometry



- Legend:
- ← Existing Lane
  - ← Modified Lane
  - ← F Free Right-Turn Lane
  - ← D Defacto Right-Turn Lane
  - ← ov Right-Turn Overlap
  - +ov Add Right-Turn Overlap
  - +F Add Free Right-Turn Lane
  - xx Stop-Controlled Intersection
  - xx Signal-Controlled Intersection
  - STOP Stop-Controlled Approach

## Area 2 - Mitigated Forecast General Plan Land Use Buildout Plus Proposed Specific Plan Conditions Study Intersection Geometry

Table 13 shows the forecast LOS of the mitigated study intersections for forecast General Plan land use buildout plus proposed Specific Plan conditions; detailed LOS analysis sheets are contained in Appendix B.

**Table 13**  
**Mitigated Forecast General Plan Land Use Buildout Plus Proposed Specific Plan Conditions Intersection Peak Hour LOS**

Study Intersection	Existing Conditions				Mitigated Forecast General Plan Land Use Buildout Plus Proposed Specific Plan Conditions				Significant Impact?
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		
	V/C (Delay)	LOS	V/C (Delay)	LOS	V/C	LOS	V/C	LOS	
1 – Moorpark Rd/Hillcrest Dr	0.41	A	0.61	B	0.43	A	0.79	C	No
2 – Moorpark Rd/Thousand Oaks Blvd	0.34	A	0.53	A	0.55	A	0.78	C	No
10 – Rancho Rd/Thousand Oaks Blvd	0.41	A	0.51	A	0.50	A	0.80	C	No
13 – Erbes Rd/Hillcrest Dr	0.54	A	0.57	A	0.70	C	0.80	C	No
14 – Erbes Rd/Thousand Oaks Blvd	0.33	A	0.42	A	0.51	A	0.78	C	No
16 – Conejo School Rd/Thousand Oaks Blvd	0.34	A	0.45	A	0.48	A	0.76	C	No
18 – Skyline Dr/Thousand Oaks Blvd	0.37	A	0.52	A	0.53	A	0.80	C	No
19 – Hampshire Rd/Thousand Oaks Blvd	0.76	C	0.78	C	0.53	A	0.77	C	No
23 – Duesenberg Dr/Thousand Oaks Blvd	0.36	A	0.57	A	0.52	A	0.78	C	No
25 – Westlake Blvd/Thousand Oaks Blvd	0.47	A	0.63	B	0.51	A	0.78	C	No

**Note:** Deficient intersection operation shown in **bold**.

As shown in Table 13, assuming implementation of the recommended mitigation measures, the ten (10) study intersections are forecast to operate at an acceptable LOS (LOS C or better) for forecast General Plan land use buildout plus proposed Specific Plan conditions.

**FORECAST GENERAL PLAN LAND USE BUILDOUT PLUS PROPOSED DOWNTOWN  
ALTERNATIVE CONDITIONS ASSUMING EXISTING STUDY INTERSECTION  
GEOMETRY/CONTROL EXCEPT SIGNALIZATION OF THE SKYLINE DRIVE/HILLCREST  
DRIVE INTERSECTION**

Forecast General Plan land use buildout plus proposed Downtown Alternative conditions assumes buildout of related projects pursuant to the City of Thousand Oaks General Plan and the proposed Downtown Alternative land use intensification within the Specific Plan area assuming existing study intersection geometry/control except signalization of the Skyline Drive/Hillcrest Drive intersection. The Downtown Alternative proposes special development regulations for the Thousand Oaks Boulevard area between Moorpark Road and Duesenberg Drive to allow somewhat more intense development than existing regulations, and will also encourage a more pedestrian-friendly environment through its proposed standards for building design and placement. Appendix C contains the City-provided location of the projects assuming buildout of the General Plan Land Use Element and the proposed Downtown Alternative land use intensification.

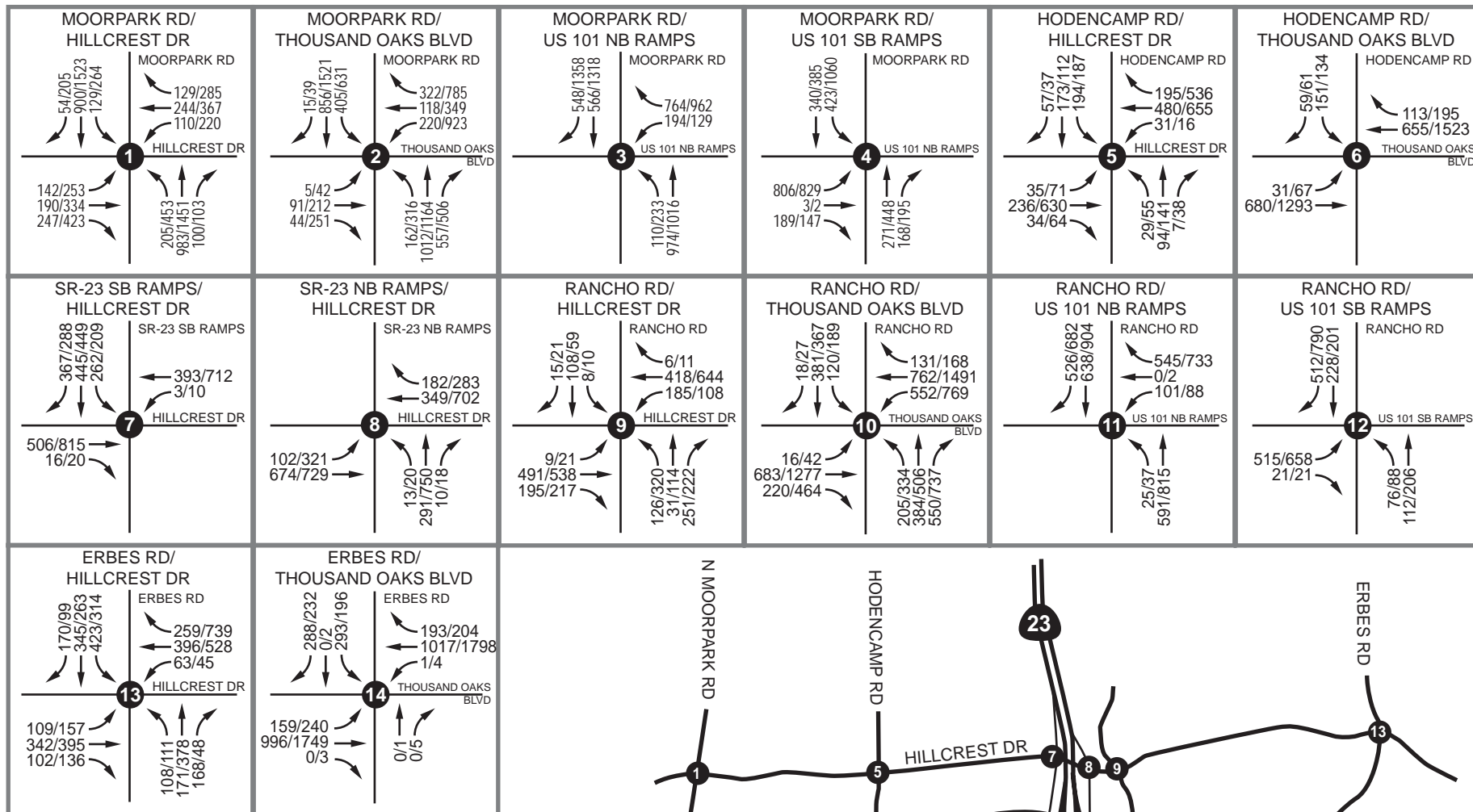
Forecast a.m. and p.m. peak hour volumes for General Plan land use buildout plus proposed Downtown Alternative conditions assuming existing study intersection geometry/control except signalization of the Skyline Drive/Hillcrest Drive study intersection were derived by adding trips forecast to be generated by the Downtown Alternative to General Plan land use buildout conditions traffic volumes.

Exhibits 33 and 34 show forecast General Plan land use buildout plus proposed Downtown Alternative conditions a.m. and p.m. peak hour volumes at the study intersections.

Exhibit 35 shows forecast General Plan land use buildout plus proposed Downtown Alternative conditions ADT volumes at the roadway segments.

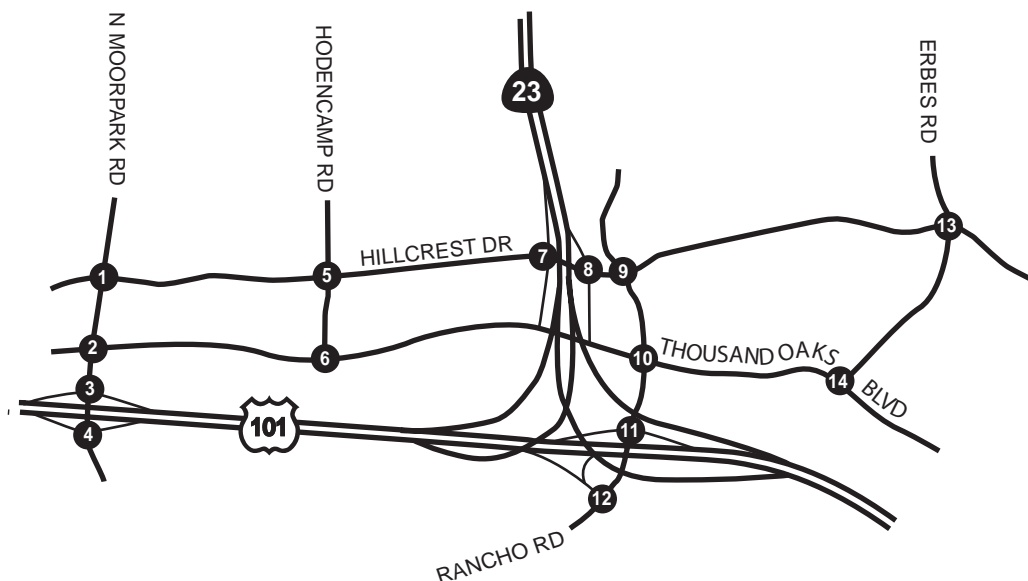
**Forecast General Plan Land Use Buildout Plus Proposed Downtown Alternative  
Conditions Intersection Level of Service Assuming Existing Study Intersection  
Geometry/Control Except Signalization of the Skyline Drive/Hillcrest Drive intersection**

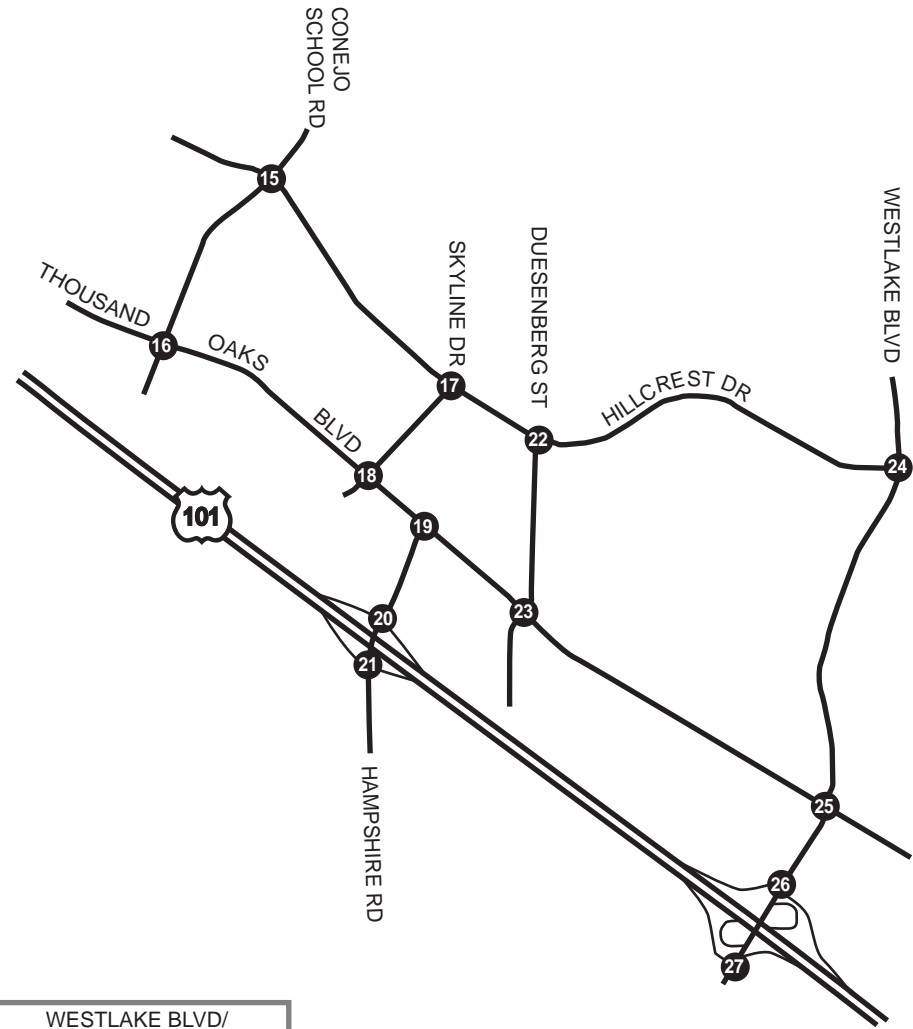
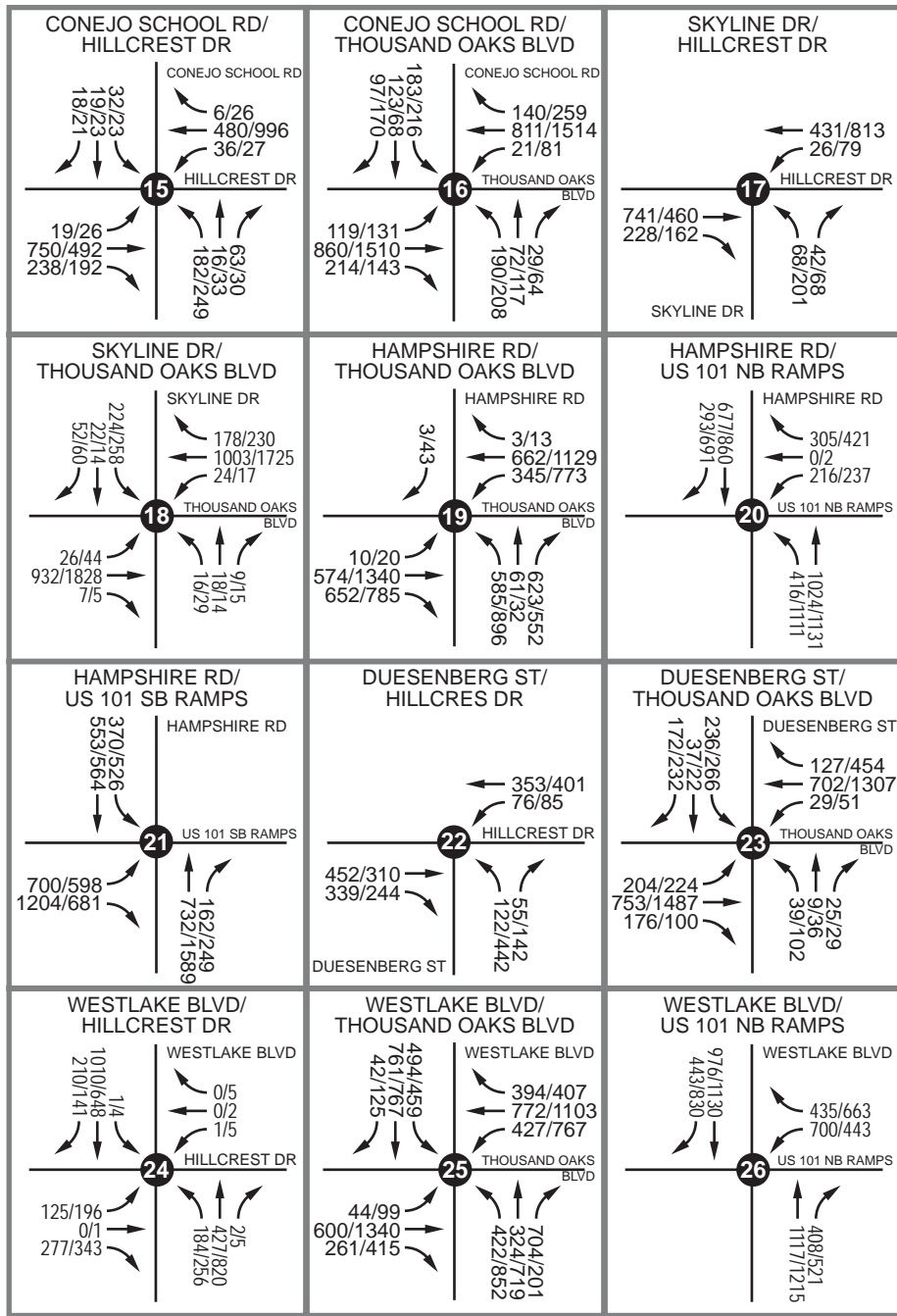
Table 14 summarizes forecast General Plan land use buildout plus proposed Downtown Alternative conditions a.m. and p.m. peak hour LOS of the study intersections assuming existing study intersection geometry/control except signalization of the Skyline Drive/Hillcrest Drive intersection; detailed LOS analysis sheets are contained in Appendix B.



Legend:

XX/XX AM/PM Intersection Volumes





Legend:  
XX/XX AM/PM Intersection Volumes

## Area 2 - Forecast General Plan Land Use Buildout Conditions Plus Proposed Downtown Alternative Conditions AM/PM Peak Hour Intersection Volumes



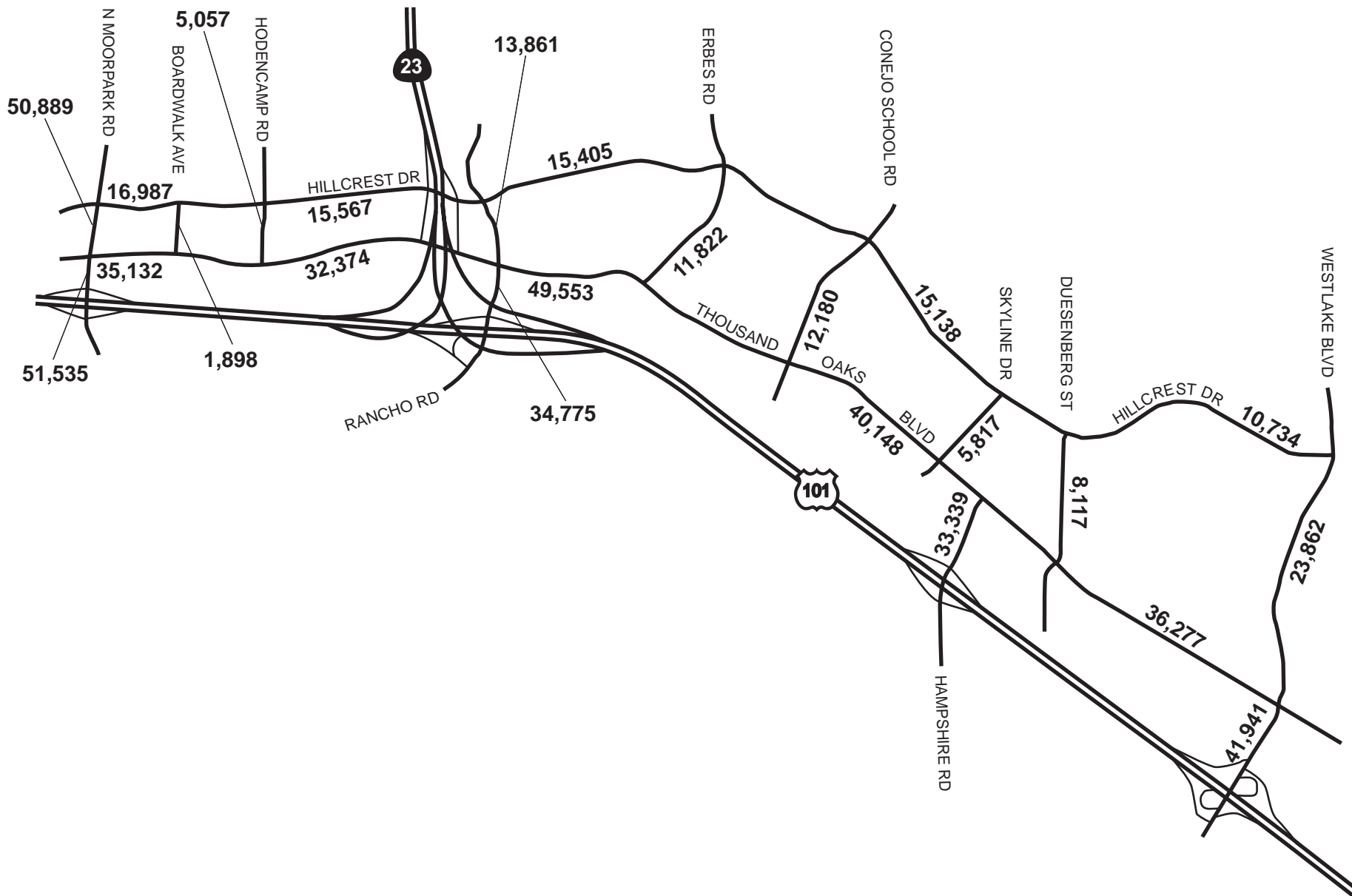


Table 14

**Forecast General Plan Land Use Buildout Plus Proposed Downtown Alternative Conditions Intersection Peak Hour LOS  
Assuming Existing Study Intersection Geometry/Control Except Signalization of the Skyline Drive/Hillcrest Drive Intersection**

Study Intersection	Existing Conditions				Forecast General Plan Land Use Buildout Plus Proposed Downtown Alternative Conditions				Significant Impact?
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		
	V/C (Delay)	LOS	V/C (Delay)	LOS	V/C (Delay)	LOS	V/C (Delay)	LOS	
1 – Moorpark Rd/Hillcrest Dr	0.41	A	0.61	B	0.55	A	1.03	F	Yes
2 – Moorpark Rd/Thousand Oaks Blvd	0.34	A	0.53	A	0.50	A	0.83	D	Yes
5 – Hodencamp Rd/Hillcrest Dr	0.33	A	0.51	A	0.39	A	0.59	A	No
6 – Hodencamp Rd/Thousand Oaks Blvd	0.17	A	0.30	A	0.27	A	0.56	A	No
9 – Rancho Rd/Hillcrest Dr	0.42	A	0.37	A	0.49	A	0.55	A	No
10 – Rancho Rd/Thousand Oaks Blvd	0.41	A	0.51	A	0.63	B	0.98	E	Yes
13 – Erbes Rd/Hillcrest Dr	0.54	A	0.57	A	0.71	C	0.80	C	Yes
14 – Erbes Rd/Thousand Oaks Blvd	0.33	A	0.42	A	0.51	A	0.78	C	Yes
15 – Conejo School Rd/Hillcrest Dr	0.45	A	0.39	A	0.51	A	0.55	A	No
16 – Conejo School Rd/Thousand Oaks Blvd	0.34	A	0.45	A	0.53	A	0.81	D	Yes
17 – Skyline Dr/Hillcrest Dr	(17.4)	C	(22.0)	C	0.29	A	0.40	A	No
18 – Skyline Dr/Thousand Oaks Blvd	0.37	A	0.52	A	0.53	A	0.81	D	Yes
19 – Hampshire Rd/Thousand Oaks Blvd	0.76	C	0.78	C	0.91	E	1.09	F	Yes
22 – Duesenberg Dr/Hillcrest Dr	0.34	A	0.31	A	0.37	A	0.39	A	No
23 – Duesenberg Dr/Thousand Oaks Blvd	0.36	A	0.57	A	0.52	A	0.77	C	Yes
24 – Westlake Blvd/Hillcrest Dr	0.49	A	0.44	A	0.55	A	0.50	A	No
25 – Westlake Blvd/Thousand Oaks Blvd	0.47	A	0.63	B	0.63	B	0.94	E	Yes

**Note:** Deficient intersection operation shown in **bold**.

As shown in Table 14, seven (7) study intersections are forecast to operate at a deficient LOS (LOS D or worse) for forecast General Plan land use buildout plus proposed Downtown Alternative conditions assuming existing study intersection geometry/control except signalization of the Skyline Drive/Hillcrest Drive intersection, based on City of Thousand Oaks performance criteria:

- Moorpark Road/Hillcrest Drive (p.m. peak hour only);
- Moorpark Road/Thousand Oaks Boulevard (p.m. peak hour only);
- Rancho Road/Thousand Oaks Boulevard (p.m. peak hour only);
- Conejo School Road/Thousand Oaks Boulevard (p.m. peak hour only);
- Skyline Drive/Thousand Oaks Boulevard (p.m. peak hour only);
- Hampshire Road/Thousand Oaks Boulevard (both a.m. and p.m. peak hours); and
- Westlake Boulevard/Thousand Oaks Boulevard (p.m. peak hour only).

As also shown in Table 14, ten (10) study intersections are forecast to be significantly impacted for forecast General Plan land use buildout plus proposed Downtown Alternative conditions assuming existing study intersection geometry/control except signalization of the Skyline Drive/Hillcrest Drive intersection, based on City of Thousand Oaks thresholds of significance:

- Moorpark Road/Hillcrest Drive (p.m. peak hour only);
- Moorpark Road/Thousand Oaks Boulevard (p.m. peak hour only);
- Rancho Road/Thousand Oaks Boulevard (p.m. peak hour only);
- Erbes Road/Hillcrest Drive (a.m. and p.m. peak hours);
- Erbes Road/Thousand Oaks Boulevard (p.m. peak hour only);
- Conejo School Road/Thousand Oaks Boulevard (p.m. peak hour only);
- Skyline Drive/Thousand Oaks Boulevard (p.m. peak hour only);
- Hampshire Road/Thousand Oaks Boulevard (both a.m. and p.m. peak hours);
- Duesenberg Drive/Thousand Oaks Boulevard (p.m. peak hour only); and
- Westlake Boulevard/Thousand Oaks Boulevard (p.m. peak hour only).

### **Forecast General Plan Land Use Buildout Plus Downtown Alternative Conditions Recommended Mitigation Measures**

The following mitigation measures are recommended to maintain acceptable LOS at the study intersections for forecast General Plan land use buildout plus proposed Downtown Alternative conditions:

#### **Moorpark Road/Hillcrest Drive**

**Mitigation Measure No. 33** - Widen southbound Moorpark Road approach from two left-turn lanes, one through lane, and one shared through/right-turn lane to consist of two left-turn lanes, two through lanes, and one shared through/right-lane. Widen westbound Hillcrest Drive approach from one left-turn lane, one through lane and one shared through/right-turn lane to consist of two left-turn lanes, one through lane and one shared through/right-turn. The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program. *[Identical to Mitigation Measure No. 23]*

### **Moorpark Road/Thousand Oaks Boulevard**

**Mitigation Measure No. 34** - Widen westbound Thousand Oaks Boulevard approach from two left-turn lanes, one through lane, and one right-turn lane with overlap to consist of three left-turn lanes, one through lane, and one right-turn lane with overlap. The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program. *[Identical to Mitigation Measure No. 24]*

### **Rancho Road/Thousand Oaks Boulevard**

**Mitigation Measure No. 35** - Widen the northbound Rancho Road approach from one left-turn lane, two through lanes, and one right-turn lane with overlap to consist of two left-turn lanes, two through lanes, and one free right-turn lane. Widen the eastbound Thousand Oaks Boulevard approach from one left-turn lane, two through lanes, and one right-turn lane with overlap to consist of one left-turn lane, three through lanes, and one right-turn lane with overlap. Widen the westbound Thousand Oaks Boulevard approach from two left-turn lanes, one through lane, and one shared through/right-turn lane to consist of two left-turn lanes, two through lanes, and one shared through/right-turn lane. The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program.

### **Erbes Road/Hillcrest Drive**

**Mitigation Measure No. 36** – The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program. *[Identical to Mitigation Measure No. 3, 12, 19, and 26]*

### **Erbes Road/Thousand Oaks Boulevard**

**Mitigation Measure No. 37** – The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program. *[Identical to Mitigation Measure No. 27]*

### **Conejo School Road/Thousand Oaks Boulevard**

**Mitigation Measure No. 38** – Re-stripe the westbound Thousand Oaks Boulevard approach from one left-turn lane, two through lanes, and one right-turn lane to consist of one left-turn lane, two through lanes, and one shared through/right-turn lane. *This assumes on-street parking is prohibited on the north side west of the intersection.* The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program. *[Identical to Mitigation Measure No. 28]*

### **Skyline Drive/Thousand Oaks Boulevard**

**Mitigation Measure No. 39** - Widen the eastbound Thousand Oaks Boulevard approach from one left-turn lane, one through lane, and one shared through/right-turn lane to consist of one left-turn lane, two through lanes, and one shared through/right-turn lane. The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program. *[Identical to Mitigation Measure No. 29]*

### **Hampshire Road/Thousand Oaks Boulevard**

**Mitigation Measure No. 40** – Widen the northbound Hampshire Road approach from one left-turn lane, one shared through/left-turn lane, and one right-turn lane to consist of two left-turn lanes, one shared through/left-turn lane, and one right turn-lane. Widen the eastbound Thousand Oaks Boulevard approach from one left-turn lane, two through lanes, and one right turn-lane to consist of one left-turn lane, three through lanes, and one right-turn lane. Modify the Hampshire Road/Thousand Oaks Boulevard intersection traffic signal to include an eastbound Thousand Oaks Boulevard right-turn overlap, which will preclude u-turn movement on northbound to southbound Hampshire Road. The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program.

### **Duesenberg Drive/Thousand Oaks Boulevard**

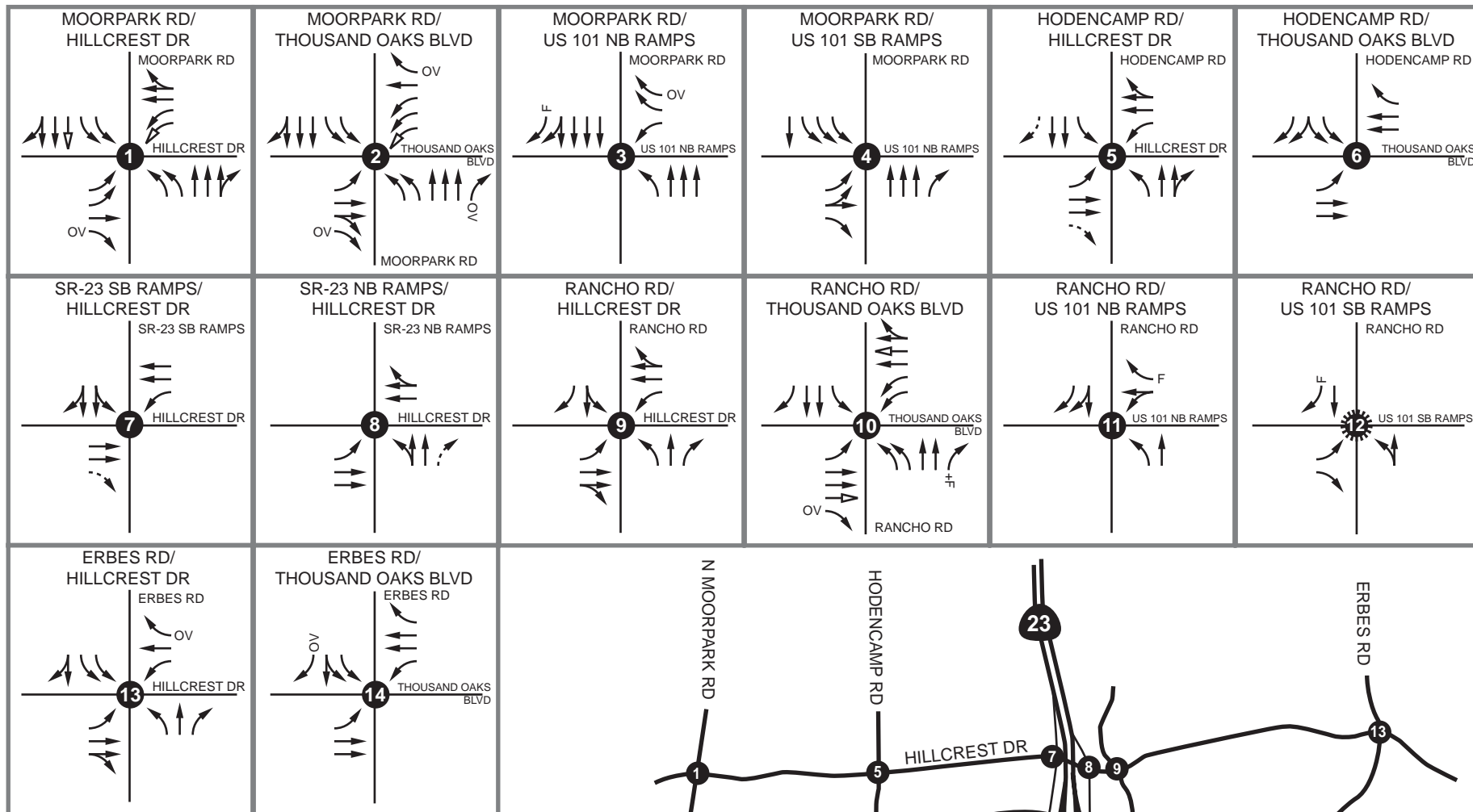
**Mitigation Measure No. 41** – The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program. *[Identical to Mitigation Measure No. 8 and 31]*

### **Westlake Boulevard/Thousand Oaks Boulevard**

**Mitigation Measure No. 42** - Widen southbound Westlake Boulevard approach from two left-turn lanes, two through lanes, and one shared through/right-turn lane to consist of two left-turn lanes, three through lanes, and one right-turn lane. Widen eastbound Thousand Oaks Boulevard approach from two left-turn lanes, two through lanes, and one right-turn with overlap to consist of two left-turn lanes, three through lanes, and one right-turn with overlap. Widen westbound Thousand Oaks Boulevard approach from three left-turn lanes, one through lane, and one shared through/right-turn lane to consist of three left turn lanes, two through lanes, and one right-turn lane. The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program. *[Identical to Mitigation Measure No. 32]*

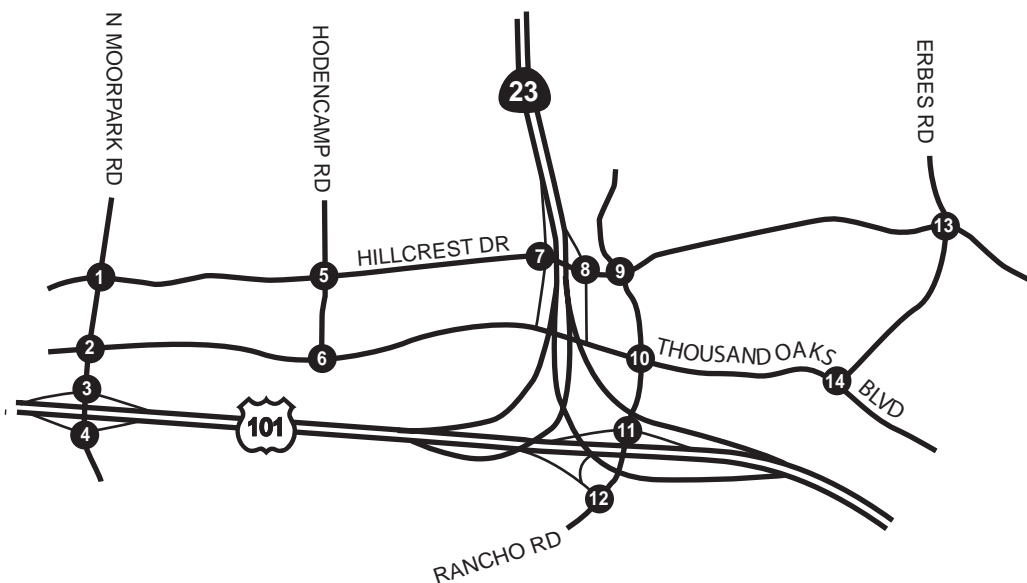
Exhibits 36 and 37 show the mitigated forecast General Plan land use buildout with proposed Downtown Alternative conditions study intersection geometry.

Table 15 shows the forecast LOS of the mitigated study intersections for forecast General Plan land use buildout plus proposed Downtown Alternative conditions; detailed LOS analysis sheets are contained in Appendix B.

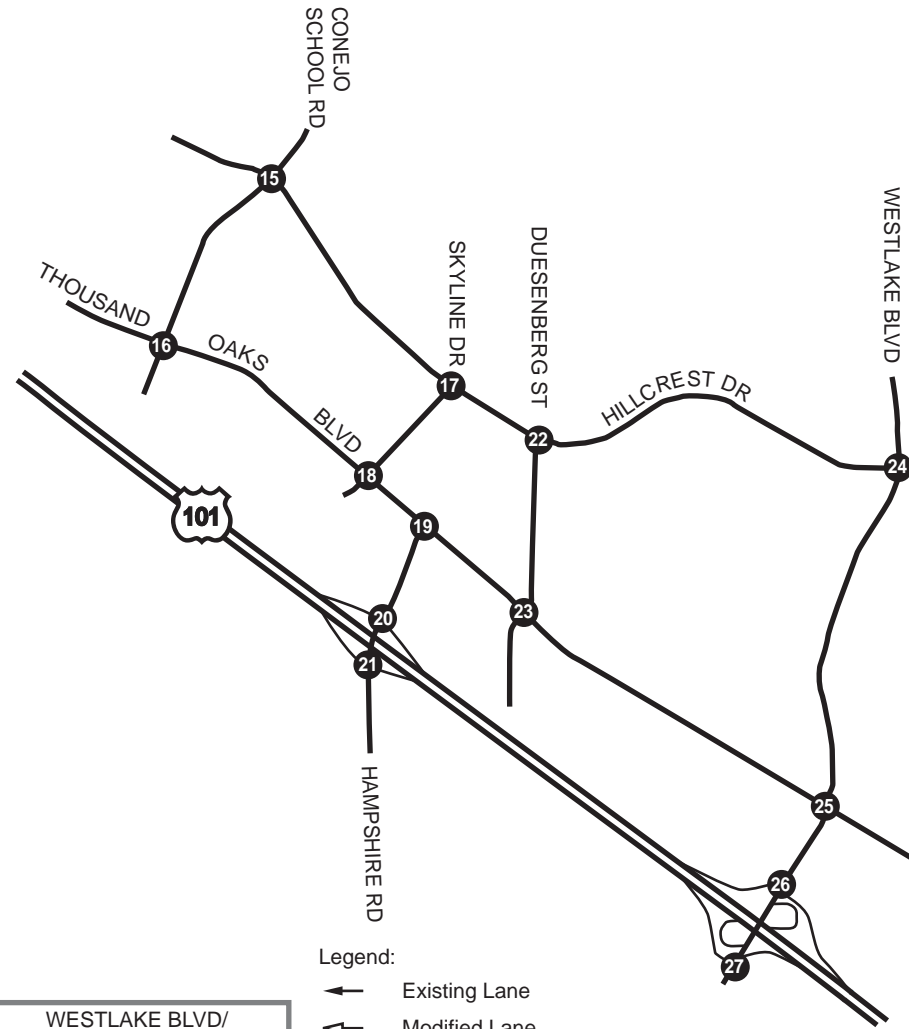
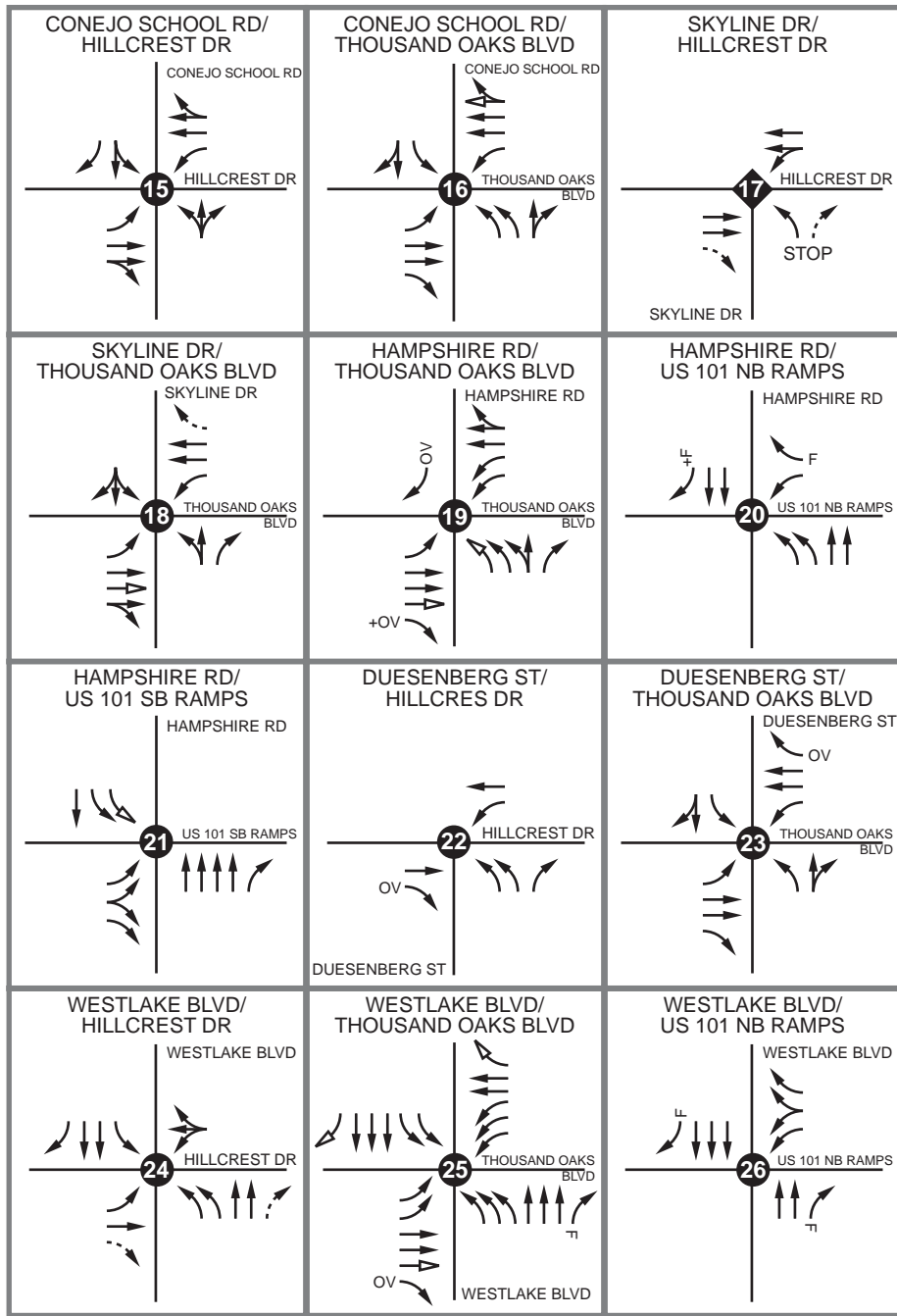


Legend:

- ← Existing Lane
- ↔ Modified Lane
- ↔<sup>F</sup> Free Right-Turn Lane
- ↔<sup>D</sup> Defacto Right-Turn Lane
- ↔<sup>OV</sup> Right-Turn Overlap
- +<sup>F</sup> Modify to Free Right-Turn Lane
- XX Signal-Controlled Intersection
- XX Modified to Signal-Controlled Intersection



## Area 1 - Mitigated Forecast General Plan Land Use Buildout Conditions Plus Proposed Downtown Alternative Conditions Study Intersection Geometry



- Legend:**
- ← Existing Lane
  - ↔ Modified Lane
  - ↔ F Free Right-Turn Lane
  - ↔ Defacto Right-Turn Lane
  - ↔ ov Right-Turn Overlap
  - +OV Add Right-Turn Overlap
  - +F Add Free Right-Turn Lane
  - xx Stop-Controlled Intersection
  - xx Signal-Controlled Intersection
  - STOP Stop-Controlled Approach

## Area 2 - Mitigated Forecast General Plan Land Use Buildout Conditions Plus Proposed Downtown Alternative Conditions Study Intersection Geometry

**Table 15**  
**Mitigated Forecast General Plan Land Use Buildout Plus**  
**Proposed Downtown Alternative Conditions Intersection Peak Hour LOS**

Study Intersection	Existing Conditions				Mitigated Forecast General Plan Land Use Buildout Plus Proposed Downtown Alternative Conditions				Significant Impact?
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		
	V/C (Delay)	LOS	V/C (Delay)	LOS	V/C	LOS	V/C	LOS	
1 – Moorpark Rd/Hillcrest Dr	0.41	A	0.61	B	0.43	A	0.78	C	No
2 – Moorpark Rd/Thousand Oaks Blvd	0.34	A	0.53	A	0.50	A	0.76	C	No
10 – Rancho Rd/Thousand Oaks Blvd	0.41	A	0.51	A	0.51	A	0.78	C	No
13 – Erbes Rd/Hillcrest Dr	0.54	A	0.57	A	0.71	C	0.80	C	No
14 – Erbes Rd/Thousand Oaks Blvd	0.33	A	0.42	A	0.51	A	0.78	C	No
16 – Conejo School Rd/Thousand Oaks Blvd	0.34	A	0.45	A	0.48	A	0.77	C	No
18 – Skyline Dr/Thousand Oaks Blvd	0.37	A	0.52	A	0.53	A	0.80	C	No
19 – Hampshire Rd/Thousand Oaks Blvd	0.76	C	0.78	C	0.52	A	0.75	C	No
23 – Duesenberg Dr/Thousand Oaks Blvd	0.36	A	0.57	A	0.52	A	0.77	C	No
25 – Westlake Blvd/Thousand Oaks Blvd	0.47	A	0.63	B	0.63	A	0.78	C	No

**Note:** Deficient intersection operation shown in **bold**.

As shown in Table 15, assuming implementation of the recommended mitigation measures, the ten (10) study intersections are forecast to operate at an acceptable LOS (LOS C or better) for forecast General Plan land use buildout plus proposed Downtown Alternative conditions.



### **FORECAST GENERAL PLAN LAND USE BUILDOUT PLUS PROPOSED REDUCED INTENSITY ALTERNATIVE CONDITIONS ASSUMING EXISTING STUDY INTERSECTION GEOMETRY/CONTROL EXCEPT SIGNALIZATION OF THE SKYLINE DRIVE/HILLCREST DRIVE INTERSECTION**

Forecast General Plan land use buildout plus proposed Reduced Intensity Alternative conditions assumes buildout of related projects pursuant to the City of Thousand Oaks General Plan and the proposed Reduced Intensity Alternative land use intensification within the Specific Plan area assuming existing study intersection geometry/control except signalization of the Skyline Drive/Hillcrest Drive intersection. The Reduced Intensity Alternative proposes special development regulations for the Thousand Oaks Boulevard area between Moorpark Road and Duesenberg Drive to allow somewhat more intense development than existing regulations, and will also encourage a more pedestrian-friendly environment through its proposed standards for building design and placement. Appendix C contains the City-provided location of the projects assuming buildout of the General Plan Land Use Element and the proposed Reduced Intensity Alternative land use intensification.

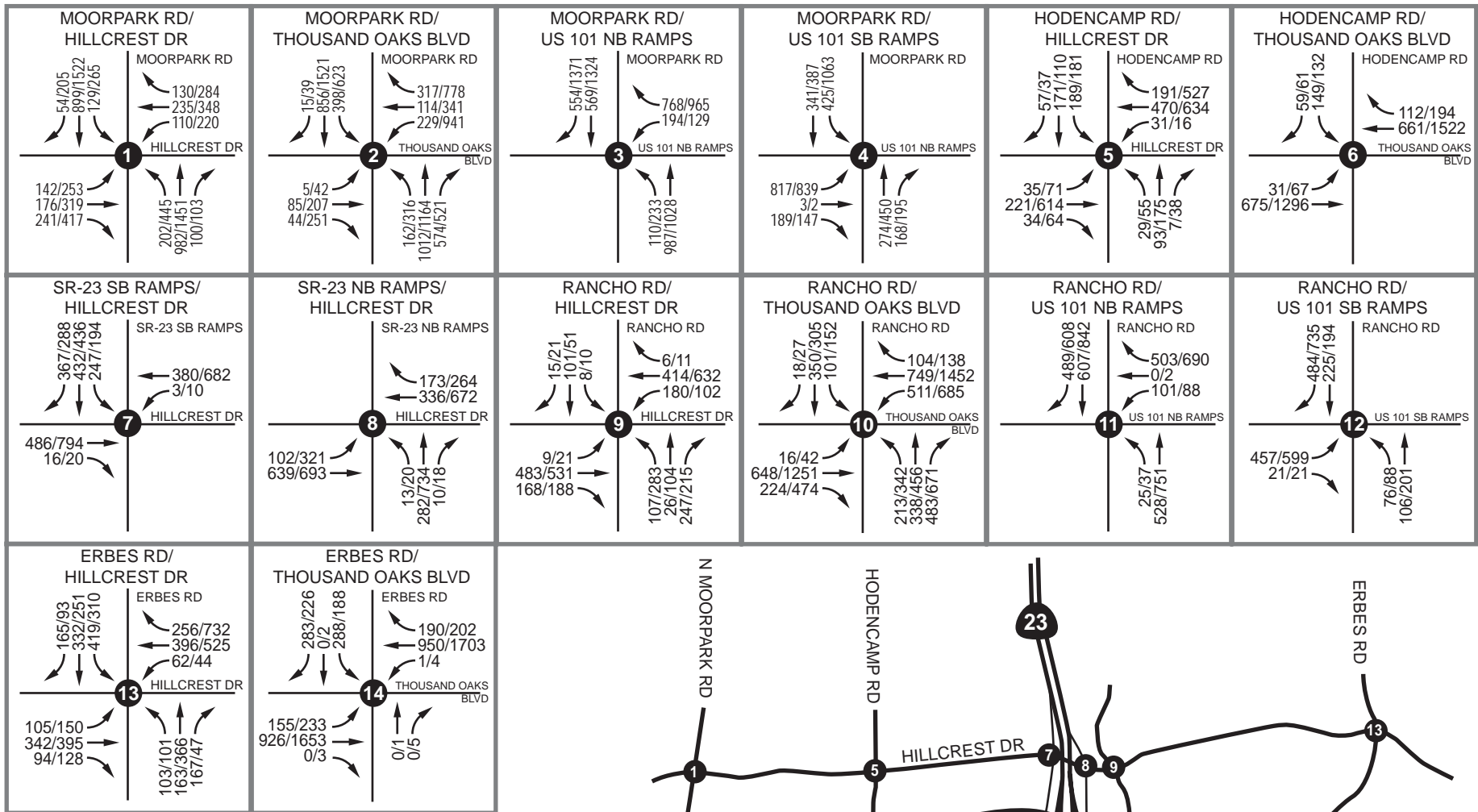
Forecast a.m. and p.m. peak hour volumes for General Plan land use buildout plus proposed Reduced Intensity Alternative conditions assuming existing study intersection geometry/control except signalization of the Skyline Drive/Hillcrest Drive study intersection were derived by adding trips forecast to be generated by the Reduced Intensity Alternative to General Plan land use buildout conditions traffic volumes.

Exhibits 38 and 39 show forecast General Plan land use buildout plus proposed Reduced Intensity Alternative conditions a.m. and p.m. peak hour volumes at the study intersections.

Exhibit 40 shows forecast General Plan land use buildout plus proposed Reduced Intensity Alternative conditions ADT volumes at the roadway segments.

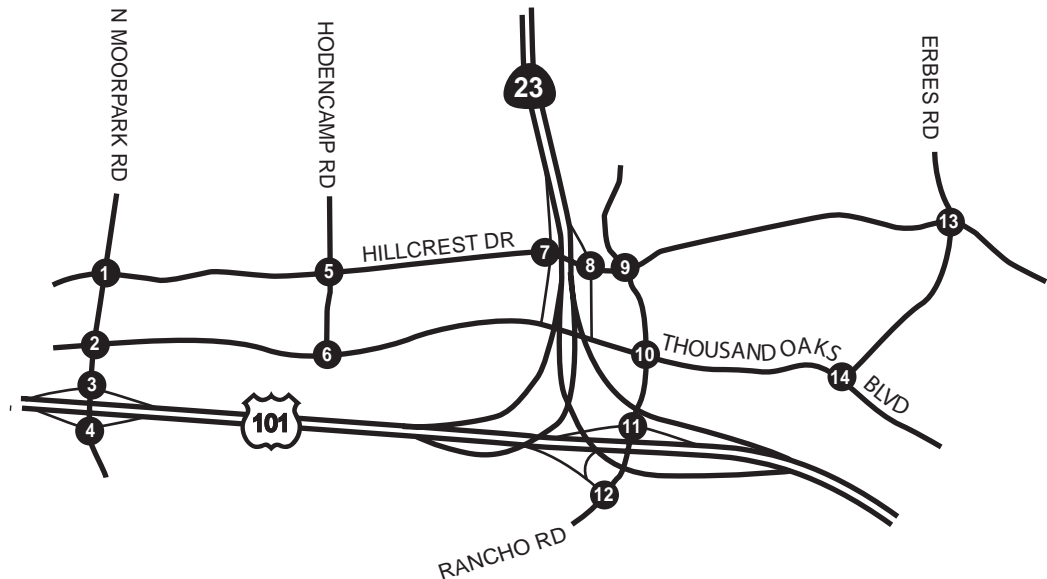
### **Forecast General Plan Land Use Buildout Plus Proposed Reduced Intensity Alternative Conditions Intersection Level of Service Assuming Existing Study Intersection Geometry/Control Except Signalization of the Skyline Drive/Hillcrest Drive intersection**

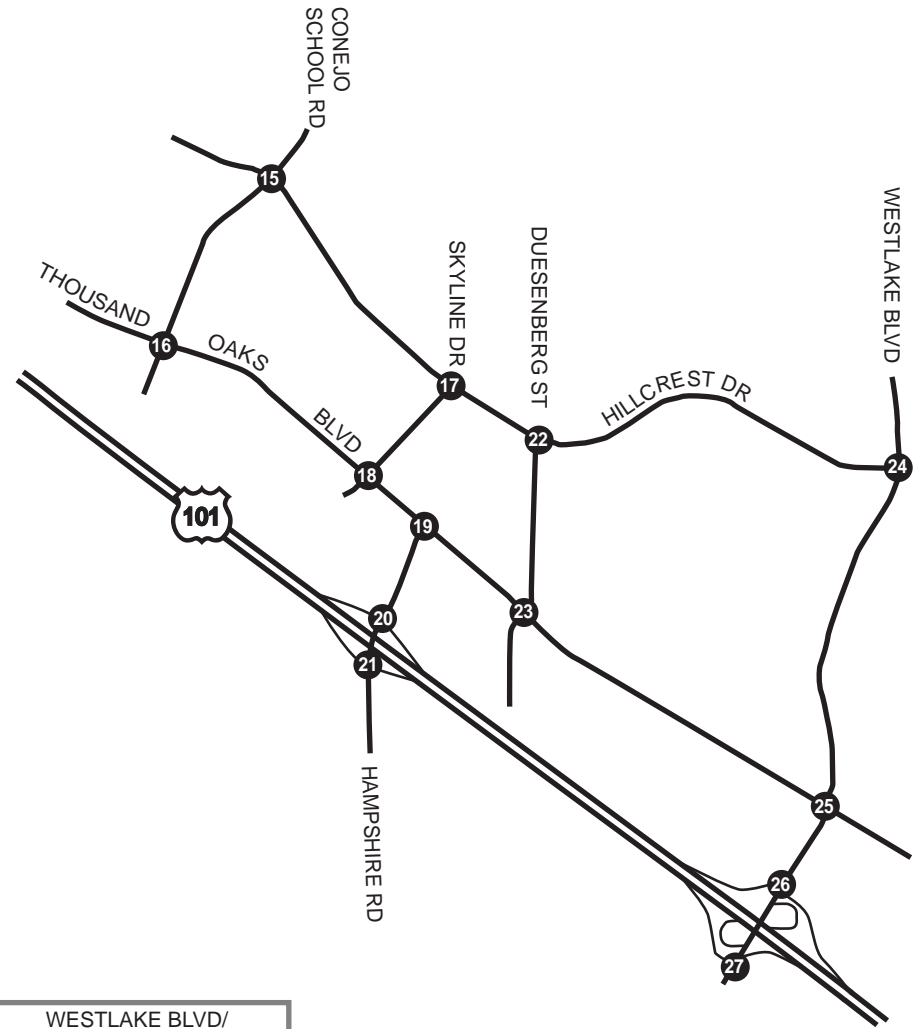
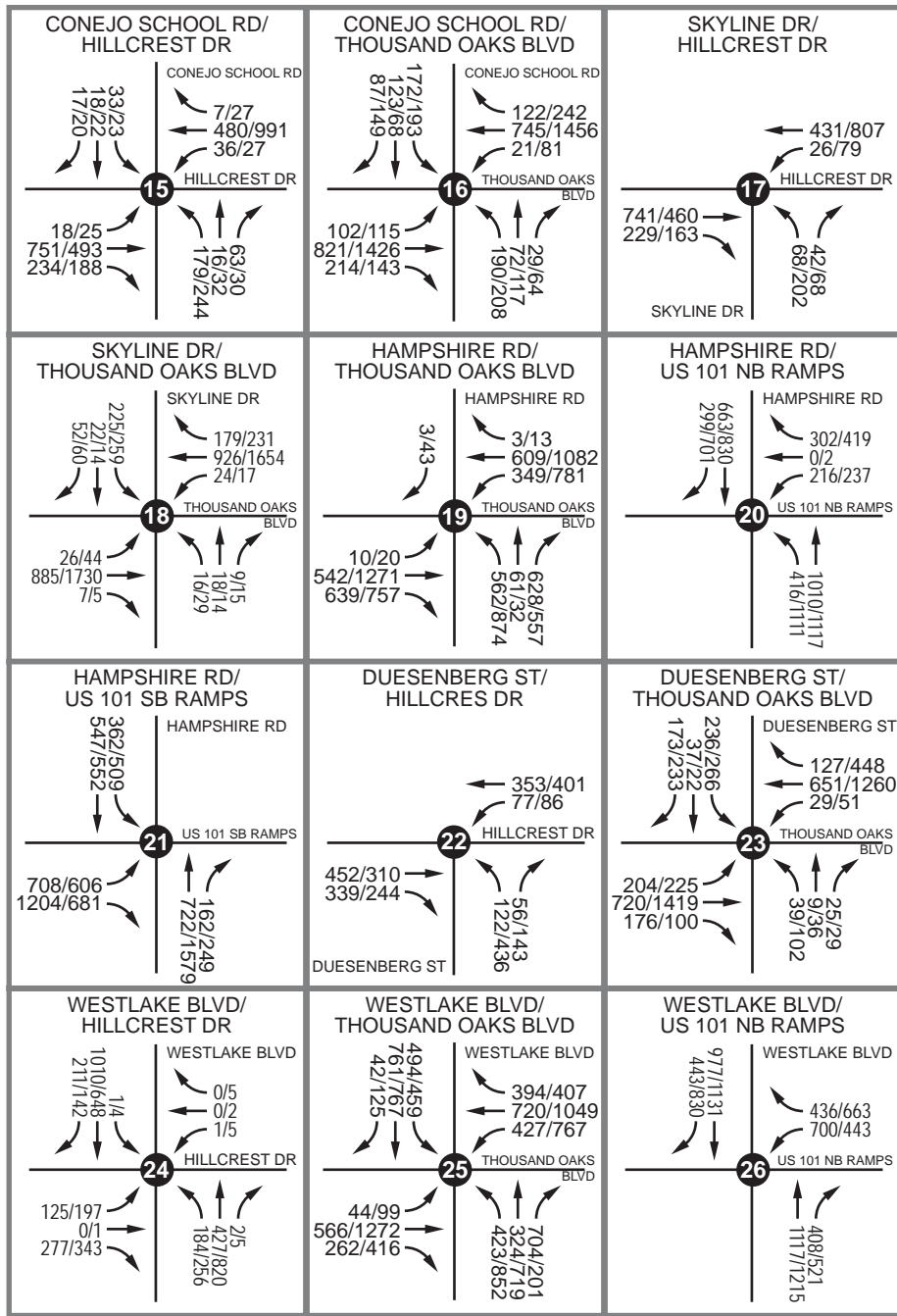
Table 16 summarizes forecast General Plan land use buildout plus proposed Reduced Intensity Alternative conditions a.m. and p.m. peak hour LOS of the study intersections assuming existing study intersection geometry/control except signalization of the Skyline Drive/Hillcrest Drive intersection; detailed LOS analysis sheets are contained in Appendix B.



Legend:

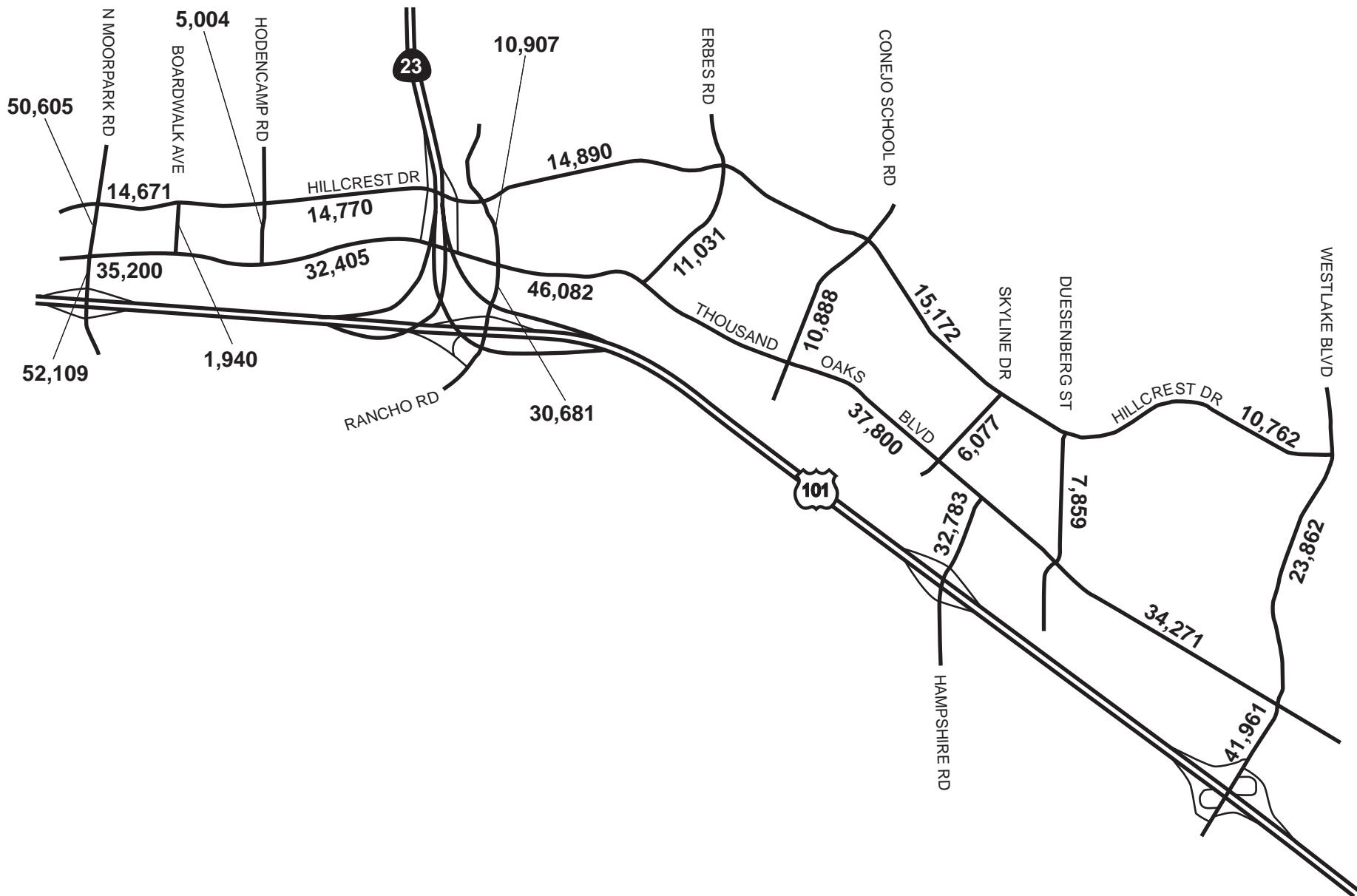
XX/XX AM/PM Intersection Volumes





Legend:  
XX/XX AM/PM Intersection Volumes

## Area 2 - Forecast General Plan Land Use Buildout Conditions Plus Proposed Reduced Intensity Alternative Conditions AM/PM Peak Hour Intersection Volumes



**Table 16**  
**Forecast General Plan Land Use Buildout Plus Proposed Reduced Intensity Alternative Conditions Intersection Peak Hour**  
**LOS Assuming Existing Study Intersection Geometry/Control Except Signalization of the Skyline Drive/Hillcrest Drive**  
**Intersection**

Study Intersection	Existing Conditions				Forecast General Plan Land Use Buildout Plus Proposed Reduced Intensity Alternative Conditions				Significant Impact?
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		
	V/C (Delay)	LOS	V/C (Delay)	LOS	V/C (Delay)	LOS	V/C (Delay)	LOS	
1 – Moorpark Rd/Hillcrest Dr	0.41	A	0.61	B	0.54	A	1.02	F	Yes
2 – Moorpark Rd/Thousand Oaks Blvd	0.34	A	0.53	A	0.51	A	0.83	D	Yes
5 – Hodencamp Rd/Hillcrest Dr	0.33	A	0.51	A	0.38	A	0.59	A	No
6 – Hodencamp Rd/Thousand Oaks Blvd	0.17	A	0.30	A	0.27	A	0.56	A	No
9 – Rancho Rd/Hillcrest Dr	0.42	A	0.37	A	0.48	A	0.50	A	No
10 – Rancho Rd/Thousand Oaks Blvd	0.41	A	0.51	A	0.61	B	0.91	E	Yes
13 – Erbes Rd/Hillcrest Dr	0.54	A	0.57	A	0.69	B	0.78	C	Yes
14 – Erbes Rd/Thousand Oaks Blvd	0.33	A	0.42	A	0.48	A	0.74	C	Yes
15 – Conejo School Rd/Hillcrest Dr	0.45	A	0.39	A	0.51	A	0.54	A	No
16 – Conejo School Rd/Thousand Oaks Blvd	0.34	A	0.45	A	0.49	A	0.76	C	Yes
17 – Skyline Dr/Hillcrest Dr	(17.4)	C	(22.0)	C	0.29	A	0.38	A	No
18 – Skyline Dr/Thousand Oaks Blvd	0.37	A	0.52	A	0.50	A	0.77	C	Yes
19 – Hampshire Rd/Thousand Oaks Blvd	0.76	C	0.78	C	0.90	D	1.08	F	Yes
22 – Duesenberg Dr/Hillcrest Dr	0.34	A	0.31	A	0.37	A	0.39	A	No
23 – Duesenberg Dr/Thousand Oaks Blvd	0.36	A	0.57	A	0.50	A	0.76	C	Yes
24 – Westlake Blvd/Hillcrest Dr	0.49	A	0.44	A	0.55	A	0.50	A	No
25 – Westlake Blvd/Thousand Oaks Blvd	0.47	A	0.63	B	0.62	B	0.92	E	Yes

**Note:** Deficient intersection operation shown in **bold**.

As shown in Table 16, seven (7) study intersections are forecast to operate at a deficient LOS (LOS D or worse) for forecast General Plan land use buildout plus proposed Reduced Intensity Alternative conditions assuming existing study intersection geometry/control except signalization of the Skyline Drive/Hillcrest Drive intersection, based on City of Thousand Oaks performance criteria:

- Moorpark Road/Hillcrest Drive (p.m. peak hour only);
- Moorpark Road/Thousand Oaks Boulevard (p.m. peak hour only);
- Rancho Road/Thousand Oaks Boulevard (p.m. peak hour only);
- Hampshire Road/Thousand Oaks Boulevard (both a.m. and p.m. peak hours); and
- Westlake Boulevard/Thousand Oaks Boulevard (p.m. peak hour only).

As also shown in Table 16, ten (10) study intersections are forecast to be significantly impacted for forecast General Plan land use buildout plus proposed Reduced Intensity Alternative conditions assuming existing study intersection geometry/control except signalization of the Skyline Drive/Hillcrest Drive intersection, based on City of Thousand Oaks thresholds of significance:

- Moorpark Road/Hillcrest Drive (p.m. peak hour only);
- Moorpark Road/Thousand Oaks Boulevard (p.m. peak hour only);
- Rancho Road/Thousand Oaks Boulevard (p.m. peak hour only);
- Erbes Road/Hillcrest Drive p.m. peak hours);
- Erbes Road/Thousand Oaks Boulevard (p.m. peak hour only);
- Conejo School Road/Thousand Oaks Boulevard (p.m. peak hour only);
- Skyline Drive/Thousand Oaks Boulevard (p.m. peak hour only);
- Hampshire Road/Thousand Oaks Boulevard (both a.m. and p.m. peak hours);
- Duesenberg Drive/Thousand Oaks Boulevard (p.m. peak hour only); and
- Westlake Boulevard/Thousand Oaks Boulevard (p.m. peak hour only).

### **Forecast General Plan Land Use Buildout Plus Reduced Intensity Alternative Conditions Recommended Mitigation Measures**

The following mitigation measures are recommended to maintain acceptable LOS at the study intersections for forecast General Plan land use buildout plus proposed Reduced Intensity Alternative conditions:

#### **Moorpark Road/Hillcrest Drive**

**Mitigation Measure No. 43** - Widen southbound Moorpark Road approach from two left-turn lanes, one through lane, and one shared through/right-turn lane to consist of two left-turn lanes, two through lanes, and one shared through/right-lane. Widen westbound Hillcrest Drive approach from one left-turn lane, one through lane and one shared through/right-turn lane to consist of two left-turn lanes, one through lane and one shared through/right-turn. The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program. *[Identical to Mitigation Measure No. 23 and 33]*

#### **Moorpark Road/Thousand Oaks Boulevard**

**Mitigation Measure No. 44** - Widen westbound Thousand Oaks Boulevard approach from two left-turn lanes, one through lane, and one right-turn lane with overlap to consist of three left-turn lanes, one through lane, and one right-turn lane with overlap. The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program. *[Identical to Mitigation Measure No. 24 and 34]*

#### **Rancho Road/Thousand Oaks Boulevard**

**Mitigation Measure No. 45** - Widen the eastbound Thousand Oaks Boulevard approach from one left-turn lane, two through lanes, and one right-turn lane with overlap to consist of one left-turn lane, three through lanes, and one right-turn lane with overlap. Widen the westbound Thousand Oaks Boulevard approach from two left-turn lanes, one through lane, and one shared through/right-turn lane to consist of two left-turn lanes, two through lanes, and one shared through/right-turn lane. The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program.

#### **Erbes Road/Hillcrest Drive**

**Mitigation Measure No. 46** – The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program. *[Identical to Mitigation Measure No. 3, 12, 19, 26 and 36]*

#### **Erbes Road/Thousand Oaks Boulevard**

**Mitigation Measure No. 47** – The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program. *[Identical to Mitigation Measure No. 27 and 37]*

#### **Conejo School Road/Thousand Oaks Boulevard**

**Mitigation Measure No. 48** – The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program. *[Identical to Mitigation Measure No. 4 and 13]*

#### **Skyline Drive/Thousand Oaks Boulevard**

**Mitigation Measure No. 49** – The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program. *[Identical to Mitigation Measure No. 6]*

## **Hampshire Road/Thousand Oaks Boulevard**

**Mitigation Measure No. 50** - Widen the northbound Hampshire Road approach from one left-turn lane, one shared through/left-turn lane, and one right-turn lane to consist of two left-turn lanes, one shared through/left-turn lane, and one right turn-lane. Widen the eastbound Thousand Oaks Boulevard approach from one left-turn lane, two through lanes, and one right turn-lane to consist of one left-turn lane, three through lanes, and one right-turn lane. Modify the Hampshire Road/Thousand Oaks Boulevard intersection traffic signal to include an eastbound Thousand Oaks Boulevard right-turn overlap, which will preclude u-turn movement on northbound to southbound Hampshire Road. The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program. *[Identical to Mitigation Measure No. 30 and 40]*

## **Duesenberg Drive/Thousand Oaks Boulevard**

**Mitigation Measure No. 51** – The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program. *[Identical to Mitigation Measure No. 8, 31, and 41]*

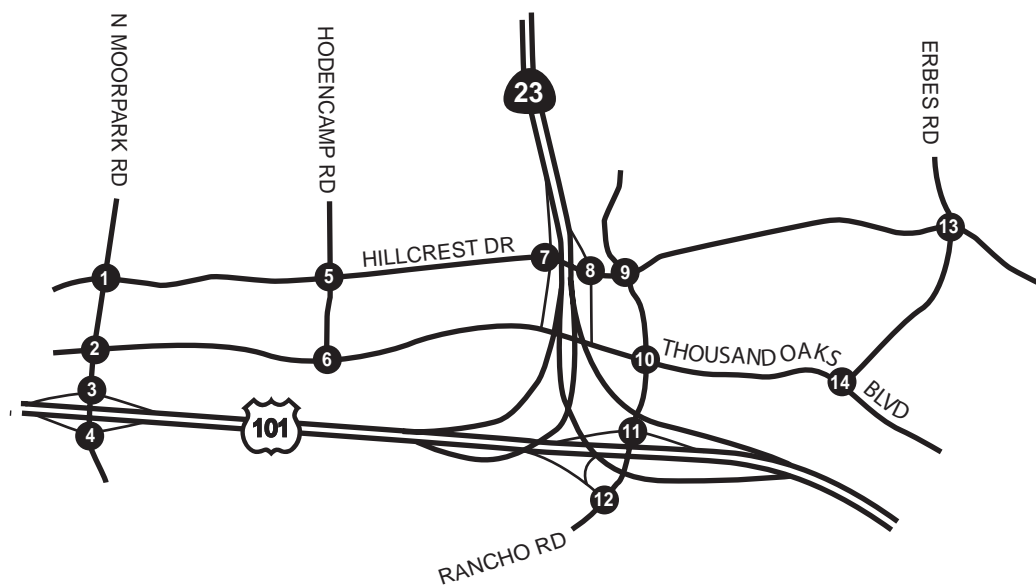
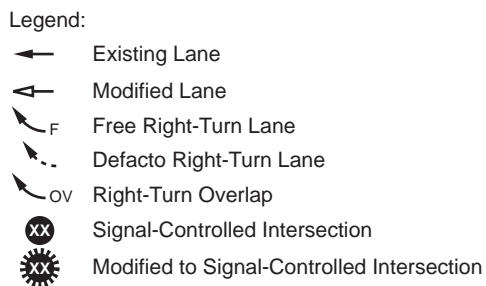
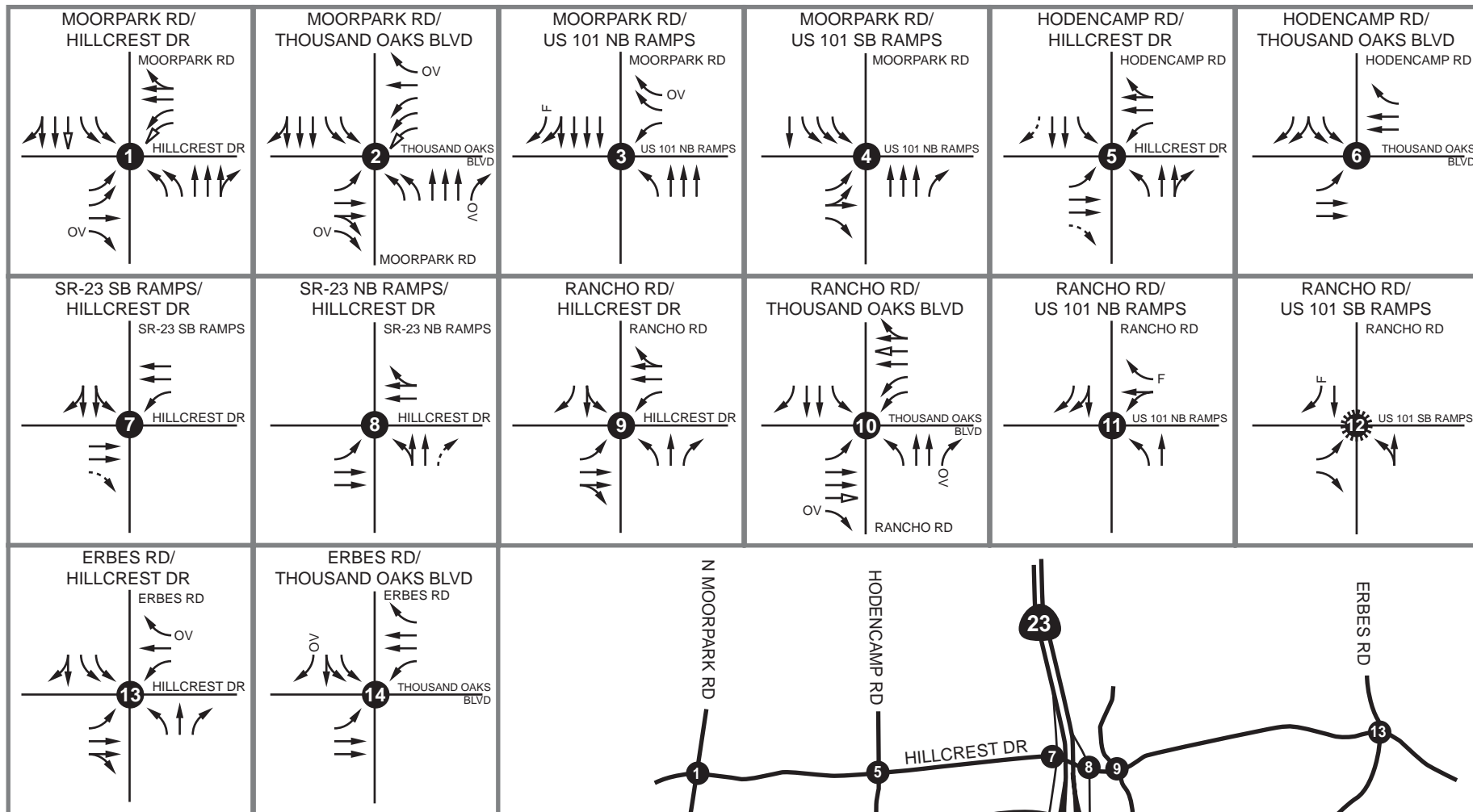
## **Westlake Boulevard/Thousand Oaks Boulevard**

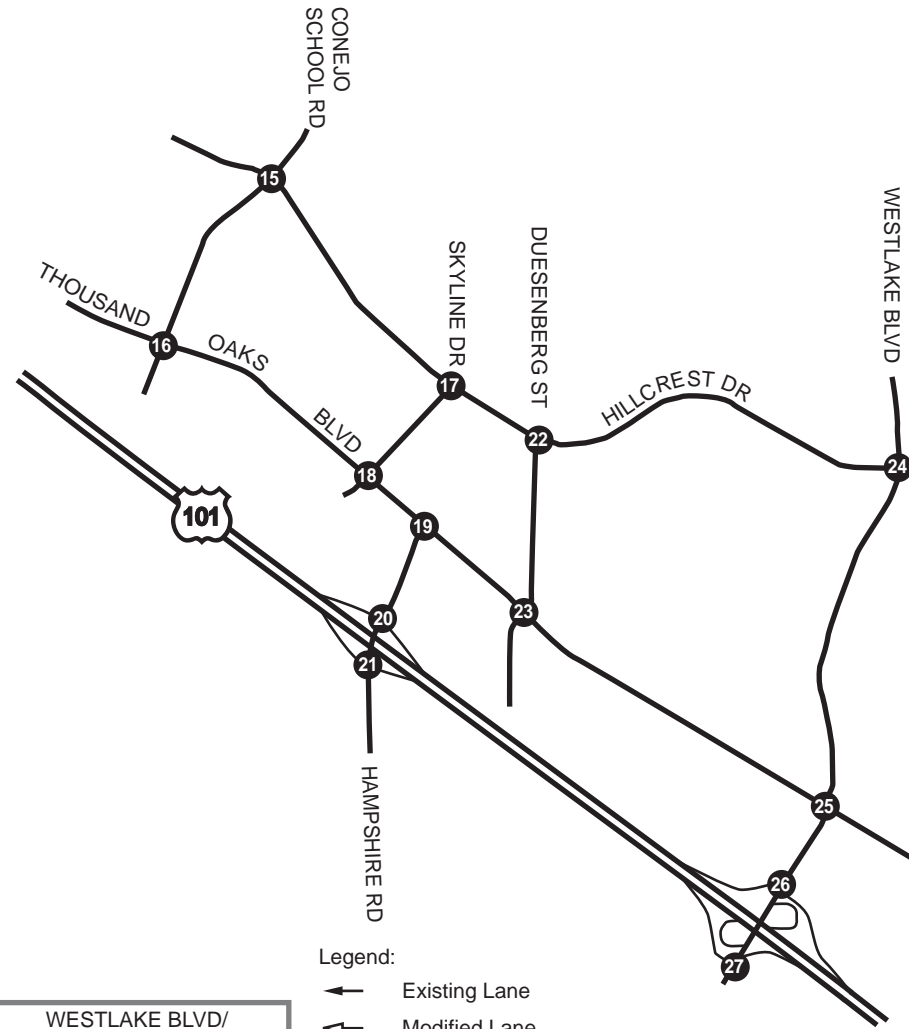
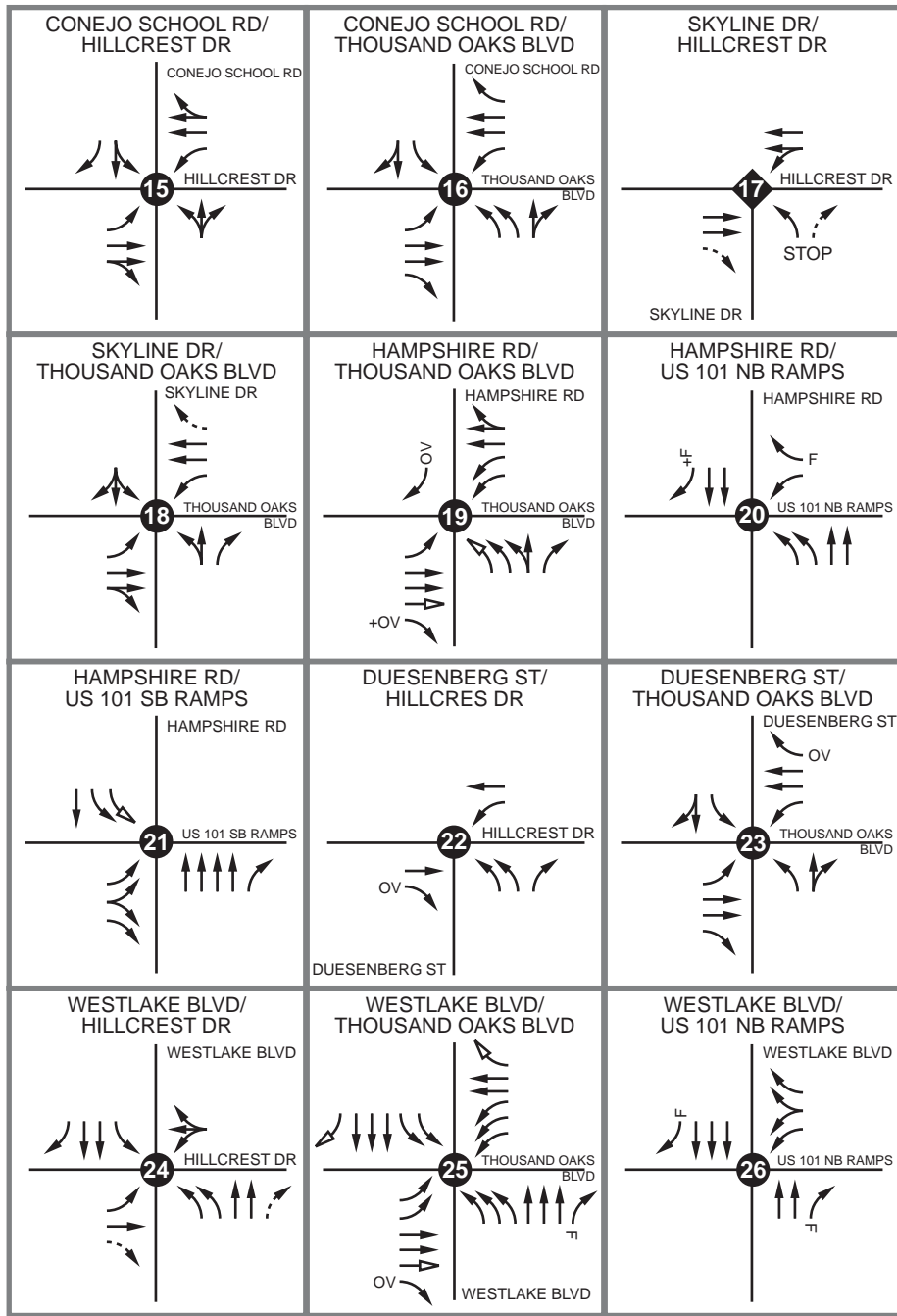
**Mitigation Measure No. 52** - Widen southbound Westlake Boulevard approach from two left-turn lanes, two through lanes, and one shared through/right-turn lane to consist of two left-turn lanes, three through lanes, and one right-turn lane. Widen eastbound Thousand Oaks Boulevard approach from two left-turn lanes, two through lanes, and one right-turn with overlap to consist of two left-turn lanes, three through lanes, and one right-turn with overlap. Widen westbound Thousand Oaks Boulevard approach from three left-turn lanes, one through lane, and one shared through/right-turn lane to consist of three left turn lanes, two through lanes, and one right-turn lane. The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program. *[Identical to Mitigation Measure No. 32 and 42]*

Exhibits 41 and 42 show the mitigated forecast General Plan land use buildout with proposed Reduced Intensity Alternative conditions study intersection geometry.

Table 17 shows the forecast LOS of the mitigated study intersections for forecast General Plan land use buildout plus proposed Reduced Intensity Alternative conditions; detailed LOS analysis sheets are contained in Appendix B.







- Legend:**
- ← Existing Lane
  - ↗ Modified Lane
  - ↗ F Free Right-Turn Lane
  - ↗ Defacto Right-Turn Lane
  - ↗ ov Right-Turn Overlap
  - +OV Add Right-Turn Overlap
  - +F Add Free Right-Turn Lane
  - xx Stop-Controlled Intersection
  - xx Signal-Controlled Intersection
  - STOP Stop-Controlled Approach

## Area 2 - Mitigated Forecast General Plan Land Use Buildout Conditions Plus Proposed Reduced Intensity Alternative Conditions Study Intersection Geometry

**Table 17**  
**Mitigated Forecast General Plan Land Use Buildout Plus**  
**Proposed Reduced Intensity Alternative Conditions Intersection Peak Hour LOS**

Study Intersection	Existing Conditions				Mitigated Forecast General Plan Land Use Buildout Plus Proposed Reduced Intensity Alternative Conditions				Significant Impact?
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		
	V/C (Delay)	LOS	V/C (Delay)	LOS	V/C	LOS	V/C	LOS	
1 – Moorpark Rd/Hillcrest Dr	0.41	A	0.61	B	0.42	A	0.78	C	No
2 – Moorpark Rd/Thousand Oaks Blvd	0.34	A	0.53	A	0.51	A	0.76	C	No
10 – Rancho Rd/Thousand Oaks Blvd	0.41	A	0.51	A	0.54	A	0.78	C	No
13 – Erbes Rd/Hillcrest Dr	0.54	A	0.57	A	0.69	B	0.78	C	No
14 – Erbes Rd/Thousand Oaks Blvd	0.33	A	0.42	A	0.48	A	0.74	C	No
16 – Conejo School Rd/Thousand Oaks Blvd	0.34	A	0.45	A	0.49	A	0.76	C	No
18 – Skyline Dr/Thousand Oaks Blvd	0.37	A	0.52	A	0.50	A	0.77	C	No
19 – Hampshire Rd/Thousand Oaks Blvd	0.76	C	0.78	C	0.51	A	0.73	C	No
23 – Duesenberg Dr/Thousand Oaks Blvd	0.36	A	0.57	A	0.50	A	0.76	C	No
25 – Westlake Blvd/Thousand Oaks Blvd	0.47	A	0.63	B	0.51	A	0.76	C	No

**Note:** Deficient intersection operation shown in **bold**.

As shown in Table 17, assuming implementation of the recommended mitigation measures, the ten (10) study intersections are forecast to operate at an acceptable LOS (LOS C or better) for forecast General Plan land use buildout plus proposed Reducing Intensity Alternative conditions.

## STATE HIGHWAY INTERSECTION ANALYSIS

This section analyzes forecast traffic conditions for the analysis scenarios at the following ten State Highway study intersections identified by Caltrans staff for analysis in this study:

- Moorpark Road/US 101 Northbound Ramps;
- Moorpark Road/US 101 Southbound Ramps;
- Route 23 Southbound Off-Ramp/Hillcrest Drive;
- Route 23 Northbound On-Ramp/Hillcrest Drive;
- Rancho Road/US 101 Northbound Ramps;
- Rancho Road/US 101 Southbound Ramps;
- Hampshire Road/US 101 Northbound Ramps;
- Hampshire Road/US 101 Southbound Ramps;
- Westlake Boulevard/US 101 Northbound Ramps; and
- Westlake Boulevard/US 101 Southbound Ramps.

### State Highway Intersection Analysis Methodology

In accordance with Caltrans direction, this analysis utilizes the HCM intersection analysis methodology to analyze the LOS operation of the State Highway study intersections. The HCM analysis methodology describes the operation of an intersection using a range of LOS from LOS A (free-flow conditions) to LOS F (severely congested conditions), based on the corresponding stopped delay experienced per vehicle as shown in Table 18.

**Table 18**  
**State Highway Intersection LOS & Delay Ranges**

LOS	Delay (seconds/vehicle)	
	Signalized Intersections	Unsignalized Intersections
A	$\leq 10.0$	$\leq 10.0$
B	$> 10.0$ to $\leq 20.0$	$> 10.0$ to $\leq 15.0$
C	$> 20.0$ to $\leq 35.0$	$> 15.0$ to $\leq 25.0$
D	$> 35.0$ to $\leq 55.0$	$> 25.0$ to $\leq 35.0$
E	$> 55.0$ to $\leq 80.0$	$> 35.0$ to $\leq 50.0$
F	$> 80.0$	$> 50.0$

Source: 2000 Highway Capacity Manual

Level of service is based on the average stopped delay per vehicle for all movements of signalized intersections and all-way stop-controlled intersections; for one-way or two-way stop-controlled intersections, LOS is based on the worst stop-controlled approach. The Caltrans goal for peak hour intersection operation is LOS C or better.

### State Highway Intersection Thresholds of Significance

While Caltrans has not established traffic thresholds of significance, this traffic analysis utilizes the following traffic thresholds of significance:

- A significant project impact occurs at a State Highway study intersection when the addition of project-generated trips causes the peak hour level of service of the study intersection to change from acceptable operation (LOS A, B, or C) to deficient operation (LOS D, E or F).

### Existing Conditions State Highway Intersection Peak Hour Level of Service

Table 19 summarizes existing conditions a.m. peak hour and p.m. peak hour LOS of the State Highway study intersections; detailed LOS analysis sheets are contained in Appendix C.

**Table 19**  
**Existing Conditions**  
**AM & PM Peak Hour State Highway Intersection LOS**

Study Intersection	AM Peak Hour		PM Peak Hour	
	Delay	LOS	Delay	LOS
3 – Moorpark Rd/US 101 NB Ramps	23.5	C	26.3	C
4 – Moorpark Rd/US 101 SB Ramps	24.3	C	26.7	C
7 – Rt 23 SB Off-Ramp/Hillcrest Dr	17.8	B	18.5	B
8 – Rt 23 NB On-Ramp/Hillcrest Dr	17.6	B	25.0	C
11 – Rancho Rd/US 101 NB Ramps	8.5	A	9.1	A
12 – Rancho Rd/US 101 SB Ramps	14.6	B	16.5	C
20 – Hampshire Rd/US 101 NB Ramps	19.6	B	25.5	C
21 – Hampshire Rd/US 101 SB Ramps	28.1	C	28.6	C
26 – Westlake Blvd/US 101 NB Ramps	18.0	B	18.3	B
27 – Westlake Blvd/US 101 SB Ramps	25.3	C	25.6	C

**Note:** Delay Shown in seconds. WB = Westbound. EB = Eastbound.

As shown in Table 19, the State Highway study intersections are currently operating at an acceptable LOS (LOS C or better) according to Caltrans performance criteria.

### Forecast Existing Plus Proposed Specific Plan Conditions State Highway Intersection Level of Service Assuming Existing Study Intersection Geometry/Control

Table 20 summarizes forecast existing plus proposed Specific Plan conditions a.m. and p.m. peak hour LOS of the State Highway study intersections assuming existing study intersection geometry/control; detailed LOS analysis sheets are contained in Appendix B.

**Table 20**  
**Forecast Existing Plus Proposed Specific Plan Conditions**  
**State Highway Intersection Peak Hour LOS Assuming Existing Study Intersection Geometry/Control**

Study Intersection	Existing Conditions				Forecast Existing Plus Proposed Specific Plan Conditions				Significant Impact?
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	
3 – Moorpark Rd/US 101 NB Ramps	23.5	C	26.3	C	23.2	C	26.4	C	No
4 – Moorpark Rd/US 101 SB Ramps	24.3	C	26.7	C	24.5	C	27.5	C	No
7 – Rt 23 SB Off-Ramp/Hillcrest Dr	17.8	B	18.5	B	17.9	B	20.0	B	No
8 – Rt 23 NB On-Ramp/Hillcrest Dr	17.6	B	25.0	C	18.6	B	28.3	C	No
11 – Rancho Rd/US 101 NB Ramps	8.5	A	9.1	A	7.7	A	7.7	A	No
12 – Rancho Rd/US 101 SB Ramps	14.6	B	16.5	C	20.8	C	49.9	E	Yes
20 – Hampshire Rd/US 101 NB Ramps	19.6	B	25.5	C	18.7	C	30.6	C	No
21 – Hampshire Rd/US 101 SB Ramps	28.1	C	28.6	C	30.2	C	34.3	C	No
26 – Westlake Blvd/US 101 NB Ramps	18.0	B	18.3	B	18.0	B	18.4	B	No
27 – Westlake Blvd/US 101 SB Ramps	25.3	C	25.6	C	25.4	C	25.6	C	No

**Note:** Delay Shown in seconds; WB = Westbound; EB = Eastbound; Deficient intersection operations shown in **bold**.

As shown in Table 20, the following State Highway study intersection is forecast to operate at a deficient LOS (LOS D or worse) for forecast existing plus proposed Specific Plan conditions assuming existing study intersection geometry/control, based on the performance criteria:

- Rancho Road/US 101 Southbound Ramps (p.m. peak hour only).

As also shown in Table 20, the following State Highway study intersection is forecast to be significantly impacted for forecast existing plus proposed Specific Plan conditions assuming existing study intersection geometry/control, based on the thresholds of significance:

- Rancho Road/US 101 Southbound Ramps (p.m. peak hour only).

#### **Forecast Existing Plus Proposed Specific Plan Conditions Recommended Mitigation Measures**

The following mitigation measures are recommended to maintain acceptable LOS at the State Highway study intersections for forecast existing plus proposed Specific Plan conditions:

##### **Rancho Road/US 101 Southbound Ramps**

**Mitigation Measure No. 53** - Signalization of the Rancho Road/US 101 Southbound Ramps intersection is recommended as mitigation to improve the intersection to an acceptable LOS (C or better).

Exhibits 11 and 12 show the mitigated study intersection geometry to achieve an acceptable LOS at the State Highway study intersections for forecast existing plus proposed Specific Plan conditions.

Table 21 shows the forecast LOS of the mitigated State Highway study intersection for forecast existing plus proposed Specific Plan conditions; detailed LOS analysis sheets are contained in Appendix B.

**Table 21**  
**Mitigated Forecast Existing Plus Proposed**  
**Specific Plan Conditions State Highway Intersection Peak Hour LOS**

Study Intersection	Forecast Existing Plus Proposed Specific Plan Conditions				Mitigate Forecast Existing Plus Proposed Specific Plan Conditions				Significant Impact?
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	
12 – Rancho Rd/US 101 SB Ramps	20.8	C	49.9	E	18.2	B	19.3	B	No

**Note:** Deficient intersection operation shown in **bold**.

As shown in Table 21, assuming implementation of the recommended mitigation measures, the State Highway study intersections are forecast to operate at an acceptable LOS (LOS C or better) for forecast existing plus proposed Specific Plan conditions.



**Forecast Existing Plus Proposed Downtown Alternative Conditions State Highway Intersection Level of Service Assuming Existing Study Intersection Geometry/Control**

Table 22 summarizes forecast existing plus proposed Downtown Alternative conditions a.m. and p.m. peak hour LOS of the State Highway study intersections assuming existing study intersection geometry/control; detailed LOS analysis sheets are contained in Appendix B.

**Table 22**  
**Forecast Existing Plus Proposed Downtown Alternative Conditions**  
**State Highway Intersection Peak Hour LOS Assuming Existing Study Intersection Geometry/Control**

Study Intersection	Existing Conditions				Forecast Existing Plus Proposed Downtown Alternative Conditions				Significant Impact?
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	
3 – Moorpark Rd/US 101 NB Ramps	23.5	C	26.3	C	23.2	C	26.4	C	No
4 – Moorpark Rd/US 101 SB Ramps	24.3	C	26.7	C	24.4	C	27.3	C	No
7 – Rt 23 SB Off-Ramp/Hillcrest Dr	17.8	B	18.5	B	18.1	B	20.0	C	No
8 – Rt 23 NB On-Ramp/Hillcrest Dr	17.6	B	25.0	C	18.2	B	28.1	C	No
11 – Rancho Rd/US 101 NB Ramps	8.5	A	9.1	A	7.6	A	7.7	A	No
12 – Rancho Rd/US 101 SB Ramps	14.6	B	16.5	C	<b>25.9</b>	<b>D</b>	<b>65.4</b>	<b>F</b>	<b>Yes</b>
20 – Hampshire Rd/US 101 NB Ramps	19.6	B	25.5	C	19.0	B	28.6	C	No
21 – Hampshire Rd/US 101 SB Ramps	28.1	C	28.6	C	30.0	C	33.7	C	No
26 – Westlake Blvd/US 101 NB Ramps	18.0	B	18.3	B	18.0	B	18.4	B	No
27 – Westlake Blvd/US 101 SB Ramps	25.3	C	25.6	C	25.4	C	25.6	C	No

**Note:** Delay Shown in seconds; WB = Westbound; EB = Eastbound; Deficient intersection operations shown in **bold**.

As shown in Table 22, the following State Highway study intersection is forecast to operate at a deficient LOS (LOS D or worse) for forecast existing plus proposed Downtown Alternative conditions assuming existing study intersection geometry/control, based on the performance criteria:

- Rancho Road/US 101 Southbound Ramps (both a.m. and p.m. peak hours).

As also shown in Table 22, the following State Highway study intersection is forecast to be significantly impacted for forecast existing plus proposed Downtown Alternative conditions assuming existing study intersection geometry/control, based on the thresholds of significance:

- Rancho Road/US 101 Southbound Ramps (both a.m. and p.m. peak hours).

#### **Forecast Existing Plus Proposed Downtown Alternative Conditions Recommended Mitigation Measures**

The following mitigation measures are recommended to maintain acceptable LOS at the State Highway study intersections for forecast existing plus proposed Downtown Alternative conditions:

##### **Rancho Road/US 101 Southbound Ramps**

**Mitigation Measure No. 54** - Signalization of the Rancho Road/US 101 Southbound Ramps intersection is recommended as mitigation to improve the intersection to an acceptable LOS (C or better).  
*[Identical to Mitigation Measure No. 53]*

Exhibits 16 and 17 show the mitigated study intersection geometry to achieve an acceptable LOS at the State Highway study intersections for forecast existing plus proposed Downtown Alternative conditions.

Table 23 shows the forecast LOS of the mitigated State Highway study intersection for forecast existing plus proposed Downtown Alternative conditions; detailed LOS analysis sheets are contained in Appendix B.

**Table 23**  
**Mitigated Forecast Existing Plus Proposed**  
**Downtown Alternative Conditions State Highway Intersection Peak Hour LOS**

Study Intersection	Forecast Existing Plus Proposed Specific Plan Conditions				Mitigate Forecast Existing Plus Proposed Downtown Alternative Conditions				Significant Impact?
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	
12 – Rancho Rd/US 101 SB Ramps	25.9	D	65.4	F	18.2	B	19.6	B	No

**Note:** Deficient intersection operation shown in **bold**.

As shown in Table 23, assuming implementation of the recommended mitigation measures, the State Highway study intersections are forecast to operate at an acceptable LOS (LOS C or better) for forecast existing plus proposed Downtown Alternative conditions.

**Forecast Existing Plus Proposed Reduced Intensity Alternative Conditions State Highway Intersection Level of Service Assuming Existing Study Intersection Geometry/Control**

Table 24 summarizes forecast existing plus proposed Reduced Intensity Alternative conditions a.m. and p.m. peak hour LOS of the State Highway study intersections assuming existing study intersection geometry/control; detailed LOS analysis sheets are contained in Appendix B.

**Table 24**  
**Forecast Existing Plus Proposed Reduced Intensity Alternative Conditions**  
**State Highway Intersection Peak Hour LOS Assuming Existing Study Intersection Geometry/Control**

Study Intersection	Existing Conditions				Forecast Existing Plus Proposed Reduced Intensity Alternative Conditions				Significant Impact?
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	
3 – Moorpark Rd/US 101 NB Ramps	23.5	C	26.3	C	23.2	C	26.4	C	No
4 – Moorpark Rd/US 101 SB Ramps	24.3	C	26.7	C	24.4	C	27.3	C	No
7 – Rt 23 SB Off-Ramp/Hillcrest Dr	17.8	B	18.5	B	17.9	B	19.8	B	No
8 – Rt 23 NB On-Ramp/Hillcrest Dr	17.6	B	25.0	C	18.4	B	27.9	C	No
11 – Rancho Rd/US 101 NB Ramps	8.5	A	9.1	A	7.8	A	7.6	A	No
12 – Rancho Rd/US 101 SB Ramps	14.6	B	16.5	C	19.2	C	44.6	E	Yes
20 – Hampshire Rd/US 101 NB Ramps	19.6	B	25.5	C	19.0	B	29.2	C	No
21 – Hampshire Rd/US 101 SB Ramps	28.1	C	28.6	C	29.7	C	33.3	C	No
26 – Westlake Blvd/US 101 NB Ramps	18.0	B	18.3	B	18.0	B	18.4	B	No
27 – Westlake Blvd/US 101 SB Ramps	25.3	C	25.6	C	25.4	C	25.6	C	No

**Note:** Delay Shown in seconds; WB = Westbound; EB = Eastbound; Deficient intersection operations shown in **bold**.

As shown in Table 24, the following State Highway study intersection is forecast to operate at a deficient LOS (LOS D or worse) for forecast existing plus proposed Reduced Intensity Alternative conditions assuming existing study intersection geometry/control, based on the performance criteria:

- Rancho Road/US 101 Southbound Ramps (p.m. peak hour only).

As also shown in Table 24, the following State Highway study intersection is forecast to be significantly impacted for forecast existing plus proposed Reduced Intensity Alternative conditions assuming existing study intersection geometry/control, based on the thresholds of significance:

- Rancho Road/US 101 Southbound Ramps (p.m. peak hour only).

#### **Forecast Existing Plus Proposed Reduced Intensity Alternative Conditions Recommended Mitigation Measures**

The following mitigation measures are recommended to maintain acceptable LOS at the State Highway study intersections for forecast existing plus proposed Reduced Intensity Alternative conditions:

##### **Rancho Road/US 101 Southbound Ramps**

**Mitigation Measure No. 55** - Signalization of the Rancho Road/US 101 Southbound Ramps intersection is recommended as mitigation to improve the intersection to an acceptable LOS (C or better).  
*[Identical to Mitigation Measure No. 53 and 54]*

Exhibits 21 and 22 show the mitigated study intersection geometry to achieve an acceptable LOS at the State Highway study intersections for forecast existing plus proposed Reduced Intensity Alternative conditions.

Table 25 shows the forecast LOS of the mitigated State Highway study intersection for forecast existing plus proposed Reduced Intensity Alternative conditions; detailed LOS analysis sheets are contained in Appendix B.

**Table 25**  
**Mitigated Forecast Existing Plus Proposed**  
**Reduced Intensity Alternative Conditions State Highway Intersection Peak Hour LOS**

Study Intersection	Forecast Existing Plus Proposed Specific Plan Conditions				Mitigate Forecast Existing Plus Proposed Reduced Intensity Alternative Conditions				Significant Impact?
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	
12 – Rancho Rd/US 101 SB Ramps	19.2	C	44.6	E	18.2	B	19.1	B	No

**Note:** Deficient intersection operation shown in **bold**.

As shown in Table 25, assuming implementation of the recommended mitigation measures, the State Highway study intersections are forecast to operate at an acceptable LOS (LOS C or better) for forecast existing plus proposed Reduced Intensity Alternative conditions.

**Forecast General Plan Land Use Buildout Conditions State Highway Intersection Level of Service Assuming Existing Study Intersection Geometry/Control**

Table 26 summarizes forecast General Plan land use buildout conditions a.m. and p.m. peak hour LOS of the study intersections assuming existing study intersection geometry/control; detailed LOS analysis sheets are contained in Appendix C.

**Table 26**  
**Forecast General Plan Land Use Buildout Conditions**  
**State Highway Intersection Peak Hour LOS Assuming Existing Study Intersection Geometry/Control**

Study Intersection	Existing Conditions				Forecast General Plan Land Use Buildout Conditions				Deficient?
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	
3 – Moorpark Rd/US 101 NB Ramps	23.5	C	26.3	C	24.3	C	28.6	C	No
4 – Moorpark Rd/US 101 SB Ramps	24.3	C	26.7	C	25.1	C	28.5	C	No
7 – Rt 23 SB Off-Ramp/Hillcrest Dr	17.8	B	18.5	B	18.9	B	19.6	B	No
8 – Rt 23 NB On-Ramp/Hillcrest Dr	17.6	B	25.0	C	17.3	B	26.3	C	No
11 – Rancho Rd/US 101 NB Ramps	8.5	A	9.1	A	8.0	A	7.8	A	No
12 – Rancho Rd/US 101 SB Ramps	14.6	B	16.5	C	18.5	C	34.3	D	Yes
20 – Hampshire Rd/US 101 NB Ramps	19.6	B	25.5	C	20.6	C	34.7	C	No
21 – Hampshire Rd/US 101 SB Ramps	28.1	C	28.6	C	33.0	C	31.9	C	No
26 – Westlake Blvd/US 101 NB Ramps	18.0	B	18.3	B	18.8	B	18.5	B	No
27 – Westlake Blvd/US 101 SB Ramps	25.3	C	25.6	C	25.7	C	24.9	C	No

**Note:** Delay Shown in seconds; WB = Westbound; EB = Eastbound; Deficient intersection operations shown in **bold**.

As shown in Table 26, the following State Highway study intersection is forecast to operate at a deficient LOS (LOS D or worse) for forecast General Plan land use buildout conditions assuming existing study intersection geometry/control, based on the performance criteria:

- Rancho Road/US 101 Southbound Ramps (p.m. peak hour only).

**Forecast General Plan Land Use Buildout Conditions Recommended State Highway Intersection Improvement**

The following intersection improvement is recommended to maintain acceptable LOS at the State Highway study intersection for forecast General Plan land use buildout conditions:

**Rancho Road/US 101 Southbound Ramps**

**Improvement No. 4** - Signalization of the Rancho Road/US 101 Southbound Ramps intersection is recommended as to improve the intersection to an acceptable LOS (C or better).

Exhibits 26 and 27 show the recommended improved study intersection improvement to achieve an acceptable LOS at the State Highway study intersection for forecast General Plan land use buildout conditions.



Table 27 shows the forecast LOS of the improved State Highway study intersection for forecast General Plan land use buildout conditions.

**Table 27**  
**Improved Forecast General Plan Land Use Buildout Conditions State Highway Intersection Peak Hour LOS**

Study Intersection	Forecast General Plan Land Use Buildout Conditions				Mitigated Forecast General Plan Land Use Buildout Conditions				Significant Impact?
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	
12 – Rancho Rd/US 101 SB Ramps	18.5	C	34.3	D	18.2	B	18.8	B	No

**Note:** Deficient intersection operation shown in **bold**.

As shown in Table 27, assuming implementation of the recommended improvement, the State Highway study intersection is forecast to operate at an acceptable LOS (LOS C or better) for forecast General Plan land use buildout conditions; detailed LOS analysis sheets are contained in Appendix B.

**Forecast General Plan Land Use Buildout Plus Proposed Specific Plan Conditions State Highway Intersection Level of Service Assuming Existing Study Intersection Geometry/Control**

Table 28 summarizes forecast General Plan land use buildout plus proposed Specific Plan conditions a.m. and p.m. peak hour LOS of the State Highway study intersections assuming existing study intersection geometry/control; detailed LOS analysis sheets are contained in Appendix B.

**Table 28**  
**Forecast General Plan Land Use Buildout Plus Proposed Specific Plan Conditions**  
**State Highway Intersection Peak Hour LOS Assuming Existing Study Intersection Geometry/Control**

Study Intersection	Existing Conditions				Forecast General Plan Land Use Buildout Plus Proposed Specific Plan Conditions				Significant Impact?
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	
3 – Moorpark Rd/US 101 NB Ramps	23.5	C	26.3	C	24.3	C	29.2	C	No
4 – Moorpark Rd/US 101 SB Ramps	24.3	C	26.7	C	25.2	C	29.3	C	No
7 – Rt 23 SB Off-Ramp/Hillcrest Dr	17.8	B	18.5	B	19.0	B	20.4	C	No
8 – Rt 23 NB On-Ramp/Hillcrest Dr	17.6	B	25.0	C	17.9	B	28.7	C	No
11 – Rancho Rd/US 101 NB Ramps	8.5	A	9.1	A	7.7	A	7.8	A	No
12 – Rancho Rd/US 101 SB Ramps	14.6	B	16.5	C	22.0	C	59.3	F	Yes
20 – Hampshire Rd/US 101 NB Ramps	19.6	B	25.5	C	20.2	C	45.9	D	Yes
21 – Hampshire Rd/US 101 SB Ramps	28.1	C	28.6	C	34.3	C	38.0	D	Yes
26 – Westlake Blvd/US 101 NB Ramps	18.0	B	18.3	B	18.8	B	18.6	B	No
27 – Westlake Blvd/US 101 SB Ramps	25.3	C	25.6	C	25.7	C	24.8	C	No

**Note:** Delay Shown in seconds; WB = Westbound; EB = Eastbound; Deficient intersection operations shown in **bold**.

As shown in Table 28, three (3) State Highway study intersections are forecast to operate at a deficient LOS (LOS D or worse) for forecast General Plan land use buildout plus proposed Specific Plan conditions assuming existing study intersection geometry/control, based on the performance criteria:

- Rancho Road/US 101 Southbound Ramps (p.m. peak hour only);
- Hampshire Road/US 101 Northbound Ramps (p.m. peak hour only); and
- Hampshire Road/US 101 Southbound Ramps (p.m. peak hour only).

As also shown in Table 28, three (3) State Highway study intersections are forecast to be significantly impacted for forecast General Plan land use buildout plus proposed Specific Plan conditions assuming existing study intersection geometry/control, based on the thresholds of significance:

- Rancho Road/US 101 Southbound Ramps (p.m. peak hour only);
- Hampshire Road/US 101 Northbound Ramps (p.m. peak hour only); and
- Hampshire Road/US 101 Southbound Ramps (p.m. peak hour only).

### **Forecast General Plan Land Use Buildout Plus Proposed Specific Plan Conditions Recommended Mitigation Measures**

The following mitigation measures are recommended to maintain acceptable LOS at the State Highway study intersections for forecast General Plan land use buildout plus proposed Specific Plan conditions:

#### **Rancho Road/US 101 Southbound Ramps**

**Mitigation Measure No. 56** - Signalization of the Rancho Road/US 101 Southbound Ramps intersection is recommended as mitigation to improve the intersection to an acceptable LOS (C or better). *[Identical to Mitigation Measure No. 53, 54, and 55]*

#### **Hampshire Road/US 101 Northbound Ramps**

**Mitigation Measure No. 57** - Widen the southbound Hampshire Road approach from two through lanes and one right-turn lane to consist of two through lanes and one free right-turn lane.

#### **Hampshire Road/US 101 Southbound Ramps**

**Mitigation Measure No. 58** - Widen the southbound Hampshire Road approach from one left-turn lane and one through lane to consist of two left-turn lanes and one through lane.

Exhibits 31 and 32 show the mitigated study intersection geometry to achieve an acceptable LOS at the State Highway study intersections for forecast General Plan land use buildout plus proposed Specific Plan conditions.

Table 29 shows the forecast LOS of the mitigated State Highway study intersections for forecast General Plan land use buildout plus proposed Specific Plan conditions; detailed LOS analysis sheets are contained in Appendix B.

**Table 29**  
**Mitigated Forecast General Plan Land Use Buildout**  
**Plus Proposed Specific Plan Conditions State Highway Intersection Peak Hour LOS**

Study Intersection	Forecast General Plan Land Use Buildout Plus Specific Plan Conditions				Mitigated Forecast General Plan Land Use Buildout Plus Specific Plan Conditions				Significant Impact?
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	
12 – Rancho Rd/US 101 SB Ramps	22.0	C	59.3	F	18.3	B	19.6	B	No
20 – Hampshire Rd/US 101 NB Ramps	20.2	C	45.9	D	19.8	B	25.6	C	No
21 – Hampshire Rd/US 101 SB Ramps	34.3	C	38.0	D	29.4	C	30.0	C	No

**Note:** Deficient intersection operation shown in **bold**.

As shown in Table 29, assuming implementation of the recommended mitigation measures, the State Highway study intersections are forecast to operate at an acceptable LOS (LOS C or better) for forecast General Plan land use buildout plus proposed Specific Plan conditions.

**Forecast General Plan Land Use Buildout Plus Proposed Downtown Alternative Conditions State Highway Intersection Level of Service Assuming Existing Study Intersection Geometry/Control**

Table 30 summarizes forecast General Plan land use buildout plus proposed Downtown Alternative conditions a.m. and p.m. peak hour LOS of the State Highway study intersections assuming existing study intersection geometry/control; detailed LOS analysis sheets are contained in Appendix B.

**Table 30**  
**Forecast General Plan Land Use Buildout Plus Proposed Downtown Alternative Conditions**  
**State Highway Intersection Peak Hour LOS Assuming Existing Study Intersection Geometry/Control**

Study Intersection	Existing Conditions				Forecast General Plan Land Use Buildout Plus Proposed Downtown Alternative Conditions				Significant Impact?
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	
3 – Moorpark Rd/US 101 NB Ramps	23.5	C	26.3	C	24.3	C	29.0	C	No
4 – Moorpark Rd/US 101 SB Ramps	24.3	C	26.7	C	25.2	C	28.9	C	No
7 – Rt 23 SB Off-Ramp/Hillcrest Dr	17.8	B	18.5	B	19.1	B	20.5	C	No
8 – Rt 23 NB On-Ramp/Hillcrest Dr	17.6	B	25.0	C	17.5	B	28.5	C	No
11 – Rancho Rd/US 101 NB Ramps	8.5	A	9.1	A	7.6	A	7.9	A	No
12 – Rancho Rd/US 101 SB Ramps	14.6	B	16.5	C	27.8	D	76.6	F	Yes
20 – Hampshire Rd/US 101 NB Ramps	19.6	B	25.5	C	20.3	C	42.0	D	Yes
21 – Hampshire Rd/US 101 SB Ramps	28.1	C	28.6	C	34.1	C	37.1	D	Yes
26 – Westlake Blvd/US 101 NB Ramps	18.0	B	18.3	B	18.8	B	18.5	B	No
27 – Westlake Blvd/US 101 SB Ramps	25.3	C	25.6	C	25.7	C	24.8	C	No

**Note:** Delay Shown in seconds; WB = Westbound; EB = Eastbound; Deficient intersection operations shown in **bold**.

As shown in Table 30, three (3) State Highway study intersections are forecast to operate at a deficient LOS (LOS D or worse) for forecast General Plan land use buildout plus proposed Downtown Alternative conditions assuming existing study intersection geometry/control, based on the performance criteria:

- Rancho Road/US 101 Southbound Ramps (both a.m. and p.m. peak hours);
- Hampshire Road/US 101 Northbound Ramps (p.m. peak hour only); and
- Hampshire Road/US 101 Southbound Ramps (p.m. peak hour only).

As also shown in Table 30, three (3) State Highway study intersections are forecast to be significantly impacted for forecast General Plan land use buildout plus proposed Downtown Alternative conditions assuming existing study intersection geometry/control, based on the thresholds of significance:

- Rancho Road/US 101 Southbound Ramps (both a.m. and p.m. peak hours);
- Hampshire Road/US 101 Northbound Ramps (p.m. peak hour only); and
- Hampshire Road/US 101 Southbound Ramps (p.m. peak hour only).

#### **Forecast General Plan Land Use Buildout Plus Proposed Downtown Alternative Conditions Recommended Mitigation Measures**

The following mitigation measures are recommended to maintain acceptable LOS at the State Highway study intersections for forecast General Plan land use buildout plus proposed Downtown Alternative conditions:

##### **Rancho Road/US 101 Southbound Ramps**

**Mitigation Measure No. 59** - Signalization of the Rancho Road/US 101 Southbound Ramps intersection is recommended as mitigation to improve the intersection to an acceptable LOS (C or better) *[Identical to Mitigation Measure No. 53, 54, 55, and 56]*.

##### **Hampshire Road/US 101 Northbound Ramps**

**Mitigation Measure No. 60** - Widen the southbound Hampshire Road approach from two through lanes and one right-turn lane to consist of two through lanes and one free right-turn lane *[Identical to Mitigation Measure No. 57]*.

##### **Hampshire Road/US 101 Southbound Ramps**

**Mitigation Measure No. 61** - Widen the southbound Hampshire Road approach from one left-turn lane and one through lane to consist of two left-turn lanes and one through lane *[Identical to Mitigation Measure No. 58]*.

Exhibits 36 and 37 show the mitigated study intersection geometry to achieve an acceptable LOS at the State Highway study intersections for forecast General Plan land use buildout plus proposed Downtown Alternative conditions.

Table 31 shows the forecast LOS of the mitigated State Highway study intersections for forecast General Plan land use buildout plus proposed Downtown Alternative conditions; detailed LOS analysis sheets are contained in Appendix B.

**Table 31**  
**Mitigated Forecast General Plan Land Use Buildout**  
**Plus Proposed Downtown Alternative Conditions State Highway Intersection Peak Hour LOS**

Study Intersection	Forecast General Plan Land Use Buildout Plus Plus Proposed Downtown Alternative Conditions				Mitigated Forecast General Plan Land Use Buildout Plus Proposed Downtown Alternative Conditions				Significant Impact?
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	
12 – Rancho Rd/US 101 SB Ramps	27.8	D	76.6	F	18.3	B	20.0	B	No
20 – Hampshire Rd/US 101 NB Ramps	20.3	C	42.0	D	19.9	B	25.5	C	No
21 – Hampshire Rd/US 101 SB Ramps	34.1	C	37.1	D	29.3	C	29.8	C	No

**Note:** Deficient intersection operation shown in **bold**.

As shown in Table 31, assuming implementation of the recommended mitigation measures, the State Highway study intersections are forecast to operate at an acceptable LOS (LOS C or better) for forecast General Plan land use buildout plus proposed Downtown Alternative conditions.

**Forecast General Plan Land Use Buildout Plus Proposed Reduced Intensity Alternative Conditions State Highway Intersection Level of Service Assuming Existing Study Intersection Geometry/Control**

Table 32 summarizes forecast General Plan land use buildout plus proposed Reduced Intensity Alternative conditions a.m. and p.m. peak hour LOS of the State Highway study intersections assuming existing study intersection geometry/control; detailed LOS analysis sheets are contained in Appendix B.

**Table 32**  
**Forecast General Plan Land Use Buildout Plus Proposed Reduced Intensity Alternative Conditions**  
**State Highway Intersection Peak Hour LOS Assuming Existing Study Intersection Geometry/Control**

Study Intersection	Existing Conditions				Forecast General Plan Land Use Buildout Plus Proposed Reduced Intensity Alternative Conditions				Significant Impact?
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	
3 – Moorpark Rd/US 101 NB Ramps	23.5	C	26.3	C	24.3	C	29.0	C	No
4 – Moorpark Rd/US 101 SB Ramps	24.3	C	26.7	C	25.2	C	29.0	C	No
7 – Rt 23 SB Off-Ramp/Hillcrest Dr	17.8	B	18.5	B	18.9	B	20.2	C	No
8 – Rt 23 NB On-Ramp/Hillcrest Dr	17.6	B	25.0	C	17.7	B	28.1	C	No
11 – Rancho Rd/US 101 NB Ramps	8.5	A	9.1	A	7.9	A	7.7	A	No
12 – Rancho Rd/US 101 SB Ramps	14.6	B	16.5	C	20.2	C	53.2	F	Yes
20 – Hampshire Rd/US 101 NB Ramps	19.6	B	25.5	C	20.3	C	43.2	D	Yes
21 – Hampshire Rd/US 101 SB Ramps	28.1	C	28.6	C	33.7	C	36.3	D	Yes
26 – Westlake Blvd/US 101 NB Ramps	18.0	B	18.3	B	18.8	B	18.5	B	No
27 – Westlake Blvd/US 101 SB Ramps	25.3	C	25.6	C	25.7	C	24.8	C	No

**Note:** Delay Shown in seconds; WB = Westbound; EB = Eastbound; Deficient intersection operations shown in **bold**.



As shown in Table 32, three (3) State Highway study intersections are forecast to operate at a deficient LOS (LOS D or worse) for forecast General Plan land use buildout plus proposed Reduced Intensity Alternative conditions assuming existing study intersection geometry/control, based on the performance criteria:

- Rancho Road/US 101 Southbound Ramps (p.m. peak hour only);
- Hampshire Road/US 101 Northbound Ramps (p.m. peak hour only); and
- Hampshire Road/US 101 Southbound Ramps (p.m. peak hour only).

As also shown in Table 32, three (3) State Highway study intersections are forecast to be significantly impacted for forecast General Plan land use buildout plus proposed Reduced Intensity Alternative conditions assuming existing study intersection geometry/control, based on the thresholds of significance:

- Rancho Road/US 101 Southbound Ramps (p.m. peak hour only);
- Hampshire Road/US 101 Northbound Ramps (p.m. peak hour only); and
- Hampshire Road/US 101 Southbound Ramps (p.m. peak hour only).

#### **Forecast General Plan Land Use Buildout Plus Proposed Reduced Intensity Alternative Conditions Recommended Mitigation Measures**

The following mitigation measures are recommended to maintain acceptable LOS at the State Highway study intersections for forecast General Plan land use buildout plus proposed Reduced Intensity Alternative conditions:

##### **Rancho Road/US 101 Southbound Ramps**

**Mitigation Measure No. 62** - Signalization of the Rancho Road/US 101 Southbound Ramps intersection is recommended as mitigation to improve the intersection to an acceptable LOS (C or better) *[Identical to Mitigation Measure No. 53, 54, 55, 56 and 59]*.

##### **Hampshire Road/US 101 Northbound Ramps**

**Mitigation Measure No. 63** - Widen the southbound Hampshire Road approach from two through lanes and one right-turn lane to consist of two through lanes and one free right-turn lane *[Identical to Mitigation Measure No. 57 and 60]*.

##### **Hampshire Road/US 101 Southbound Ramps**

**Mitigation Measure No. 64** - Widen the southbound Hampshire Road approach from one left-turn lane and one through lane to consist of two left-turn lanes and one through lane *[Identical to Mitigation Measure No. 58 and 61]*.

Exhibits 41 and 42 show the mitigated study intersection geometry to achieve an acceptable LOS at the State Highway study intersections for forecast General Plan land use buildout plus proposed Reduced Intensity Alternative conditions.

Table 33 shows the forecast LOS of the mitigated State Highway study intersections for forecast General Plan land use buildout plus proposed Reduced Intensity Alternative conditions; detailed LOS analysis sheets are contained in Appendix B.

**Table 33**  
**Mitigated Forecast General Plan Land Use Buildout Plus**  
**Proposed Reduced Intensity Alternative Conditions State Highway Intersection Peak Hour LOS**

Study Intersection	Forecast General Plan Land Use Buildout Plus Proposed Reduced Intensity Alternative Conditions				Mitigated Forecast General Plan Land Use Buildout Plus Proposed Reduced Intensity Alternative Conditions				Significant Impact?
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	
12 – Rancho Rd/US 101 SB Ramps	20.2	C	53.2	F	18.3	B	19.4	B	No
20 – Hampshire Rd/US 101 NB Ramps	20.3	C	43.2	D	19.9	B	25.2	C	No
21 – Hampshire Rd/US 101 SB Ramps	33.7	C	36.3	D	29.1	C	29.6	C	No

**Note:** Deficient intersection operation shown in **bold**.

As shown in Table 33, assuming implementation of the recommended mitigation measures, the State Highway study intersections are forecast to operate at an acceptable LOS (LOS C or better) for forecast General Plan land use buildout plus proposed Reduced Intensity Alternative conditions.

## **RECOMMENDED IMPROVEMENT SUMMARY**

The following intersection improvements are recommended to maintain acceptable LOS at the study intersections for forecast General Plan land use buildout conditions:

### **Moorpark Road/Hillcrest Drive**

**Improvement No. 1** - Widen southbound Moorpark Road approach from two left-turn lanes, one through lane, and one shared through/right-turn lane to consist of two left-turn lanes, two through lanes, and one shared through/right- turn lane.

### **Hampshire Road/Thousand Oaks Boulevard**

**Improvement No. 2** - Modify the Hampshire Road/Thousand Oaks Boulevard intersection traffic signal to include an eastbound Thousand Oaks Boulevard right-turn overlap, which will preclude u-turn movement on northbound to southbound Hampshire Road. Modify the Hampshire Road/Thousand Oaks Boulevard intersection traffic signal to include a northbound Hampshire Road right-turn overlap, which will preclude U-turn movement on westbound to eastbound Thousand Oaks Boulevard. Note: traffic signal equipment currently exists at the Hampshire Road/Thousand Oaks Boulevard intersection to implement a right-turn overlap for eastbound Thousand Oaks Boulevard and northbound Hampshire Road, but neither are being utilized.

### **Westlake Boulevard/Thousand Oaks Boulevard**

**Improvement No. 3** - Widen southbound Westlake Boulevard approach from two left-turn lanes, two through lanes, and one shared through/right-turn lane to consist of two left-turn lanes, three through lanes, and one right-turn lane.

The following intersection improvement is recommended to maintain acceptable LOS at the State Highway study intersection for forecast General Plan land use buildout conditions:

### **Rancho Road/US 101 Southbound Ramps**

**Improvement No. 4** - Signalization of the Rancho Road/US 101 Southbound Ramps intersection is recommended as to improve the intersection to an acceptable LOS (C or better).

## **RECOMMENDED MITIGATION MEASURES SUMMARY**

The following mitigation measures are recommended to maintain acceptable LOS at the study intersections for forecast existing plus proposed Specific Plan conditions:

### **Moorpark Road/Hillcrest Drive**

**Mitigation Measure No. 1** - The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program.

### **Rancho Road/Thousand Oaks Boulevard**

**Mitigation Measure No. 2** - Widen the eastbound Thousand Oaks Boulevard approach from one left-turn lane, two through lanes, and one right-turn lane with overlap to consist of one left-turn lane, three through lanes, and one right-turn lane with overlap. The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program.

### **Erbes Road/Hillcrest Drive**

**Mitigation Measure No. 3** – The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program.

### **Conejo School Road/Thousand Oaks Boulevard**

**Mitigation Measure No. 4** - The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program.

### **Skyline Drive/Hillcrest Drive**

**Mitigation Measure No. 5** – Signalization of the Skyline Drive/Hillcrest Drive intersection is recommended as mitigation to improve the intersection to an acceptable LOS (C or better).

### **Skyline Drive/Thousand Oaks Boulevard**

**Mitigation Measure No. 6** - The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program.

### **Hampshire Road/Thousand Oaks Boulevard**

**Mitigation Measure No. 7** - Modify the Hampshire Road/Thousand Oaks Boulevard intersection traffic signal to include a northbound Hampshire Road right-turn overlap, which will preclude u-turn movement on westbound to eastbound Thousand Oaks Boulevard. Widen the eastbound Thousand Oaks Boulevard approach from one left-turn lane, two through lanes, and one right turn-lane to consist of one left-turn lane, three through lanes, and one right-turn lane. Modify the Hampshire Road/Thousand Oaks Boulevard intersection traffic signal to include a eastbound Thousand Oaks Boulevard right-turn overlap, which will preclude u-turn movement on northbound to southbound Hampshire Road.

### **Duesenberg Drive/Thousand Oaks Boulevard**

**Mitigation Measure No. 8** – The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program.

### **Westlake Boulevard/Thousand Oaks Boulevard**

**Mitigation Measure No. 9** - Widen eastbound Thousand Oaks Boulevard approach from two left-turn lanes, two through lanes, and one right-turn with overlap to consist of two left-turn lanes, three through lanes, and one right-turn with overlap. The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program.

The following mitigation measures are recommended to maintain acceptable LOS at the study intersections for forecast existing plus proposed Downtown Alternative conditions:

### **Moorpark Road/Hillcrest Drive**

**Mitigation Measure No. 10** - The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program.  
*[Identical to Mitigation Measure No. 1]*

### **Rancho Road/Thousand Oaks Boulevard**

**Mitigation Measure No. 11** - Widen the eastbound Thousand Oaks Boulevard approach from one left-turn lane, two through lanes, and one right-turn lane with overlap to consist of one left-turn lane, three through lanes, and one right-turn lane with overlap. Widen the westbound Thousand Oaks Boulevard approach from two left-turn lanes, one through lane, and one shared through/right-turn lane to consist of two left-turn lanes, two through lanes, and one right-turn lane. The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program.

#### **Erbes Road/Hillcrest Drive**

**Mitigation Measure No. 12** – The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program.  
*[Identical to Mitigation Measure No. 3]*

#### **Conejo School Road/Thousand Oaks Boulevard**

**Mitigation Measure No. 13** - The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program.  
*[Identical to Mitigation Measure No. 4]*

#### **Skyline Drive/Hillcrest Drive**

**Mitigation Measure No. 14** – Signalization of the Skyline Drive/Hillcrest Drive intersection is recommended as mitigation to improve the intersection to an acceptable LOS (C or better).  
*[Identical to Mitigation Measure No. 5]*

#### **Hampshire Road/Thousand Oaks Boulevard**

**Mitigation Measure No. 15** - Modify the Hampshire Road/Thousand Oaks Boulevard intersection traffic signal to include a northbound Hampshire Road right-turn overlap, which will preclude u-turn movement on westbound to eastbound Thousand Oaks Boulevard. Widen the eastbound Thousand Oaks Boulevard approach from one left-turn lane, two through lanes, and one right turn-lane to consist of one left-turn lane, three through lanes, and one right-turn lane. Modify the Hampshire Road/Thousand Oaks Boulevard intersection traffic signal to include a eastbound Thousand Oaks Boulevard right-turn overlap, which will preclude u-turn movement on northbound to southbound Hampshire Road. The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program.

#### **Westlake Boulevard/Thousand Oaks Boulevard**

**Mitigation Measure No. 16** - Widen eastbound Thousand Oaks Boulevard approach from two left-turn lanes, two through lanes, and one right-turn with overlap to consist of two left-turn lanes, three through lanes, and one right-turn with overlap. The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program. *[Identical to Mitigation Measure No. 9]*

The following mitigation measures are recommended to maintain acceptable LOS at the study intersections for forecast existing plus proposed Reduced Intensity Alternative conditions:

#### **Moorpark Road/Hillcrest Drive**

**Mitigation Measure No. 17** - The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program.  
*[Identical to Mitigation Measure No. 1 and 10]*

#### **Rancho Road/Thousand Oaks Boulevard**

**Mitigation Measure No. 18** - Widen the eastbound Thousand Oaks Boulevard approach from one left-turn lane, two through lanes, and one right-turn lane with overlap to consist of one left-turn lane, three through lanes, and one right-turn lane with overlap. The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program. *[Identical to Mitigation Measure No. 2]*

#### **Erbes Road/Hillcrest Drive**

**Mitigation Measure No. 19** – The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program. *[Identical to Mitigation Measure No. 3 and 12]*

#### **Skyline Drive/Hillcrest Drive**

**Mitigation Measure No. 20** – Signalization of the Skyline Drive/Hillcrest Drive intersection is recommended as mitigation to improve the intersection to an acceptable LOS (C or better). *[Identical to Mitigation Measure No. 5 and 14]*

#### **Hampshire Road/Thousand Oaks Boulevard**

**Mitigation Measure No. 21** - Modify the Hampshire Road/Thousand Oaks Boulevard intersection traffic signal to include a northbound Hampshire Road right-turn overlap, which will preclude u-turn movement on westbound to eastbound Thousand Oaks Boulevard. Widen the eastbound Thousand Oaks Boulevard approach from one left-turn lane, two through lanes, and one right turn-lane to consist of one left-turn lane, three through lanes, and one right-turn lane. Modify the Hampshire Road/Thousand Oaks Boulevard intersection traffic signal to include a eastbound Thousand Oaks Boulevard right-turn overlap, which will preclude u-turn movement on northbound to southbound Hampshire Road. The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program. *[Identical to Mitigation Measure No. 15]*

#### **Westlake Boulevard/Thousand Oaks Boulevard**

**Mitigation Measure No. 22** - Widen eastbound Thousand Oaks Boulevard approach from two left-turn lanes, two through lanes, and one right-turn with overlap to consist of two left-turn lanes, three through lanes, and one right-turn with overlap. The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program. *[Identical to Mitigation Measure No. 9 and 16]*

The following mitigation measures are recommended to maintain acceptable LOS at the study intersections for forecast General Plan land use buildout plus proposed Specific Plan conditions:

#### **Moorpark Road/Hillcrest Drive**

**Mitigation Measure No. 23** - Widen southbound Moorpark Road approach from two left-turn lanes, one through lane, and one shared through/right-turn lane to consist of two left-turn lanes, two through lanes, and one shared through/right-lane. Widen westbound Hillcrest Drive approach from one left-turn lane, one through lane and one shared through/right-turn lane to consist of two left-turn lanes, one through lane and one shared through/right-turn. The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program.

#### **Moorpark Road/Thousand Oaks Boulevard**

**Mitigation Measure No. 24** - Widen westbound Thousand Oaks Boulevard approach from two left-turn lanes, one through lane, and one right-turn lane with overlap to consist of three left-turn lanes, one through lane, and one right-turn lane with overlap. The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program.

#### **Rancho Road/Thousand Oaks Boulevard**

**Mitigation Measure No. 25** - Widen the northbound Rancho Road approach from one left-turn lane, two through lanes, and one right-turn lane with overlap to consist of two left-turn lanes, two through lanes, and one free right-turn lane. Widen the eastbound Thousand Oaks Boulevard approach from one left-turn lane, two through lanes, and one right-turn lane with overlap to consist of one left-turn lane, three through lanes, and one right-turn lane with overlap. The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program.

#### **Erbes Road/Hillcrest Drive**

**Mitigation Measure No. 26** – The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program.  
*[Identical to Mitigation Measure No. 3, 12, and 19]*

#### **Erbes Road/Thousand Oaks Boulevard**

**Mitigation Measure No. 27** – The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program.



### **Conejo School Road/Thousand Oaks Boulevard**

**Mitigation Measure No. 28** – Re-stripe the westbound Thousand Oaks Boulevard approach from one left-turn lane, two through lanes, and one right-turn lane to consist of one left-turn lane, two through lanes, and one shared through/right-turn lane. *This assumes on-street parking is prohibited on the north side west of the intersection.* The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program.

### **Skyline Drive/Thousand Oaks Boulevard**

**Mitigation Measure No. 29** - Widen the eastbound Thousand Oaks Boulevard approach from one left-turn lane, one through lane, and one shared through/right-turn lane to consist of one left-turn lane, two through lanes, and one shared through/right-turn lane. The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program.

### **Hampshire Road/Thousand Oaks Boulevard**

**Mitigation Measure No. 30** - Widen the northbound Hampshire Road approach from one left-turn lane, one shared through/left-turn lane, and one right-turn lane to consist of two left-turn lanes, one shared through/left-turn lane, and one right turn-lane. Widen the eastbound Thousand Oaks Boulevard approach from one left-turn lane, two through lanes, and one right turn-lane to consist of one left-turn lane, three through lanes, and one right-turn lane. Modify the Hampshire Road/Thousand Oaks Boulevard intersection traffic signal to include an eastbound Thousand Oaks Boulevard right-turn overlap, which will preclude u-turn movement on northbound to southbound Hampshire Road.

### **Duesenberg Drive/Thousand Oaks Boulevard**

**Mitigation Measure No. 31** – The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program. *[Identical to Mitigation Measure No. 8]*

## **Westlake Boulevard/Thousand Oaks Boulevard**

**Mitigation Measure No. 32** - Widen southbound Westlake Boulevard approach from two left-turn lanes, two through lanes, and one shared through/right-turn lane to consist of two left-turn lanes, three through lanes, and one right-turn lane. Widen eastbound Thousand Oaks Boulevard approach from two left-turn lanes, two through lanes, and one right-turn with overlap to consist of two left-turn lanes, three through lanes, and one right-turn with overlap. Widen westbound Thousand Oaks Boulevard approach from three left-turn lanes, one through lane, and one shared through/right-turn lane to consist of three left turn lanes, two through lanes, and one right-turn lane. The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program.

The following mitigation measures are recommended to maintain acceptable LOS at the study intersections for forecast General Plan land use buildout plus proposed Downtown Alternative conditions:

## **Moorpark Road/Hillcrest Drive**

**Mitigation Measure No. 33** - Widen southbound Moorpark Road approach from two left-turn lanes, one through lane, and one shared through/right-turn lane to consist of two left-turn lanes, two through lanes, and one shared through/right-lane. Widen westbound Hillcrest Drive approach from one left-turn lane, one through lane and one shared through/right-turn lane to consist of two left-turn lanes, one through lane and one shared through/right-turn. The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program. *[Identical to Mitigation Measure No. 23]*

## **Moorpark Road/Thousand Oaks Boulevard**

**Mitigation Measure No. 34** - Widen westbound Thousand Oaks Boulevard approach from two left-turn lanes, one through lane, and one right-turn lane with overlap to consist of three left-turn lanes, one through lane, and one right-turn lane with overlap. The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program. *[Identical to Mitigation Measure No. 24]*

#### **Rancho Road/Thousand Oaks Boulevard**

**Mitigation Measure No. 35** - Widen the northbound Rancho Road approach from one left-turn lane, two through lanes, and one right-turn lane with overlap to consist of two left-turn lanes, two through lanes, and one free right-turn lane. Widen the eastbound Thousand Oaks Boulevard approach from one left-turn lane, two through lanes, and one right-turn lane with overlap to consist of one left-turn lane, three through lanes, and one right-turn lane with overlap. Widen the westbound Thousand Oaks Boulevard approach from two left-turn lanes, one through lane, and one shared through/right-turn lane to consist of two left-turn lanes, two through lanes, and one shared through/right-turn lane. The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program.

#### **Erbes Road/Hillcrest Drive**

**Mitigation Measure No. 36** – The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program. *[Identical to Mitigation Measure No. 3, 12, 19, and 26]*

#### **Erbes Road/Thousand Oaks Boulevard**

**Mitigation Measure No. 37** – The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program. *[Identical to Mitigation Measure No. 27]*

#### **Conejo School Road/Thousand Oaks Boulevard**

**Mitigation Measure No. 38** – Re-stripe the westbound Thousand Oaks Boulevard approach from one left-turn lane, two through lanes, and one right-turn lane to consist of one left-turn lane, two through lanes, and one shared through/right-turn lane. *This assumes on-street parking is prohibited on the north side west of the intersection.* The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program. *[Identical to Mitigation Measure No. 28]*

#### **Skyline Drive/Thousand Oaks Boulevard**

**Mitigation Measure No. 39** - Widen the eastbound Thousand Oaks Boulevard approach from one left-turn lane, one through lane, and one shared through/right-turn lane to consist of one left-turn lane, two through lanes, and one shared through/right-turn lane. The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program. *[Identical to Mitigation Measure No. 29]*

### **Hampshire Road/Thousand Oaks Boulevard**

**Mitigation Measure No. 40** – Widen the northbound Hampshire Road approach from one left-turn lane, one shared through/left-turn lane, and one right-turn lane to consist of two left-turn lanes, one shared through/left-turn lane, and one right turn-lane. Widen the eastbound Thousand Oaks Boulevard approach from one left-turn lane, two through lanes, and one right turn-lane to consist of one left-turn lane, three through lanes, and one right-turn lane. Modify the Hampshire Road/Thousand Oaks Boulevard intersection traffic signal to include an eastbound Thousand Oaks Boulevard right-turn overlap, which will preclude u-turn movement on northbound to southbound Hampshire Road. The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program.

### **Duesenberg Drive/Thousand Oaks Boulevard**

**Mitigation Measure No. 41** – The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program.  
*[Identical to Mitigation Measure No. 8 and 31]*

### **Westlake Boulevard/Thousand Oaks Boulevard**

**Mitigation Measure No. 42** - Widen southbound Westlake Boulevard approach from two left-turn lanes, two through lanes, and one shared through/right-turn lane to consist of two left-turn lanes, three through lanes, and one right-turn lane. Widen eastbound Thousand Oaks Boulevard approach from two left-turn lanes, two through lanes, and one right-turn with overlap to consist of two left-turn lanes, three through lanes, and one right-turn with overlap. Widen westbound Thousand Oaks Boulevard approach from three left-turn lanes, one through lane, and one shared through/right-turn lane to consist of three left turn lanes, two through lanes, and one right-turn lane. The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program. *[Identical to Mitigation Measure No. 32]*

The following mitigation measures are recommended to maintain acceptable LOS at the study intersections for forecast General Plan land use buildout plus proposed Reduced Intensity Alternative conditions:

#### **Moorpark Road/Hillcrest Drive**

**Mitigation Measure No. 43** - Widen southbound Moorpark Road approach from two left-turn lanes, one through lane, and one shared through/right-turn lane to consist of two left-turn lanes, two through lanes, and one shared through/right-lane. Widen westbound Hillcrest Drive approach from one left-turn lane, one through lane and one shared through/right-turn lane to consist of two left-turn lanes, one through lane and one shared through/right-turn. The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program. *[Identical to Mitigation Measure No. 23 and 33]*

#### **Moorpark Road/Thousand Oaks Boulevard**

**Mitigation Measure No. 44** - Widen westbound Thousand Oaks Boulevard approach from two left-turn lanes, one through lane, and one right-turn lane with overlap to consist of three left-turn lanes, one through lane, and one right-turn lane with overlap. The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program. *[Identical to Mitigation Measure No. 24 and 34]*

#### **Rancho Road/Thousand Oaks Boulevard**

**Mitigation Measure No. 45** - Widen the eastbound Thousand Oaks Boulevard approach from one left-turn lane, two through lanes, and one right-turn lane with overlap to consist of one left-turn lane, three through lanes, and one right-turn lane with overlap. Widen the westbound Thousand Oaks Boulevard approach from two left-turn lanes, one through lane, and one shared through/right-turn lane to consist of two left-turn lanes, two through lanes, and one shared through/right-turn lane. The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program.

#### **Erbes Road/Hillcrest Drive**

**Mitigation Measure No. 46** – The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program. *[Identical to Mitigation Measure No. 3, 12, 19, 26 and 36]*

#### **Erbes Road/Thousand Oaks Boulevard**

**Mitigation Measure No. 47** – The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program. *[Identical to Mitigation Measure No. 27 and 37]*

### **Conejo School Road/Thousand Oaks Boulevard**

**Mitigation Measure No. 48** – The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program. *[Identical to Mitigation Measure No. 4 and 13]*

### **Skyline Drive/Thousand Oaks Boulevard**

**Mitigation Measure No. 49** – The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program. *[Identical to Mitigation Measure No. 6]*

### **Hampshire Road/Thousand Oaks Boulevard**

**Mitigation Measure No. 50** - Widen the northbound Hampshire Road approach from one left-turn lane, one shared through/left-turn lane, and one right-turn lane to consist of two left-turn lanes, one shared through/left-turn lane, and one right turn-lane. Widen the eastbound Thousand Oaks Boulevard approach from one left-turn lane, two through lanes, and one right turn-lane to consist of one left-turn lane, three through lanes, and one right-turn lane. Modify the Hampshire Road/Thousand Oaks Boulevard intersection traffic signal to include an eastbound Thousand Oaks Boulevard right-turn overlap, which will preclude u-turn movement on northbound to southbound Hampshire Road. The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program. *[Identical to Mitigation Measure No. 30 and 40]*

### **Duesenberg Drive/Thousand Oaks Boulevard**

**Mitigation Measure No. 51** – The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program. *[Identical to Mitigation Measure No. 8, 31, and 41]*

### **Westlake Boulevard/Thousand Oaks Boulevard**

**Mitigation Measure No. 52** - Widen southbound Westlake Boulevard approach from two left-turn lanes, two through lanes, and one shared through/right-turn lane to consist of two left-turn lanes, three through lanes, and one right-turn lane. Widen eastbound Thousand Oaks Boulevard approach from two left-turn lanes, two through lanes, and one right-turn with overlap to consist of two left-turn lanes, three through lanes, and one right-turn with overlap. Widen westbound Thousand Oaks Boulevard approach from three left-turn lanes, one through lane, and one shared through/right-turn lane to consist of three left turn lanes, two through lanes, and one right-turn lane. The project applicant shall contribute payment into the Thousand Oaks Road Improvement Fee Program. *[Identical to Mitigation Measure No. 32 and 42]*

The following mitigation measures are recommended to maintain acceptable LOS at the State Highway study intersections for forecast existing plus proposed Specific Plan conditions:

#### **Rancho Road/US 101 Southbound Ramps**

**Mitigation Measure No. 53** - Signalization of the Rancho Road/US 101 Southbound Ramps intersection is recommended as mitigation to improve the intersection to an acceptable LOS (C or better).

The following mitigation measures are recommended to maintain acceptable LOS at the State Highway study intersections for forecast existing plus proposed Downtown Alternative conditions:

#### **Rancho Road/US 101 Southbound Ramps**

**Mitigation Measure No. 54** - Signalization of the Rancho Road/US 101 Southbound Ramps intersection is recommended as mitigation to improve the intersection to an acceptable LOS (C or better).  
*[Identical to Mitigation Measure No. 53]*

The following mitigation measures are recommended to maintain acceptable LOS at the State Highway study intersections for forecast existing plus proposed Reduced Intensity Alternative conditions:

#### **Rancho Road/US 101 Southbound Ramps**

**Mitigation Measure No. 55** - Signalization of the Rancho Road/US 101 Southbound Ramps intersection is recommended as mitigation to improve the intersection to an acceptable LOS (C or better).  
*[Identical to Mitigation Measure No. 53 and 54]*

The following mitigation measures are recommended to maintain acceptable LOS at the State Highway study intersections for forecast General Plan land use buildout plus proposed Specific Plan conditions:

#### **Rancho Road/US 101 Southbound Ramps**

**Mitigation Measure No. 56** - Signalization of the Rancho Road/US 101 Southbound Ramps intersection is recommended as mitigation to improve the intersection to an acceptable LOS (C or better).  
*[Identical to Mitigation Measure No. 53, 54, and 55]*

#### **Hampshire Road/US 101 Northbound Ramps**

**Mitigation Measure No. 57** - Widen the southbound Hampshire Road approach from two through lanes and one right-turn lane to consist of two through lanes and one free right-turn lane.

### **Hampshire Road/US 101 Southbound Ramps**

**Mitigation Measure No. 58** - Widen the southbound Hampshire Road approach from one left-turn lane and one through lane to consist of two left-turn lanes and one through lane.

The following mitigation measures are recommended to maintain acceptable LOS at the State Highway study intersections for forecast General Plan land use buildout plus proposed Downtown Alternative conditions:

### **Rancho Road/US 101 Southbound Ramps**

**Mitigation Measure No. 59** - Signalization of the Rancho Road/US 101 Southbound Ramps intersection is recommended as mitigation to improve the intersection to an acceptable LOS (C or better) *[Identical to Mitigation Measure No. 53, 54, 55, and 56]*.

### **Hampshire Road/US 101 Northbound Ramps**

**Mitigation Measure No. 60** - Widen the southbound Hampshire Road approach from two through lanes and one right-turn lane to consist of two through lanes and one free right-turn lane *[Identical to Mitigation Measure No. 57]*.

### **Hampshire Road/US 101 Southbound Ramps**

**Mitigation Measure No. 61** - Widen the southbound Hampshire Road approach from one left-turn lane and one through lane to consist of two left-turn lanes and one through lane *[Identical to Mitigation Measure No. 58]*.

The following mitigation measures are recommended to maintain acceptable LOS at the State Highway study intersections for forecast General Plan land use buildout plus proposed Reduced Intensity Alternative conditions:

### **Rancho Road/US 101 Southbound Ramps**

**Mitigation Measure No. 62** - Signalization of the Rancho Road/US 101 Southbound Ramps intersection is recommended as mitigation to improve the intersection to an acceptable LOS (C or better) *[Identical to Mitigation Measure No. 53, 54, 55, 56 and 59]*.

### **Hampshire Road/US 101 Northbound Ramps**

**Mitigation Measure No. 63** - Widen the southbound Hampshire Road approach from two through lanes and one right-turn lane to consist of two through lanes and one free right-turn lane *[Identical to Mitigation Measure No. 57 and 60]*.



## Hampshire Road/US 101 Southbound Ramps

**Mitigation Measure No. 64** - Widen the southbound Hampshire Road approach from one left-turn lane and one through lane to consist of two left-turn lanes and one through lane *[Identical to Mitigation Measure No. 58 and 61]*.

## PROPOSED THOUSAND OAKS BOULEVARD SPECIFIC PLAN ROADWAY CROSS-SECTION

### Lane Widths

The proposed Thousand Oaks Boulevard Specific Plan would modify the existing roadway cross-section of Thousand Oaks Boulevard. Table 34 shows the existing lane widths compared to proposed lane widths contained in the proposed Thousand Oaks Boulevard Specific Plan.

**Table 34**  
**Existing & Proposed Thousand Oaks Boulevard Lane Widths**

Lane Type	Existing Lane Width (feet)	Proposed Specific Plan Lane Width (feet)
Turn Lane	14	12
Travel Lane	12	11
Parking Lane	8	8
Bike Lane	N/A	4

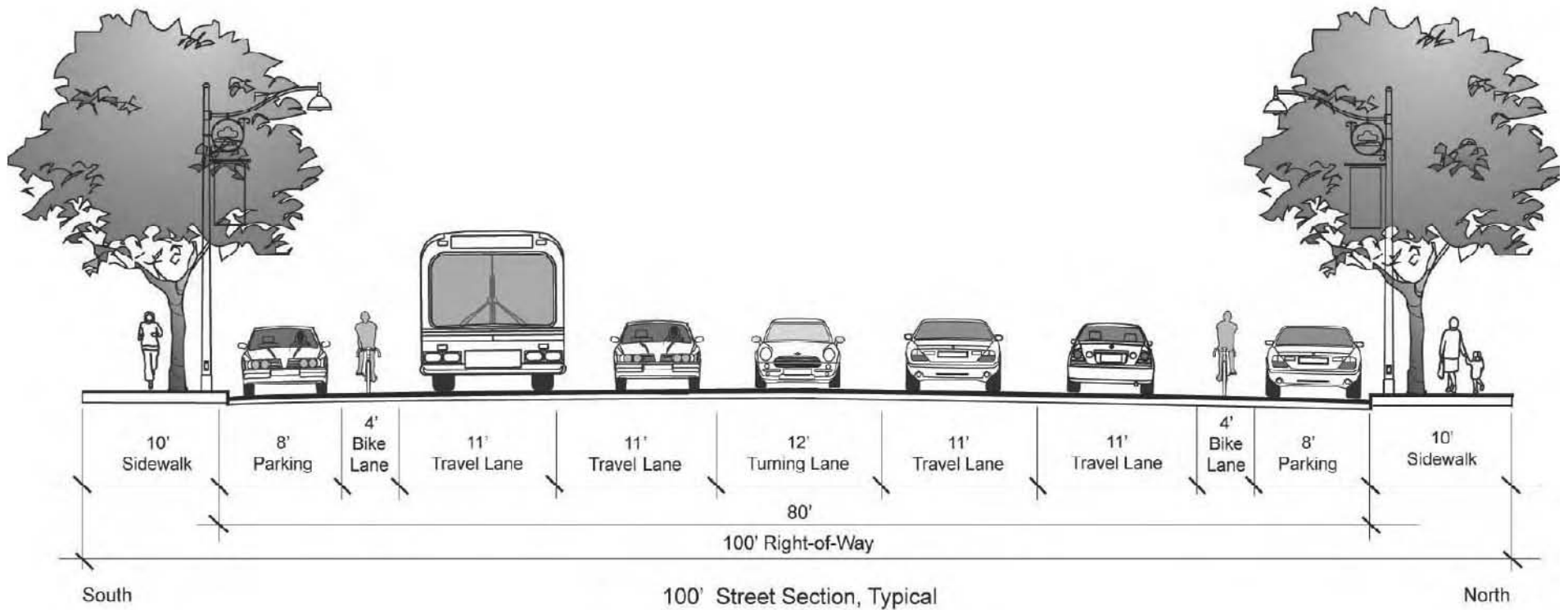
**Note:** N/A = Not Applicable.

As shown in Table 34, the proposed Thousand Oaks Boulevard Specific Plan would reduce the lane widths for turn lanes and travel lanes in order to create dedicated 4' wide bike lanes in each direction. As shown in Exhibit 43, the proposed narrower cross-section may be expected to reduce vehicle speeds somewhat, although not probably to the degree generally experienced in traditional downtown areas where travel lanes are generally 10 feet in width.

### Bike Sharrows

The City of Thousand Oaks currently has bike sharrows striped according to California Manual on Uniform Traffic Control Devices (MUTCD) standards on Thousand Oaks Boulevard located 11 feet from the curb within the vicinity of the proposed Thousand Oaks Boulevard Specific Plan location. The City is planning to move the bike sharrows 13 feet from the curb which will place the bicyclist more in the middle of the travel lane instead of on the right side of the travel lane. This should make bicyclists more visible to motorists and increase the separation between bicyclists and parked vehicles, thus reducing the chances of bicyclists colliding with opened doors of the parked vehicles, and would subsequently be expected to generally reduce vehicle speeds along Thousand Oaks Boulevard.

While the proposed Thousand Oaks Boulevard Specific Plan shows 4 foot bike lanes (MUTCD identifies a standard width of 5 foot bike lanes) next to the parking lane, the City's Bicycle Advisory Team (BAT) has a preference for bike sharrows where on-street parking exists. The BAT believes the proposed substandard 4 foot lanes could be a safety hazard since the lanes are narrower than the MUTCD 5 foot minimum.



Source: Proposed Thousand Oaks Boulevard  
Specific Plan, April 27, 2009.



Not to Scale

**RBF**

## Proposed Thousand Oaks Boulevard Cross-Section

## **Pedestrian Nodes**

The proposed Thousand Oaks Boulevard Specific Plan identifies pedestrian node locations which are planned to consist of the following:

- Removal of parallel parking to allow for curb extensions/bulbouts;
- Transit stops;
- Enlarged sidewalks;
- Enhanced pedestrian crossings;
- Specialty paving; and
- Accent plantings.

The proposed pedestrian nodes are located along Thousand Oaks Boulevard at the cross-streets of Moorpark Road, Hodencamp Road, SR-23 Southbound Off-Ramp, Erbes Road, Dallas Drive, Conejo School Road, Skyline Drive, Hampshire Road, and Duesenberg Drive. The nodes at Moorpark Road, Skyline Drive, Hampshire Road, and Duesenberg Drive may increase congestion along Thousand Oaks Boulevard, especially since the levels of service are forecast to be E or F with the proposed Thousand Oaks Boulevard Specific Plan. While the intersection of Moorpark Road/Thousand Oaks Boulevard is identified as a pedestrian node, consideration should be given as to whether this is the appropriate location for pedestrian activation due to the close proximity of the auto-centric Oaks Mall and freeway ramps resulting in heavy vehicular through and turning movements at this intersection; the gateway node designation seems appropriate for this location as the westerly boundary of the proposed Thousand Oaks Boulevard Specific Plan area.

If the proposed Thousand Oaks Boulevard Specific Plan is adopted and related development occurs on Thousand Oaks Boulevard, focused analysis should be done to determine whether curb extensions/bulbouts or the roadway cross-section can adequately accommodate forecast pedestrian, bicycle, and vehicle trips.

Additionally, if enhanced paving is adopted as referenced in the proposed Thousand Oaks Boulevard Specific Plan, the paving should be easily visible to create a non-confusing environment for pedestrians, bicyclists, and motorists. Issues may occur with enhanced paving due to difficulty maintaining appearance with normal maintenance and repair work. Typically installation of pavers is discouraged in close proximity to residential uses due to the resulting noise impact on residents.

## **Center Medians/Two-Way Left-Turn Lanes**

The proposed Thousand Oaks Boulevard Specific Plan shows a two-way left-turn lane along Thousand Oaks Boulevard within the study area with the exception of the Civic Arts Plaza segment where a raised center median currently exists. Additional raised center medians prohibiting left-turns may be necessary along the proposed Thousand Oaks Boulevard study area to reduce conflicts between opposing vehicles or where high left-turn queues are forecast. Such medians may also be beneficial to improving the aesthetic character of the Boulevard.

## **CONCLUSIONS**

Based on the thresholds of significance, significant traffic impacts are forecast to occur for the six project analysis scenarios. Mitigation measures have been identified to reduce all significant traffic impacts to a level considered less than significant.

## APPENDIX A

### Existing Count Data

Appendix A, Existing Count Data, is available for reference at the City of Thousand Oaks Community Development Department.

## APPENDIX B

### LOS Analysis Sheets

Appendix B, LOS Analysis Sheets, is available for reference at the City of Thousand Oaks Community Development Department.

## **APPENDIX C**


### **Buildout & Specific Plan Projects**

January 22, 2010

Beth –

Attached are hard copies of information for the preparation of the traffic study for the Thousand Oaks Boulevard Specific Plan. There are 2 sets of information here:

1. Estimated future development that would be built within the Specific Plan area itself, based on existing zoning, General Plan designations, and topographic constraints.
2. Related projects map and list for analysis of cumulative impacts. These are future development expected to be built outside the Specific Plan area, but which would generate traffic affecting roads and intersections that development of the Specific Plan will affect.



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John Prescott

cc: Haider Alawami  
Greg Smith  
Mark Towne  
Jon Shepherd  
Jeff Specter  
Russ Watson  
Bill Hatcher

January 20, 2010

Thousand Oaks Blvd. Specific Plan - Baseline Future Projects

**COMMERCIAL PROJECTS**

<u>Map. No.</u>	<u>Project</u>	<u>VCTC Land Use Type</u>	<u>Future Square Feet</u>
20	APN 670-182-10,11,20	Retail - Medium	11,000
22	APN 670-182-23	Retail - Medium	5,500
58	DP 92-695 (former)	Retail - Medium	137,000
327	APN 669-273-01	Retail - Medium	5,000
411	DP 2007-70736	Retail - Medium	11,900
413	APN 669-050-13	Office	34,500
425	APN 669-202-02	Office	2,200
430	APN 669-210-1,2,3,4,23,24	Office	40,641
451	APN 670-050-02 (rear)	Office	19,200
452	APN 670-050-02 (front)	Retail - Medium	15,600
456	APN 670-160-22	Retail - Medium	20,800
465	DP 2001-0769 (former)	Retail - Medium	30,000
466	APN 670-170-17	Retail - Medium	51,836
471	APN 670-182-06,19,21,22	Retail-Medium	23,500
514	APN 671-150-23	Retail - Low	8,900
522	APN 671-160-05	Retail - Medium	17,555
525	DP 06-70309 (APN 671-160-13)	Retail - Medium	10,000
533	APN 671-160-09,20	Retail - Medium	10,672
534	APN 671-171-13	Retail- - Medium	10,890
741	APN 670-031-24	Retail - High	1,600
752	APN 669-220-70	Office	1,962
753	APN 669-220-30	Office	2,091
762	AP 669-203-41	Office	36,100

Commercial Projects Denoted by Red Squares on the Map

**INDUSTRIAL PROJECTS**

<u>Map. No.</u>	<u>Project</u>	<u>VCTC Land Use Type</u>	<u>Specific Use</u>	<u>Future Square Feet</u>
517	APN 671-150-29	Industrial	Mini-storage	79,373
528	APN 671-160-19	Industrial		8,900

Industrial Projects Denoted by Blue Triangles on the Map



# Thousand Oaks Boulevard Specific Plan Area Baseline Future Development Projects



## Legend

- Commercial Projects
- ▲ Industrial Projects
- Specific Plan Area



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Miles

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Community Development Department  
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January 21, 2010

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January 15, 2010

Thousand Oaks Boulevard Specific Plan - Related Residential Projects Outside Specific Plan Boundary

<u>Map No.</u>	<u>Project</u>	<u>Type</u>	<u>Future Dwellings</u>
20	T 5458	COND	23
35	E/side Erbes- Hillcrest	SFD	6
40	Greenwich Village south	SFD	10
41	Greenwich Village north	SFD	5
55	T 5487	COND	36
80	RPD 08-70688 (Many Mansions)	<del>SFD</del> APT	60
101	LU 95-212 area	COND	30
146	Oak Highlands AP 676-124-all	SFD	5
156	Area Housing Authority project	APT	60
157	T 5556	COND	7
159	Redevelopment 11	COND	20
164	RPD 2003-542	APT	6
165	Redevelopment 4	APT	48
168	Redevelopment 5	APT	18
169	Redevelopment 6	APT	16
171	T 5469	COND	7
174	T 5468	COND	13
175	Redevelopment 9	COND	39
179	Rolling Oaks	SFD	9
227	RPD 96-509	APT	5
752	T 3532	SFD	7
781	T 4185, w/of Lakeview Canyon	SFD	7
791	T 4256- e/of Lakeview Canyon	SFD	7
835	Former T 4674	APT	25
882	T 5106	SFD	7
905	T.O. Tract - Rancho Hillcrest	SFD	8
907	T.O. Tract - Skyline area	SFD	39
915	APN 676-180-21	SFD	12
916	Vacant Land	APT	18
923	APN 670-260-01	SFD	9
924	APN 670-250-23	APT	8
927	T 5440	SFD	8
931	T 5325	SFD	20
941	T 5471	COND	22
965	T 5400	COND	38
978	T.O. Tract (por)	SFD	6
2000	MONIP (School Area 33)	APT	73

Residential Projects Denoted by Green Circles on Map

January 15, 2010

Thousand Oaks Boulevard Specific Plan - Related Commercial Projects Outside Specific Plan Boundary

<u>Map. No.</u>	<u>Project</u>	<u>VCTC Land Use Type</u>	<u>Future Sq. ft.</u>
73	Janss Marketplace - re-use portion	Retail-Medium	100,000
77	Oaks Mall Retail	Retail - Medium	187,149
86	DP 97-742	Office	36,742
87	Specific Plan 17	Office	216,000
176	DP 91-688 (former Circuit City)	Retail-High	23,800
177	APN 663-093-21,22 (Zada)	Office	24,394
483	APN 670-290-09	Retail - Medium	9,474
534	APN 671-171-13	Retail - Medium	10,890
564	The Lakes (CAP E/side)	Retail - High	50,000
581	K-Mart re-use	Retail - Medium	118,655
649	RPD 76-155 mod 17	Office	18,080
672	SUP 77-0348	Office	50,244
725	DP 71-0187/PAR 07-70473	Retail - Medium	6,000
784	DP 99-759	Office	225,790
785	APN 525-052-52,54,59 (e/end Oaks)	Retail - Medium	32,000

Commercial Projects Denoted by Red Square on Map

Thousand Oaks Boulevard Specific Plan - Related Hotel Projects Outside Specific Plan Boundary

<u>Map. No.</u>	<u>Project</u>	<u>VCTC Land Use Type</u>	<u>Future Rooms</u>
1010	Westlake Hyatt Expansion	Hotel/motel	68

Hotel Project Denoted by Orange Diamond on Map

January 15, 2010

Thousand Oaks Boulevard Specific Plan - Related Industrial Projects Outside Specific Plan Boundary

<u>Map No.</u>	<u>Project</u>	<u>Type</u>	<u>Specific Type</u>	<u>Future Sq. Ft.</u>
493	APN 671-060-12	Industrial		25,700
517	APN 671-150-29	Industrial	Mini-storage	79,373
528	APN 671-160-19	Industrial		8,900
584	DP 1967-0011	Industrial		22,100
637	SUP 1998-0974 (former)	Industrial		21,300
684	APN 687-012-11	Industrial		47,916
710	Jafra	Industrial		16,800

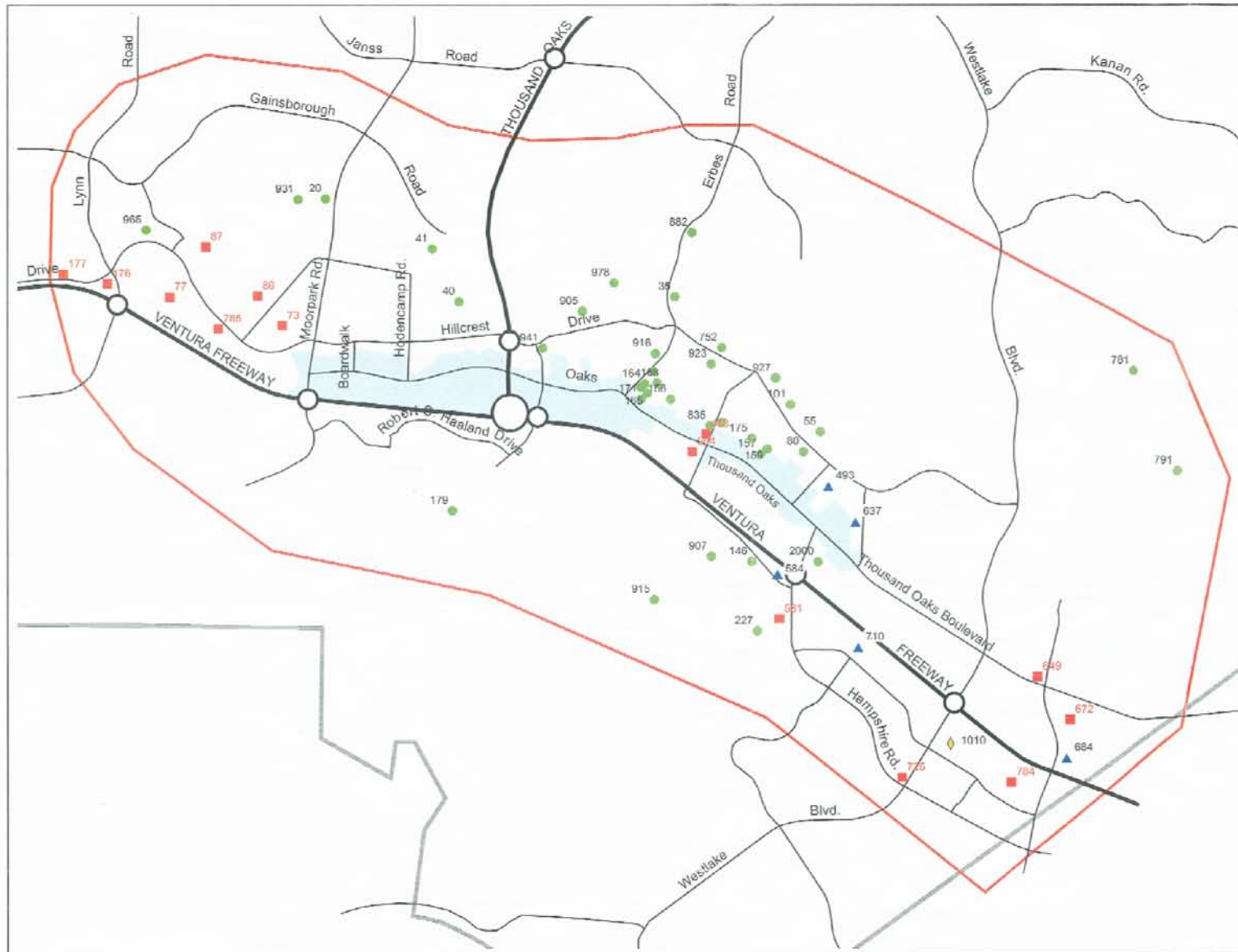
Industrial Projects Denoted by Blue Triangles on the Map

## Related Projects Map

### Thousand Oaks Blvd. Specific Plan

#### Legend

- Residential Projects
- Commercial Projects
- ◆ Hotels and Motels
- ▲ Industrial Projects
- Specific Plan Area



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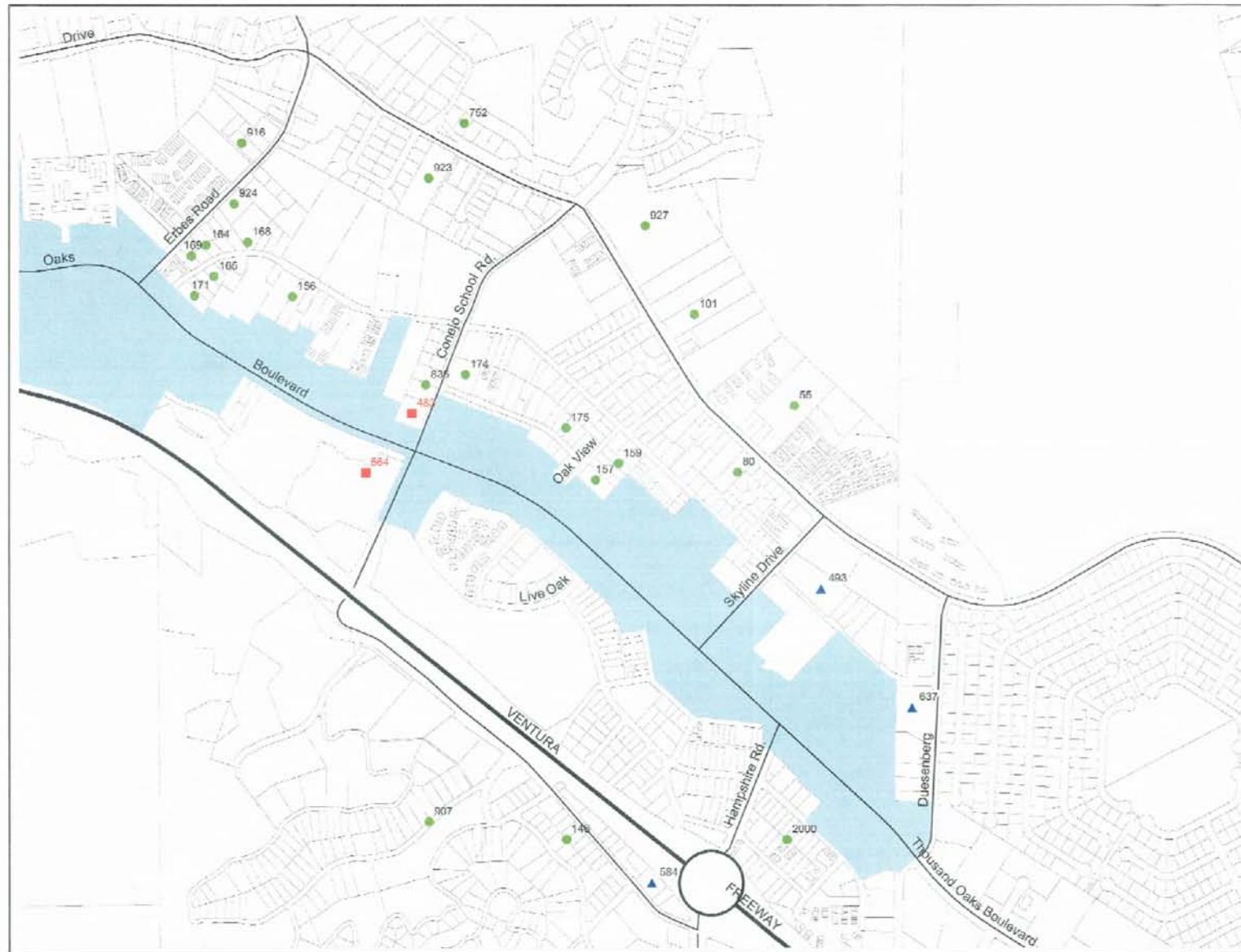
March 3, 2010



## Related Projects Map

### Thousand Oaks Blvd. Specific Plan

#### Detail of Central Area



#### Legend

- Residential Projects
- Commercial Projects
- ◆ Hotels and Motels
- ▲ Industrial Projects
- Specific Plan Boundary

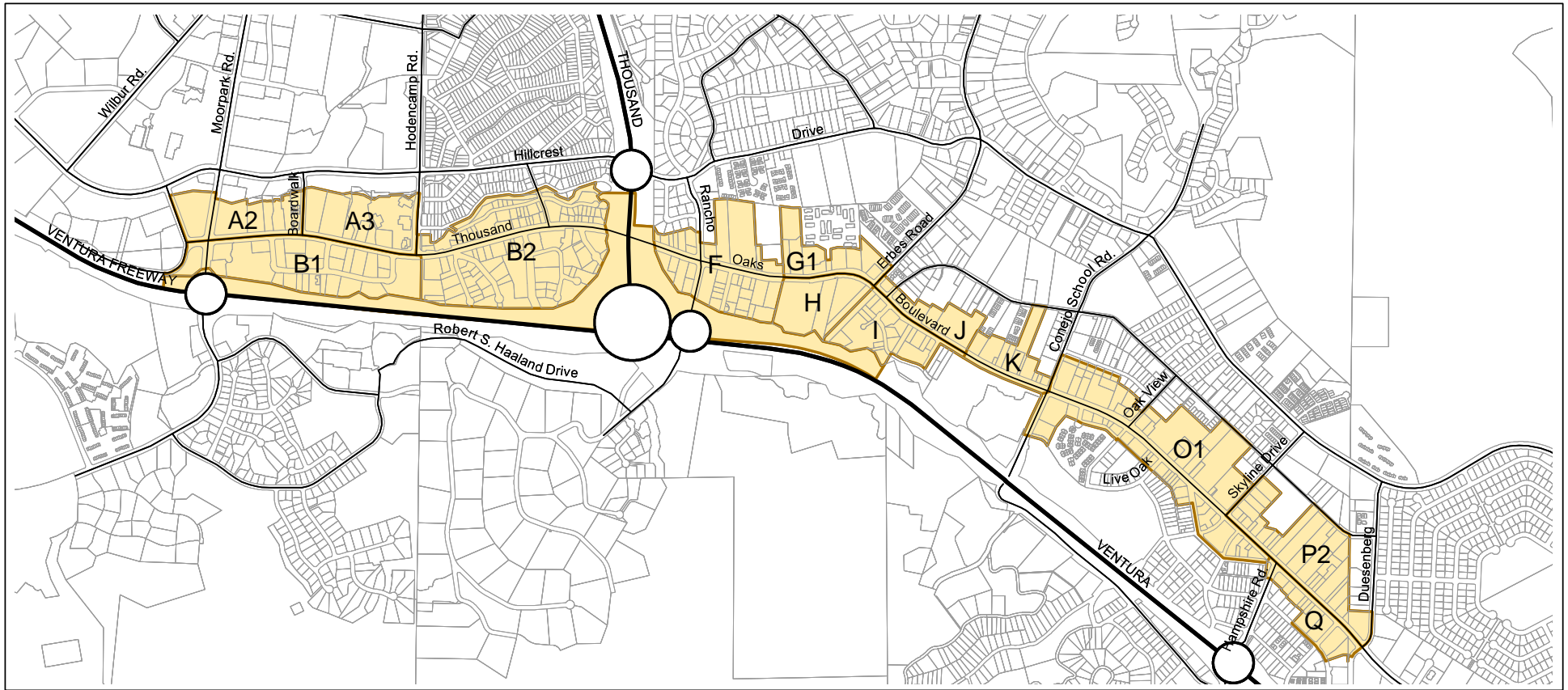


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March 3, 2010

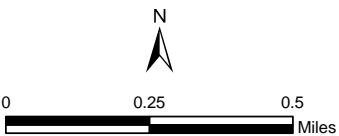
# Thousand Oaks Boulevard Specific Plan Area Specific Plan Added Development



Summary of Specific Plan Added Development Above Buildout Baseline by Sub-Area

## Legend

**A** Specific Plan Sub-Area



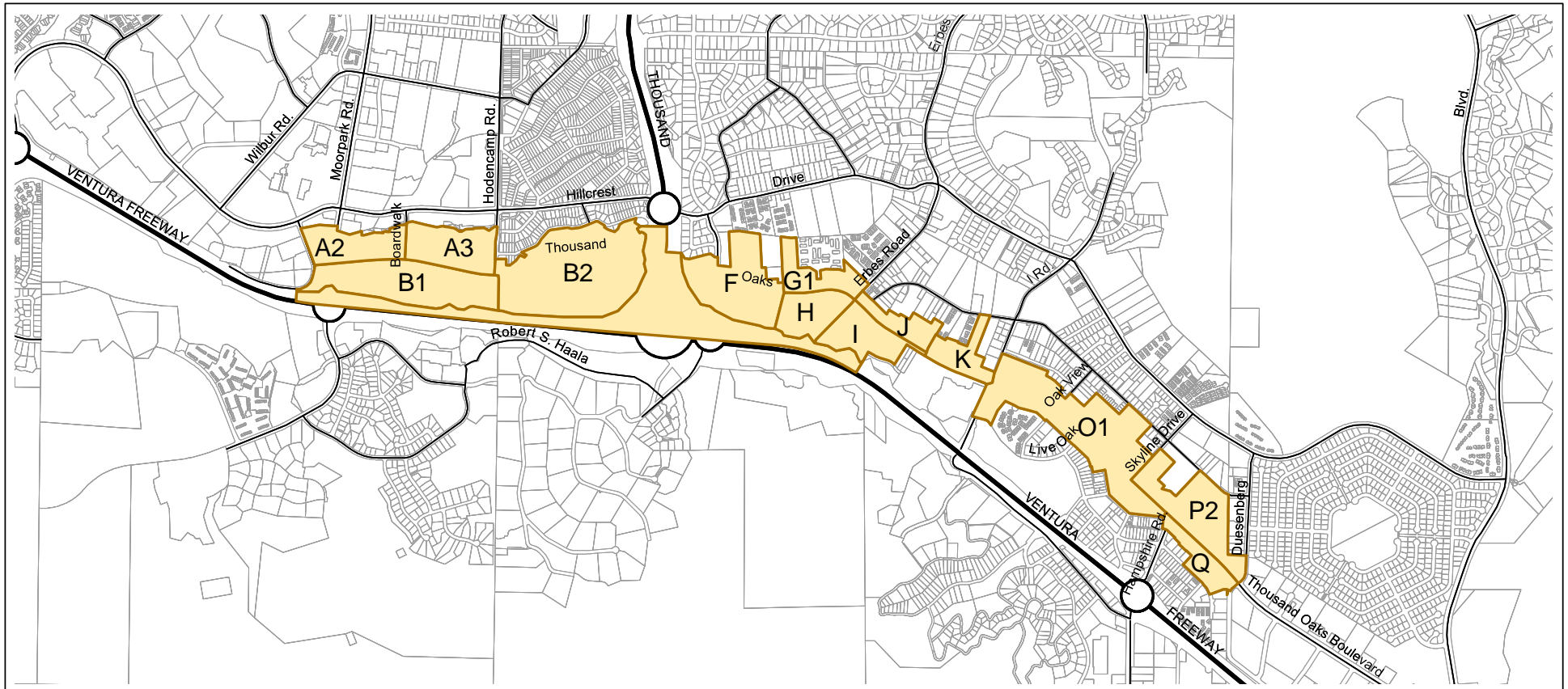
Sub-Area Label	Sub-Area Description	ACREAGE	Pct. Of Net	No. of Apartments	High Retail S.F.	Medium Retail S.F.	Comm. Office S.F.
	Freeway Right-of-Way	59.2	0%	0	0	0	0
A2	Moorpark - Boardwalk (North of TOB)	15.1	5.3%	20	4,800	21,000	6,500
A3	Boardwalk - Hodencamp (North of TOB)	17.6	6.1%	23	5,600	24,500	7,500
B1	Moorpark - Hodencamp (South of TOB)	32.7	11.4%	43	10,000	45,500	14,000
B2	Hodencamp - Route 23 (Both sides)	54	18.8%	70	17,000	75,000	23,000
F	Route 23 - Oak Lane (Both sides)	28.2	9.8%	37	9,000	39,200	12,000
G1	Oak Lane - Erbes (North of TOB)	11.3	3.9%	15	3,600	15,600	4,800
H	Oak Lane - Erbes (South of TOB)	13	4.5%	17	4,200	18,000	5,500
I	Erbes - CAP (South of TOB)	14.3	5%	19	4,600	19,900	6,100
J	Erbes - Gardens of the World (North of TO)	8.2	2.9%	11	2,600	11,400	3,500
K	Gardens of World - Conejo School (North)	9.8	3.4%	13	3,100	13,600	4,200
O1	Conejo School - Skyline/ Hampshire (Both)	48.7	17%	63	16,000	67,700	21,000
P2	Skyline - Duesenberg (North side)	24.5	8.6%	32	7,900	34,100	10,000
Q	Hampshire - Auto Mall Drive (South side)	9.2	3.2%	12	2,900	12,700	3,900

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March 3, 2010

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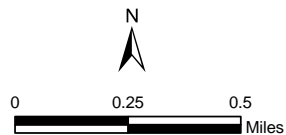
# Thousand Oaks Boulevard Specific Plan Area Specific Plan Added Development - "Downtown" Alternative



Summary of Downtown Alternative Added Development Above Buildout Baseline by Sub-Area

## Legend

**A** Specific Plan Sub-Area



Sub-Area	Sub-Area Description	ACREAGE	Pct. of Development	No. of Apartments	High Retail S.F.	Medium Retail S.F.	Comm. Office S.F.
	Freeway Right-of-Way	59.2	0%	0	0	0	0
A2	Moorpark - Boardwalk (North of TOB)	15.1	1.9%	6	1,500	6,700	2,100
A3	Boardwalk - Hodencamp (North of TOB)	17.6	2.2%	7	1,800	7,800	2,400
B1	Moorpark - Hodencamp (South of TOB)	32.7	4.1%	14	3,300	14,500	4,400
B2	Hodencamp - Route 23 (Both sides)	54	6.7%	23	5,500	24,000	7,300
F	Route 23 - Oak Lane (Both sides)	28.2	24.9%	84	21,000	89,400	27,000
G1	Oak Lane - Erbes (North of TOB)	11.3	10%	34	8,200	35,800	11,000
H	Oak Lane - Erbes (South of TOB)	13	11.5%	39	9,400	41,200	13,000
I	Erbes - CAP (South of TOB)	14.3	12.6%	43	10,000	45,300	14,000
J	Erbes - Gardens of the World (North of TOB)	8.2	7.3%	24	6,000	26,000	8,000
K	Gardens of World - Conejo School (North of TOB)	9.8	8.7%	29	7,100	31,100	9,500
O1	Conejo School - Skyline/ Hampshire (Both sides)	48.7	6%	20	5,000	21,600	6,600
P2	Skyline - Duesenberg (North side)	24.5	3%	10	2,500	10,900	3,300
Q	Hampshire - Auto Mall Drive (South side)	9.2	1.1%	4	900	4,100	1,300

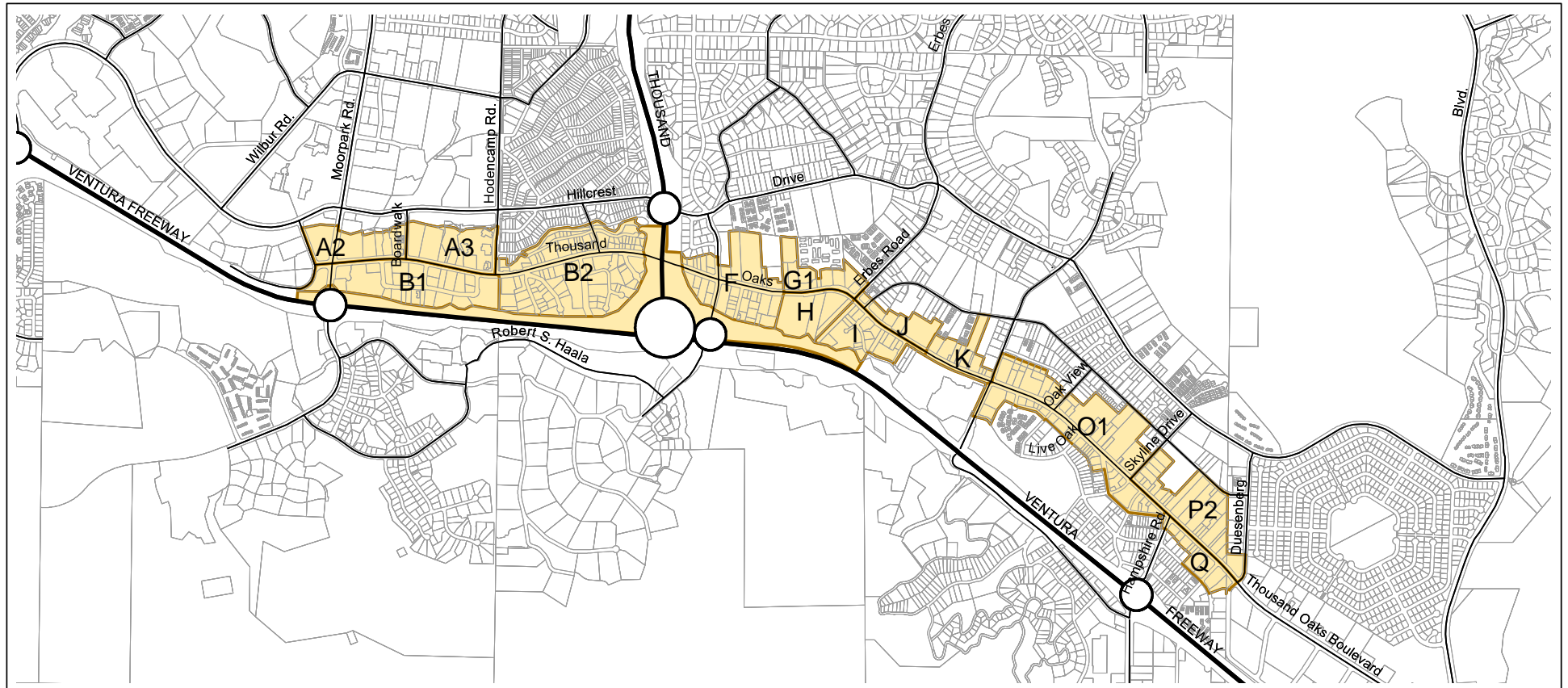
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December 16, 2010

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specific plan added development -  
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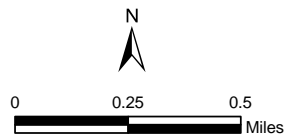
# Thousand Oaks Boulevard Specific Plan Area Specific Plan Added Development - "Reduced Intensity" Alternative



Summary of Specific Plan Added Development Above Buildout Baseline by Sub-Area - "Reduced Intensity" Alternative

**Legend**

A Specific Plan Sub-Area



Sub-Area Label	Sub-Area Description	ACREAGE	Pct. of Development	No. of Apartments	High Retail S.F.	Medium Retail S	Comm. Office S.F.
	Freeway Right-of-Way	59.2	0.0%	0	0	0	0
A2	Moorpark - Boardwalk (North of TOB)	15.1	5.3%	10	2,400	10,500	3,200
A3	Boardwalk - Hodencamp (North of TOB)	17.6	6.1%	12	2,800	12,200	3,700
B1	Moorpark - Hodencamp (South of TOB)	32.7	11.4%	21	5,200	22,700	7,000
B2	Hodencamp - Route 23 (Both sides)	54	18.8%	35	8,600	37,500	11,500
F	Route 23 - Oak Lane (Both sides)	28.2	9.8%	18	4,500	19,600	6,000
G1	Oak Lane - Erbes (North of TOB)	11.3	3.9%	7	1,800	7,900	2,400
H	Oak Lane - Erbes (South of TOB)	13	4.5%	9	2,100	9,000	2,800
I	Erbes - CAP (South of TOB)	14.3	5.0%	9	2,300	9,900	3,000
J	Erbes - Gardens of the World (North of TOB)	8.2	2.9%	5	1,300	5,700	1,700
K	Gardens of World - Conejo School (North of TOB)	9.8	3.4%	6	1,600	6,800	2,100
O1	Conejo School - Skyline/Hampshire (Both sides)	48.7	17.0%	32	7,800	33,800	10,400
P2	Skyline - Duesenberg (North side)	24.5	8.5%	16	3,900	17,000	5,200
Q	Hampshire - Auto Mall Drive (South side)	9.2	3.2%	6	1,500	6,400	2,000

City of Thousand Oaks  
Community Development Department  
2100 Thousand Oaks Boulevard  
Thousand Oaks CA 91362  
(805) 449-2323

December 16, 2010

u:/cdd/thousand oaks blvd. specific plan/  
specific plan added development -  
reduced intensity alternative.mxd

## **APPENDIX D**

### **ITE Trip Generation and Pass-By Rates**

**Average Vehicle Trips**

Average Vehicle <u>Trips</u>				AM										PM										DAY								
ITE Code	Land Use (ITE Name)	Land Use (Thousand Oaks Name)	Units	Type of Curve	Y/N	T=A*X+B		ln(T)=A*ln(X)+B		%IN	%OUT		Type of Curve	Y/N	T=A*X+B		ln(T)=A*ln(X)+B		%IN	%OUT		trips	Type of Curve	Y/N	T=A*X+B		ln(T)=A*ln(X)+B					
						A	B	Y/N	A	B					A	B	Y/N	A	B						A	B	Y/N	A	B	trips		
110	General Light Industrial	Industrial	tsf	rates are preferred	1	0.92	0.00	0			88%	12%	0.92	rates are preferred	1	0.97	0.00	0		12%	88%	0.97	rates are preferred	1	6.97	0.00	0			6.97		
210	SFDU	Single Family Residential	d.u.	LINEAR	1	0.70	9.74	0			25%	75%	0.75	NATURAL LOG.	0		1	0.90	0.51	63%	37%	1.01	NATURAL LOG.	0			1	0.92	2.71	9.57		
220	Apartment	Apartment	d.u.	LINEAR	1	0.49	3.73	0			20%	80%	0.51	LINEAR	1	0.55	17.65	0		65%	35%	0.62	LINEAR	1	6.06	123.56	0			6.65		
230	Residential Condominium	Condominium	d.u.	NATURAL LOG.	0			1	0.80	0.26	17%	83%	0.44	NATURAL LOG.	0		1	0.82	0.32	67%	33%	0.52	NATURAL LOG.	0			1	0.87	2.46	5.81		
252	Senior Adult Housing Attached	Affordable Senior Housing	occupied d.u.	N/A	1	0.08	0.00	0			45%	55%	0.08	N/A	1	0.11	0.00	0		61%	39%	0.11	N/A	1	3.48	0.00	0			3.48		
253	Congregate Care Facility	Congregate Care Facility	d.u. (assumed 1bed=1du)	N/A	1	0.06	0.00	0			59%	41%	0.06	N/A	1	0.17	0.00	0		55%	45%	0.17	N/A	1	2.02	0.00	0			2.02		
444	Movie Theater with matinee	Cinema	st	N/A	1	0.00	0.00	0			0%	0%	0.00	N/A	1	0.07	0.00	0		39%	61%	0.07		0			0					
610	Hospital	Hospital	tsf	LINEAR	1	0.91	145.24	0			67%	33%	1.20	LINEAR	1	0.71	233.89	0		33%	67%	1.18	LINEAR	1	10.01	2209.31	0			17.57		
710	General Office Building	Office	tsf	NATURAL LOG.	0			1	0.80	1.55	88%	12%	1.55	LINEAR	1	1.12	78.81	0		17%	83%	1.49	NATURAL LOG.	0			1	0.77	3.65	11.01		
720	Medical / Dental Office Building	Medical Office	tsf	N/A	1	2.48	0.00	0			79%	21%	2.48	NATURAL LOG.	0		1	0.93	1.47	27%	73%	3.72	LINEAR	1	40.89	-214.97	0			36.13		
814	Specialty Retail Center	Specialty Retail	tsf GLA	N/A	1	1.20	0.00	0			60%	40%	1.20	LINEAR	1	2.40	21.48	0		44%	56%	2.71	LINEAR	1	42.78	37.66	0			44.32		
820	Shopping Center	Retail	tsf	NATURAL LOG.	0			1	0.59	2.32	61%	39%	1.00	NATURAL LOG.	0		1	0.67	3.37	49%	51%	3.73	NATURAL LOG.	0			1	0.65	5.83	42.94		
841	New Car Sales	Auto Dealership	tsf	N/A	1	2.05	0.00	0			74%	26%	2.05	LINEAR	1	1.72	29.61	0		39%	61%	2.64	N/A	1	33.34	0.00	0			33.34		
881	Pharmacy/Drugstore with Drive Through Window	Drug Store	tsf	N/A	1	2.66	0.00	0			57%	43%	2.66	N/A	1	8.62	0.00	0		49%	51%	8.62	N/A	1	88.16	0.00	0			88.16		
932	High Turnover Restaurant	Restaurant with bar	tsf	N/A	1	11.52	0.00	0			52%	48%	11.52	N/A	1	10.92	0.00	0		61%	39%	10.92	N/A	1	127.15	0.00	0			127.15		
934	Fast Food Restaurant with Drive Through Window	Fast-food restaurant w/Drive Thru	tsf	N/A	1	53.11	0.00	0			51%	49%	53.11	N/A	1	34.64	0.00	0		52%	48%	34.64	N/A	1	496.12	0.00	0			496.12		
		Imax Theater																														
		Discovery Center																														

***Average Pass-By Trip Percentage***

[illegible]

## **APPENDIX 4.3**

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### **Air Quality Emissions**



Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: Z:\Air Quality\095.11 Thousand Oaks Blvd SP\Emissions\Revised Emissions\Thousand Oaks Boulevard Buildout Existing GP in f

Project Name: Thousand Oaks Boulevard - Specific Plan

Project Location: Ventura County APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>
TOTALS (lbs/day, unmitigated)	4.25	5.37	9.10	0.00	0.03	0.03
TOTALS (lbs/day, mitigated)	4.21	4.95	8.74	0.00	0.03	0.03
Percent Reduction	0.94	7.82	3.96 #####		0.00	0.00

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>
TOTALS (lbs/day, unmitigated)	31.43	23.53	321.38	0.93	161.20	30.42
TOTALS (lbs/day, mitigated)	31.43	23.53	321.38	0.93	161.20	30.42
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>
TOTALS (lbs/day, unmitigated)	35.68	28.90	330.48	0.93	161.23	30.45
TOTALS (lbs/day, mitigated)	35.64	28.48	330.12	0.93	161.23	30.45
Percent Reduction	0.11	1.45	0.11	0.00	0.00	0.00

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>
Natural Gas	0.39	5.31	4.46	0.00	0.01	0.01
Hearth - No Summer Emissions						
Landscape	0.37	0.06	4.64	0.00	0.02	0.02
Consumer Products	0.00					
Architectural Coatings	3.49					
TOTALS (lbs/day, unmitigated)	4.25	5.37	9.10	0.00	0.03	0.03

Area Source Mitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Mitigated

<u>Source</u>	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>
Natural Gas	0.35	4.89	4.10	0.00	0.01	0.01
Hearth - No Summer Emissions						
Landscape	0.37	0.06	4.64	0.00	0.02	0.02
Consumer Products	0.00					
Architectural Coatings	3.49					
TOTALS (lbs/day, mitigated)	4.21	4.95	8.74	0.00	0.03	0.03

Area Source Changes to Defaults

Percent residential using natural gas changed from 60% to 100%

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOX</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM25</u>
Strip mall	26.27	20.10	272.73	0.79	137.54	25.95
General office building	3.54	2.41	34.04	0.10	16.62	3.14
General light industry	1.62	1.02	14.61	0.04	7.04	1.33
TOTALS (lbs/day, unmitigated)	31.43	23.53	321.38	0.93	161.20	30.42



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Operational Mitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Mitigated

<u>Source</u>	ROG	NOX	CO	SO2	PM10	PM25
Strip mall	26.27	20.10	272.73	0.79	137.54	25.95
General office building	3.54	2.41	34.04	0.10	16.62	3.14
General light industry	1.62	1.02	14.61	0.04	7.04	1.33
TOTALS (lbs/day, mitigated)	31.43	23.53	321.38	0.93	161.20	30.42

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2035 Temperature (F): 85 Season: Summer

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Strip mall		37.03	1000 sq ft	371.50	13,756.64	80,283.78
General office building		11.01	1000 sq ft	137.00	1,508.37	9,698.82
General light industry		6.97	1000 sq ft	88.00	613.36	4,109.51
					15,878.37	94,092.11

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	43.6	0.0	100.0	0.0
Light Truck < 3750 lbs	8.7	0.0	100.0	0.0
Light Truck 3751-5750 lbs	25.5	0.0	100.0	0.0
Med Truck 5751-8500 lbs	12.7	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	2.0	0.0	80.0	20.0
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	66.7	33.3
Med-Heavy Truck 14,001-33,000 lbs	0.8	0.0	25.0	75.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.3	0.0	0.0	100.0
Other Bus	0.0	0.0	0.0	0.0
Urban Bus	0.0	0.0	0.0	0.0
Motorcycle	3.2	34.4	65.6	0.0
School Bus	0.1	0.0	0.0	100.0

2.5                      0.0                      92.0                      8.0

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	8.6	5.8	6.0	7.6	5.8	5.8
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Strip mall				2.0	1.0	97.0
General office building				35.0	17.5	47.5
General light industry				50.0	25.0	25.0

## Combined Winter Emissions Reports (Pounds/Day)

File Name: Z:\Air Quality\095.11 Thousand Oaks Blvd SP\Emissions\Revised Emissions\Thousand Oaks Boulevard Buildout Existing GP in :

Project Name: Thousand Oaks Boulevard - Specific Plan

Project Location: Ventura County APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

## Summary Report:

## AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>
TOTALS (lbs/day, unmitigated)	3.88	5.31	4.46	0.00	0.01	0.01
TOTALS (lbs/day, mitigated)	3.84	4.89	4.10	0.00	0.01	0.01
Percent Reduction	1.03	7.91	8.07 #####		0.00	0.00

## OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>
TOTALS (lbs/day, unmitigated)	34.56	35.25	351.20	0.81	161.20	30.42
TOTALS (lbs/day, mitigated)	34.56	35.25	351.20	0.81	161.20	30.42
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00

## SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>
TOTALS (lbs/day, unmitigated)	38.44	40.56	355.66	0.81	161.21	30.43
TOTALS (lbs/day, mitigated)	38.40	40.14	355.30	0.81	161.21	30.43
Percent Reduction	0.10	1.04	0.10	0.00	0.00	0.00

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>
Natural Gas	0.39	5.31	4.46	0.00	0.01	0.01
Hearth	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping - No Winter Emissions						
Consumer Products	0.00					
Architectural Coatings	3.49					
TOTALS (lbs/day, unmitigated)	3.88	5.31	4.46	0.00	0.01	0.01

Area Source Mitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Winter Pounds Per Day, Mitigated

<u>Source</u>	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>
Natural Gas	0.35	4.89	4.10	0.00	0.01	0.01
Hearth	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping - No Winter Emissions						
Consumer Products	0.00					
Architectural Coatings	3.49					
TOTALS (lbs/day, mitigated)	3.84	4.89	4.10	0.00	0.01	0.01

Area Source Changes to Defaults

Percent residential using natural gas changed from 60% to 100%

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOX</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM25</u>
Strip mall	29.55	30.11	299.46	0.69	137.54	25.95
General office building	3.52	3.61	36.32	0.08	16.62	3.14
General light industry	1.49	1.53	15.42	0.04	7.04	1.33
TOTALS (lbs/day, unmitigated)	34.56	35.25	351.20	0.81	161.20	30.42

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Operational Mitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Winter Pounds Per Day, Mitigated

Source	ROG	NOX	CO	SO2	PM10	PM25
Strip mall	29.55	30.11	299.46	0.69	137.54	25.95
General office building	3.52	3.61	36.32	0.08	16.62	3.14
General light industry	1.49	1.53	15.42	0.04	7.04	1.33
TOTALS (lbs/day, mitigated)	34.56	35.25	351.20	0.81	161.20	30.42

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2035 Temperature (F): 40 Season: Winter

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Strip mall		37.03	1000 sq ft	371.50	13,756.64	80,283.78
General office building		11.01	1000 sq ft	137.00	1,508.37	9,698.82
General light industry		6.97	1000 sq ft	88.00	613.36	4,109.51
					15,878.37	94,092.11

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	43.6	0.0	100.0	0.0
Light Truck < 3750 lbs	8.7	0.0	100.0	0.0
Light Truck 3751-5750 lbs	25.5	0.0	100.0	0.0
Med Truck 5751-8500 lbs	12.7	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	2.0	0.0	80.0	20.0
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	66.7	33.3
Med-Heavy Truck 14,001-33,000 lbs	0.8	0.0	25.0	75.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.3	0.0	0.0	100.0
Other Bus	0.0	0.0	0.0	0.0
Urban Bus	0.0	0.0	0.0	0.0
Motorcycle	3.2	34.4	65.6	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	2.5	0.0	92.0	8.0

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	8.6	5.8	6.0	7.6	5.8	5.8
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Strip mall				2.0	1.0	97.0
General office building				35.0	17.5	47.5
General light industry				50.0	25.0	25.0

## Combined Summer Emissions Reports (Pounds/Day)

File Name: Z:\Air Quality\095.11 Thousand Oaks Blvd SP\Emissions\Thousand Oaks Boulevard SP - Project.urb924

Project Name: Thousand Oaks Boulevard - Specific Plan

Project Location: Ventura County APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

## Summary Report:

## AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>
TOTALS (lbs/day, unmitigated)	25.71	10.34	12.84	0.00	0.04	0.04
TOTALS (lbs/day, mitigated)	25.64	9.49	12.27	0.00	0.04	0.04
Percent Reduction	0.27	8.22	4.44	0.00	0.00	0.00

## OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>
TOTALS (lbs/day, unmitigated)	57.19	43.03	593.35	1.70	295.53	55.79
TOTALS (lbs/day, mitigated)	57.19	43.03	593.35	1.70	295.53	55.79
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00

## SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>
TOTALS (lbs/day, unmitigated)	82.90	53.37	606.19	1.70	295.57	55.83
TOTALS (lbs/day, mitigated)	82.83	52.52	605.62	1.70	295.57	55.83
Percent Reduction	0.08	1.59	0.09	0.00	0.00	0.00



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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>
Natural Gas	0.77	10.26	6.66	0.00	0.02	0.02
Hearth - No Summer Emissions						
Landscape	0.49	0.08	6.18	0.00	0.02	0.02
Consumer Products	18.35					
Architectural Coatings	6.10					
TOTALS (lbs/day, unmitigated)	25.71	10.34	12.84	0.00	0.04	0.04

Area Source Mitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Mitigated

<u>Source</u>	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>
Natural Gas	0.70	9.41	6.09	0.00	0.02	0.02
Hearth - No Summer Emissions						
Landscape	0.49	0.08	6.18	0.00	0.02	0.02
Consumer Products	18.35					
Architectural Coatings	6.10					
TOTALS (lbs/day, mitigated)	25.64	9.49	12.27	0.00	0.04	0.04

Area Source Changes to Defaults

Percent residential using natural gas changed from 60% to 100%

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOX</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM25</u>
Apartments mid rise	9.18	6.10	88.60	0.25	42.39	8.02
Quality restaurant	14.21	11.23	153.63	0.44	76.98	14.53
Strip mall	28.28	21.64	293.66	0.85	148.10	27.94
General office building	5.52	4.06	57.46	0.16	28.06	5.30
TOTALS (lbs/day, unmitigated)	57.19	43.03	593.35	1.70	295.53	55.79

## Operational Mitigated Detail Report:

## OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Mitigated

<u>Source</u>	ROG	NOX	CO	SO2	PM10	PM25
Apartments mid rise	9.18	6.10	88.60	0.25	42.39	8.02
Quality resturant	14.21	11.23	153.63	0.44	76.98	14.53
Strip mall	28.28	21.64	293.66	0.85	148.10	27.94
General office building	5.52	4.06	57.46	0.16	28.06	5.30
TOTALS (lbs/day, mitigated)	57.19	43.03	593.35	1.70	295.53	55.79

## Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2035 Temperature (F): 85 Season: Summer

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Apartments mid rise	9.87	9.67	dwelling units	375.00	3,626.25	24,728.85
Quality resturant		84.46	1000 sq ft	89.50	7,559.17	44,931.71
Strip mall		37.03	1000 sq ft	400.00	14,812.00	86,442.83
General office building		20.87	1000 sq ft	122.00	2,546.14	16,371.68
					28,543.56	172,475.07

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	43.6	0.0	100.0	0.0
Light Truck < 3750 lbs	8.7	0.0	100.0	0.0
Light Truck 3751-5750 lbs	25.5	0.0	100.0	0.0
Med Truck 5751-8500 lbs	12.7	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	2.0	0.0	80.0	20.0
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	66.7	33.3

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Med-Heavy Truck 14,001-33,000 lbs	0.8	0.0	25.0	75.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.3	0.0	0.0	100.0
Other Bus	0.0	0.0	0.0	0.0
Urban Bus	0.0	0.0	0.0	0.0
Motorcycle	3.2	34.4	65.6	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	2.5	0.0	92.0	8.0

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	8.6	5.8	6.0	7.6	5.8	5.8
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Quality resturant				8.0	4.0	88.0
Strip mall				2.0	1.0	97.0
General office building				35.0	17.5	47.5

## Combined Winter Emissions Reports (Pounds/Day)

File Name: Z:\Air Quality\095.11 Thousand Oaks Blvd SP\Emissions\Thousand Oaks Boulevard SP - Project.urb924

Project Name: Thousand Oaks Boulevard - Specific Plan

Project Location: Ventura County APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

## Summary Report:

## AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>
TOTALS (lbs/day, unmitigated)	81.51	15.40	230.19	0.67	35.46	34.13
TOTALS (lbs/day, mitigated)	81.44	14.55	229.62	0.67	35.46	34.13
Percent Reduction	0.09	5.52	0.25	0.00	0.00	0.00

## OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>
TOTALS (lbs/day, unmitigated)	63.27	64.53	645.50	1.49	295.53	55.79
TOTALS (lbs/day, mitigated)	63.27	64.53	645.50	1.49	295.53	55.79
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00

## SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>
TOTALS (lbs/day, unmitigated)	144.78	79.93	875.69	2.16	330.99	89.92
TOTALS (lbs/day, mitigated)	144.71	79.08	875.12	2.16	330.99	89.92
Percent Reduction	0.05	1.06	0.07	0.00	0.00	0.00

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>
Natural Gas	0.77	10.26	6.66	0.00	0.02	0.02
Hearth	56.29	5.14	223.53	0.67	35.44	34.11
Landscaping - No Winter Emissions						
Consumer Products	18.35					
Architectural Coatings	6.10					
TOTALS (lbs/day, unmitigated)	81.51	15.40	230.19	0.67	35.46	34.13

Area Source Mitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Winter Pounds Per Day, Mitigated

<u>Source</u>	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>
Natural Gas	0.70	9.41	6.09	0.00	0.02	0.02
Hearth	56.29	5.14	223.53	0.67	35.44	34.11
Landscaping - No Winter Emissions						
Consumer Products	18.35					
Architectural Coatings	6.10					
TOTALS (lbs/day, mitigated)	81.44	14.55	229.62	0.67	35.46	34.13

Area Source Changes to Defaults

Percent residential using natural gas changed from 60% to 100%

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOX</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM25</u>
Apartments mid rise	9.02	9.18	94.01	0.22	42.39	8.02
Quality resturant	16.49	16.83	167.73	0.39	76.98	14.53
Strip mall	31.81	32.42	322.44	0.74	148.10	27.94
General office building	5.95	6.10	61.32	0.14	28.06	5.30
TOTALS (lbs/day, unmitigated)	63.27	64.53	645.50	1.49	295.53	55.79

## Operational Mitigated Detail Report:

## OPERATIONAL EMISSION ESTIMATES Winter Pounds Per Day, Mitigated

<u>Source</u>	ROG	NOX	CO	SO2	PM10	PM25
Apartments mid rise	9.02	9.18	94.01	0.22	42.39	8.02
Quality resturant	16.49	16.83	167.73	0.39	76.98	14.53
Strip mall	31.81	32.42	322.44	0.74	148.10	27.94
General office building	5.95	6.10	61.32	0.14	28.06	5.30
TOTALS (lbs/day, mitigated)	63.27	64.53	645.50	1.49	295.53	55.79

## Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2035 Temperature (F): 40 Season: Winter

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Apartments mid rise	9.87	9.67	dwelling units	375.00	3,626.25	24,728.85
Quality resturant		84.46	1000 sq ft	89.50	7,559.17	44,931.71
Strip mall		37.03	1000 sq ft	400.00	14,812.00	86,442.83
General office building		20.87	1000 sq ft	122.00	2,546.14	16,371.68
					28,543.56	172,475.07

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	43.6	0.0	100.0	0.0
Light Truck < 3750 lbs	8.7	0.0	100.0	0.0
Light Truck 3751-5750 lbs	25.5	0.0	100.0	0.0
Med Truck 5751-8500 lbs	12.7	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	2.0	0.0	80.0	20.0
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	66.7	33.3

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Med-Heavy Truck 14,001-33,000 lbs	0.8	0.0	25.0	75.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.3	0.0	0.0	100.0
Other Bus	0.0	0.0	0.0	0.0
Urban Bus	0.0	0.0	0.0	0.0
Motorcycle	3.2	34.4	65.6	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	2.5	0.0	92.0	8.0

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	8.6	5.8	6.0	7.6	5.8	5.8
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Quality resturant				8.0	4.0	88.0
Strip mall				2.0	1.0	97.0
General office building				35.0	17.5	47.5

Combined Summer Emissions Reports (Pounds/Day)

File Name: Z:\Air Quality\095.11 Thousand Oaks Blvd SP\Emissions\Thousand Oaks Boulevard GP - Project.urb924

Project Name: Thousand Oaks Boulevard - General Plan

Project Location: Ventura County APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>
TOTALS (lbs/day, unmitigated)	3,408.02	1,047.85	1,948.65	0.07	5.78	5.72

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>
TOTALS (lbs/day, unmitigated)	3,420.65	2,488.78	35,168.97	102.39	17,829.73	3,363.05

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>
TOTALS (lbs/day, unmitigated)	6,828.67	3,536.63	37,117.62	102.46	17,835.51	3,368.77



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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>
Natural Gas	78.88	1,031.61	510.55	0.01	1.96	1.93
Hearth - No Summer Emissions						
Landscape	258.04	16.24	1,438.10	0.06	3.82	3.79
Consumer Products	2,314.06					
Architectural Coatings	757.04					
TOTALS (lbs/day, unmitigated)	3,408.02	1,047.85	1,948.65	0.07	5.78	5.72

Area Source Changes to Defaults

Percent residential using natural gas changed from 60% to 100%

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOX</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM25</u>
Single family housing	1,097.81	794.09	11,497.85	33.01	5,716.34	1,079.21
Apartments mid rise	209.58	147.85	2,140.76	6.15	1,064.32	200.94
Condo/townhouse general	191.31	129.22	1,871.05	5.37	930.22	175.62
Elementary school	59.07	20.44	285.45	0.84	146.13	27.55
Junior high school	36.91	14.50	202.43	0.59	103.63	19.54
High school	56.79	22.68	313.33	0.92	161.74	30.48
Hotel	32.42	22.00	302.27	0.89	156.72	29.53
Regnl shop. center	637.71	518.14	7,095.18	21.04	3,688.61	694.94
Strip mall	453.05	363.73	4,980.73	14.77	2,589.36	487.84
General office building	245.57	179.74	2,547.12	7.41	1,288.91	243.13
Government (civic center)	71.40	55.79	770.89	2.27	397.94	75.00
Hospital	27.07	20.25	284.20	0.83	144.91	27.33
General light industry	301.96	200.35	2,877.71	8.30	1,440.90	271.94
TOTALS (lbs/day, unmitigated)	3,420.65	2,488.78	35,168.97	102.39	17,829.73	3,363.05

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2035 Temperature (F): 85 Season: Summer

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Single family housing	10,600.00	12.27	dwelling units	31,800.00	390,186.01	3,335,973.43
Apartments mid rise	189.47	10.09	dwelling units	7,200.00	72,648.00	621,118.63
Condo/townhouse general	518.75	7.65	dwelling units	8,300.00	63,495.00	542,863.22
Elementary school		1.29	students	8,500.00	10,965.00	85,307.70
Junior high school		1.62	students	4,800.00	7,776.00	60,497.28
High school		1.71	students	7,300.00	12,483.00	94,433.90
Hotel		8.18	rooms	1,500.00	12,270.00	91,503.53
Regnl shop. center		65.40	1000 sq ft	4,454.50	291,324.31	2,153,760.57
Strip mall		45.91	1000 sq ft	4,454.50	204,506.09	1,511,913.54
General office building		13.51	1000 sq ft	6,873.00	92,854.23	752,351.41
Government (civic center)		27.92	1000 sq ft	1,100.00	30,712.00	232,336.28
Hospital		16.50	1000 sq ft	650.00	10,725.00	84,593.44
General light industry		6.97	1000 sq ft	14,321.00	99,817.37	840,961.31
					1,299,762.01	10,407,614.24

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	43.6	0.0	100.0	0.0
Light Truck < 3750 lbs	8.7	0.0	100.0	0.0
Light Truck 3751-5750 lbs	25.5	0.0	100.0	0.0
Med Truck 5751-8500 lbs	12.7	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	2.0	0.0	80.0	20.0
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	66.7	33.3
Med-Heavy Truck 14,001-33,000 lbs	0.8	0.0	25.0	75.0

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Heavy-Heavy Truck 33,001-60,000 lbs	0.3	0.0	0.0	100.0
Other Bus	0.0	0.0	0.0	0.0
Urban Bus	0.0	0.0	0.0	0.0
Motorcycle	3.2	34.4	65.6	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	2.5	0.0	92.0	8.0

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			

% of Trips - Commercial (by land use)

Elementary school	20.0	10.0	70.0
Junior high school	20.0	10.0	70.0
High school	10.0	5.0	85.0
Hotel	5.0	2.5	92.5
Regnl shop. center	2.0	1.0	97.0
Strip mall	2.0	1.0	97.0
General office building	35.0	17.5	47.5
Government (civic center)	10.0	5.0	85.0
Hospital	25.0	12.5	62.5
General light industry	50.0	25.0	25.0

Combined Winter Emissions Reports (Pounds/Day)

File Name: Z:\Air Quality\095.11 Thousand Oaks Blvd SP\Emissions\Thousand Oaks Boulevard GP - Project.urb924

Project Name: Thousand Oaks Boulevard - General Plan

Project Location: Ventura County APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>
TOTALS (lbs/day, unmitigated)	10,252.58	1,728.00	28,725.53	84.61	4,475.78	4,308.35

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>
TOTALS (lbs/day, unmitigated)	3,601.00	3,755.89	37,052.15	89.59	17,829.73	3,363.05

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>
TOTALS (lbs/day, unmitigated)	13,853.58	5,483.89	65,777.68	174.20	22,305.51	7,671.40

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>
Natural Gas	78.88	1,031.61	510.55	0.01	1.96	1.93
Hearth	7,102.60	696.39	28,214.98	84.60	4,473.82	4,306.42
Landscaping - No Winter Emissions						
Consumer Products	2,314.06					
Architectural Coatings	757.04					
TOTALS (lbs/day, unmitigated)	10,252.58	1,728.00	28,725.53	84.61	4,475.78	4,308.35

Area Source Changes to Defaults

Percent residential using natural gas changed from 60% to 100%

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOX</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM25</u>
Single family housing	1,156.08	1,200.04	11,988.20	28.90	5,716.34	1,079.21
Apartments mid rise	215.25	223.43	2,232.06	5.38	1,064.32	200.94
Condo/townhouse general	188.13	195.28	1,950.84	4.70	930.22	175.62
Elementary school	29.43	30.83	301.80	0.73	146.13	27.55
Junior high school	20.87	21.86	214.03	0.52	103.63	19.54
High school	32.66	34.18	333.62	0.81	161.74	30.48
Hotel	31.69	33.14	323.03	0.78	156.72	29.53
Regnl shop. center	746.45	780.49	7,599.95	18.39	3,688.61	694.94
Strip mall	524.00	547.89	5,335.07	12.91	2,589.36	487.84
General office building	258.69	271.36	2,666.89	6.48	1,288.91	243.13
Government (civic center)	80.36	84.09	820.81	1.99	397.94	75.00
Hospital	29.15	30.55	299.48	0.73	144.91	27.33
General light industry	288.24	302.75	2,986.37	7.27	1,440.90	271.94
TOTALS (lbs/day, unmitigated)	3,601.00	3,755.89	37,052.15	89.59	17,829.73	3,363.05

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2035 Temperature (F): 40 Season: Winter

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Single family housing	10,600.00	12.27	dwelling units	31,800.00	390,186.01	3,335,973.43
Apartments mid rise	189.47	10.09	dwelling units	7,200.00	72,648.00	621,118.63
Condo/townhouse general	518.75	7.65	dwelling units	8,300.00	63,495.00	542,863.22
Elementary school		1.29	students	8,500.00	10,965.00	85,307.70
Junior high school		1.62	students	4,800.00	7,776.00	60,497.28
High school		1.71	students	7,300.00	12,483.00	94,433.90
Hotel		8.18	rooms	1,500.00	12,270.00	91,503.53
Regnl shop. center		65.40	1000 sq ft	4,454.50	291,324.31	2,153,760.57
Strip mall		45.91	1000 sq ft	4,454.50	204,506.09	1,511,913.54
General office building		13.51	1000 sq ft	6,873.00	92,854.23	752,351.41
Government (civic center)		27.92	1000 sq ft	1,100.00	30,712.00	232,336.28
Hospital		16.50	1000 sq ft	650.00	10,725.00	84,593.44
General light industry		6.97	1000 sq ft	14,321.00	99,817.37	840,961.31
					1,299,762.01	10,407,614.24

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	43.6	0.0	100.0	0.0
Light Truck < 3750 lbs	8.7	0.0	100.0	0.0
Light Truck 3751-5750 lbs	25.5	0.0	100.0	0.0
Med Truck 5751-8500 lbs	12.7	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	2.0	0.0	80.0	20.0
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	66.7	33.3
Med-Heavy Truck 14,001-33,000 lbs	0.8	0.0	25.0	75.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.3	0.0	0.0	100.0
Other Bus	0.0	0.0	0.0	0.0
Urban Bus	0.0	0.0	0.0	0.0
Motorcycle	3.2	34.4	65.6	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	2.5	0.0	92.0	8.0

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			

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% of Trips - Commercial (by land use)

Elementary school	20.0	10.0	70.0
Junior high school	20.0	10.0	70.0
High school	10.0	5.0	85.0
Hotel	5.0	2.5	92.5
Regnl shop. center	2.0	1.0	97.0
Strip mall	2.0	1.0	97.0
General office building	35.0	17.5	47.5
Government (civic center)	10.0	5.0	85.0
Hospital	25.0	12.5	62.5
General light industry	50.0	25.0	25.0





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**Table GP/SP-GHG-1  
Summary of Annual GHG Emissions**

<b>Emissions Scenario</b>	<b>Operational Direct Emissions</b>		<b>Operational Indirect Emissions</b>				<b>Total</b>
	<b>Motor Vehicles (MTCO<sub>2</sub>e/yr)</b>	<b>Area Sources (MTCO<sub>2</sub>e/yr)</b>	<b>Electricity (MTCO<sub>2</sub>e/yr)</b>	<b>Solid Waste (MTCO<sub>2</sub>e/yr)</b>	<b>Water (MTCO<sub>2</sub>e/yr)</b>	<b>Wastewater (MTCO<sub>2</sub>e/yr)</b>	<b>Emissions (MTCO<sub>2</sub>e/yr)</b>
Without AB32 Measures							
BAU Project	22,994	1,058	2,924	91	94	13	<b>27,174</b>
Proposed Project	21,641	974	2,607	91	88	12	<b>25,413</b>
<b>Project Reduction from BAU</b>	1,352	84	317	-	7	1	<b>1,761</b>
<b>Percent Reduction from BAU</b>	5.9%	8.0%	10.8%	0.0%	7.0%	7.0%	<b>6.5%</b>
With AB32 Measures							
BAU Project	22,994	1,058	2,924	91	94	13	<b>27,174</b>
Proposed Project	15,471	881	1,751	91	88	12	<b>18,294</b>
<b>Project Reduction from BAU</b>	7,522	177	1,173	-	7	1	<b>8,880</b>
<b>Percent Reduction from BAU</b>	32.7%	16.7%	40.1%	0.0%	7.0%	7.0%	<b>32.7%</b>

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**Table GP/SP-GHG-2  
AB 32 Measures<sup>1</sup>**

<b>Emissions Source</b>	<b>California Legislation</b>	<b>Reduction from 2020 GHG Inventory (%)</b>	<b>Land Use End Use Sector</b>	<b>Included in Project Reductions?</b>
Mobile	AB 1493 (Pavley Phase 1 and 2)	19.7%	On-road transportation (passenger, light-duty)	YES
Mobile	Passenger Vehicle Efficiency	2.8%	On-road transportation (passenger, light-duty)	YES
Mobile	Low Carbon Fuel Standard	7.2%	On-road transportation (passenger, light-duty)	YES
Mobile	Heavy/Medium Duty Efficiency	2.9%	On-road transportation (heavy- and medium-duty)	YES
Mobile	Low Carbon Fuel Standard	7.2%	On-road transportation (heavy- and medium-duty)	YES
Area	Energy Efficiency - Natural Gas	9.5%	Natural gas (residential)	YES
Area	Energy Efficiency - Natural Gas	9.5%	Natural gas (commercial)	YES
Indirect	Energy Efficiency - Electricity	15.7%	Electricity	YES
Indirect	Renewables Portfolio Standard (33%) <sup>2</sup>	21.0%	Electricity (exclude Cogen)	YES
Indirect	Solar Roof Initiative	1.5%	Electricity (exclude Cogen)	NO
<b>Total credits given to land use-driven emission inventory sectors from Scoping Plan measures</b>				

Sources:

1. California Air Resources Board, *Climate Change Scoping Plan*, (2008).
2. California Energy Commission, *2007 Net System Power Report, Commission Report*, (2008) 4-5.  
The CEC estimated that about 12 percent of California's retail electric load was met with renewable resources, including wind, solar, geothermal, small hydroelectric, biomass, and biogas.

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**Table GP/SP-GHG-3  
Operational Motor Vehicle GHG Emissions**

Emissions Scenario	ITE Code	Units	Trip Reduction Features <sup>1,2</sup> (%)	Base Trip Rate <sup>3</sup> (ADT/unit)	Adjusted Trip Rate with Features (ADT/unit)	Annual CO <sub>2</sub> Emissions <sup>4</sup> (Tons CO <sub>2</sub> /yr)	AB 32 Reductions in Place <sup>5</sup> (%)	CO <sub>2</sub> to CO <sub>2</sub> e Ratio <sup>6</sup>	Annual CO <sub>2</sub> e Emissions (MTCO <sub>2</sub> e/yr)	
									w/o AB 32	w/ AB 32
BAU Project										
Strip Mall	820	371.50 ksf	0.0%	39.44	39.44	18,849.18	0.0%	0.95	17,999.68	17,999.68
General Office Building	710	137.00 ksf	0.0%	22.23	22.23	4,322.23	0.0%	0.95	4,127.43	4,127.43
General Light Industry	110	88.00 ksf	0.0%	6.97	6.97	907.50	0.0%	0.95	866.60	866.60
Subtotal						24,078.91			22,993.71	22,993.71
Proposed Project										
Strip Mall	820	371.50 ksf	6.1%	39.44	37.03	17,697.39	29.7%	0.95	16,899.80	11,880.56
General Office Building	710	137.00 ksf	6.1%	22.23	20.87	4,057.80	29.7%	0.95	3,874.92	2,724.07
General Light Industry	110	88.00 ksf	0.0%	6.97	6.97	907.50	0.0%	0.95	866.60	866.60
Subtotal						22,662.69			21,641.32	15,471.23
<b>Proposed Project Reduction from BAU</b>									<b>1,352.39</b>	<b>7,522.48</b>
<b>Percent Reduction from BAU</b>									<b>5.9%</b>	<b>32.7%</b>

Sources:

- Sacramento Metropolitan Air Quality Management District, *Recommended Guidance for Land Use Emission Reductions*, (2010).
- California Air Pollution Control Officer's Association, *CEQA and Climate Change*, (2008).  
Transportation-Related Features include:  
  - *Bicycle Parking*: On-street bicycle parking will be distributed throughout the commercial areas of the project and placed conveniently near building entrances without obstructing pedestrian movement. (0.625% reduction applied to commercial uses)
  - *Proximity to bike path/bike lanes*: Entire project is located within 1/2 mile of an existing Class I or Class II bike lane and project design includes a comparable network that connects the project uses to the existing offsite facility. (0.625% reduction applied to residential and commercial uses)
  - *Pedestrian Network*: Creation of a denser, more compact pattern of development that positively defines the public realm, and supports a vibrant, "walkable" community. (1% reduction applied to residential and commercial uses)
  - *Bus Shelter for Existing Transit Service*: Bus service provides headways of one hour or less for stops within 1/4 mile; project provides safe and convenient bicycle/pedestrian access to transit stops and provides essential transit stop improvements (i.e., shelters, route information, benches, and lighting). (0.25% reduction applied to residential and commercial uses)
  - *Traffic Calming*: Project design includes pedestrian/bicycle safety and traffic calming measures in excess of jurisdiction requirements. Roadways are designed to reduce motor vehicle speeds and encourage pedestrian and bicycle trips by featuring traffic calming features. (0.25% reduction applied to residential and commercial uses)
  - *Office/Mixed-use Density*: Project provides high density office or mixed-use proximate to transit. (0.1% reduction applied to residential and commercial uses)
  - *Orientation Toward Planned Transit, Bikeway, or Pedestrian Corridor*: Project is oriented towards planned transit, bicycle, or pedestrian corridor. Setback distance is minimized. (0.25% reduction applied to residential and commercial uses)
  - *Residential Density*: Project provides high-density residential development. (1% reduction applied to residential uses)
  - *Urban Mixed-use*: Development of projects predominantly characterized by properties or which various uses, such as office, commercial, institutional, and residential, are combined in a single building or on a single site in an integrated development project with functional interrelationships and a coherent physical design. (3% reduction applied to residential and commercial uses)
- For BAU: Thousand Oaks Boulevard General Plan Amendment, *Projected Project Trip Rates and Generations*, (2010).  
For Proposed Project: Thousand Oaks Boulevard General Plan Amendment, *Projected Project Trip Rates and Generations*, (2010).
- Estimated CO<sub>2</sub> emissions from URBEMIS2007 Environmental Management Software.
- California Air Resources Board, *Climate Change Scoping Plan*, (2008). See Table SP-GHG-2.
- U.S. Environmental Protection Agency, *Emission Facts - Greenhouse Gas Emissions from a Typical Passenger Vehicle*, (2005) 4. It is assumed that CO<sub>2</sub> accounts for 95% of the greenhouse gas emissions, while CH<sub>4</sub>, N<sub>2</sub>O, and HFCs account for 5% of the emissions.

Where:

ADT                      Average daily trips  
CO<sub>2</sub>                     Carbon dioxide  
CO<sub>2</sub>e                    Carbon dioxide equivalent

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**Table GP/SP-GHG-4  
Vehicle Miles Traveled Adjustment in URBEMIS2007**

Emissions Scenario	Trip Type	VMT Reduction <sup>1</sup> (%)	Urban	Adjusted Trip Length (miles/trip)	VMT Reduction <sup>1</sup> (%)	Rural	Adjusted Trip Length (miles/trip)
			Base Trip Length <sup>2</sup> (miles/trip)			Base Trip Length <sup>2</sup> (miles/trip)	
BAU Project	Home-based Work	0.0%	10.8	10.8	0.0%	16.8	16.8
	Home-based Shop	0.0%	7.3	7.3	0.0%	7.1	7.1
	Home-based Other	0.0%	7.5	7.5	0.0%	7.9	7.9
	Commercial-based Commute	0.0%	9.5	9.5	0.0%	14.7	14.7
	Commercial-based Non-Work	0.0%	7.3	7.3	0.0%	6.6	6.6
	Commercial-based Customer	0.0%	7.3	7.3	0.0%	6.6	6.6
Proposed Project	Home-based Work	20.0%	10.8	8.6	0.0%	16.8	16.8
	Home-based Shop	20.0%	7.3	5.8	0.0%	7.1	7.1
	Home-based Other	20.0%	7.5	6.0	0.0%	7.9	7.9
	Commercial-based Commute	20.0%	9.5	7.6	0.0%	14.7	14.7
	Commercial-based Non-Work	20.0%	7.3	5.8	0.0%	6.6	6.6
	Commercial-based Customer	20.0%	7.3	5.8	0.0%	6.6	6.6

Sources:

- California Air Pollution Control Officer's Association, *CEQA and Climate Change*, (2008).

Vehicle Miles Traveled-Reduction Features include:

- MM D-12: Infill Development - Infill development reduces VMT by 20%.

- URBEMIS2007 (version 9.2.4) Environmental Management Software. Project was modeled using the "urban" setting.

Where:

VMT                      Vehicle miles traveled

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**Table GP/SP-GHG-5  
Area Source GHG Emissions**

Emissions Scenario	Efficiency Standards <sup>1,2</sup>			CO <sub>2</sub> Emission Factor GWP = 1 (kg/MMBtu)	CH <sub>4</sub> Emission Factor GWP = 21 (kg/MMBtu)	N <sub>2</sub> O Emission Factor GWP = 310 (kg/MMBtu)	Annual CO <sub>2</sub> Emissions (Tons CO <sub>2</sub> /yr)	AB 32 Reductions in Place <sup>6</sup> (%)	Annual CO <sub>2</sub> e Emissions (MTCO <sub>2</sub> e/yr)	
	Title 24 2005 (%)	Title 24 2008 (%)	Cumulative Efficiency (%)						w/o AB 32	w/ AB 32
BAU Project										
Natural Gas <sup>3</sup>	0.00%	0.00%	0.00%	56.06	0.005	0.0001	1,162.86	0.0%	1,057.49	1,057.49
Landscape Maintenance <sup>4</sup>	-	-	-	70.88	0.011	0.0006	0.76	0.0%	0.69	0.69
Hearths (Natural Gas) <sup>3</sup>	-	-	-	56.06	0.005	0.0001	-	0.0%	-	-
Hearths (Wood) <sup>5</sup>	-	-	-	93.87	0.316	0.0042	-	0.0%	-	-
Subtotal							1,163.62		1,058.18	1,058.18
Proposed Project										
Natural Gas <sup>3</sup> (Non-Res.)	0.00%	9.40%	9.40%	56.06	0.005	0.0001	1,070.13	9.5%	973.16	880.71
Landscape Maintenance <sup>4</sup>	-	-	-	70.88	0.011	0.0006	0.76	0.0%	0.69	0.69
Hearths (Natural Gas) <sup>3</sup>	-	-	-	56.06	0.005	0.0001	-	0.0%	-	-
Hearths (Wood) <sup>5</sup>	-	-	-	93.87	0.316	0.0042	-	0.0%	-	-
Subtotal							1,070.89		973.85	881.40
<b>Proposed Project Reduction from BAU</b>									<b>84.33</b>	<b>176.78</b>
<b>Percent Reduction from BAU</b>									<b>8.0%</b>	<b>16.7%</b>

Note:

The cumulative efficiency percentage is calculated based on the following formula: (X% + Y%) - (X% × Y%).

Sources:

1. California Energy Commission, *Impact Analysis: 2005 Update to the California Energy Efficiency Standards*, (2003) 6.
2. California Energy Commission, *Impact Analysis: 2008 Update to the California Energy Efficiency Standards*, (2007) 6.
3. URBEMIS2007 uses a CO<sub>2</sub> emission factor of 120,000 pounds per million cubic feet for natural gas. This value was converted to kg/MMBtu based on 1.03 therms per cubic feet.
4. California Climate Action Registry, *General Reporting Protocol: Reporting Entity-Wide Greenhouse Gas Emissions*, Version 3.1, (2009) 101, 103. Landscape maintenance equipment were assumed to be fueled with motor gasoline.
5. California Climate Action Registry, *General Reporting Protocol: Reporting Entity-Wide Greenhouse Gas Emissions*, Version 3.1, (2009) 102, 103.
6. California Air Resources Board, *Climate Change Scoping Plan*, (2008).

Where:

CH <sub>4</sub>	Methane	MMBtu	Million British thermal units
CO <sub>2</sub>	Carbon dioxide	MT	Metric ton
CO <sub>2</sub> e	Carbon dioxide equivalent	N <sub>2</sub> O	Nitrous oxide
GWP	Global warming potential	yr	Year
kg	Kilogram		

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**Table GP/SP-GHG-6  
Electrical Consumption GHG Emissions**

Emissions Scenario	Units	Efficiency Standards <sup>1,2</sup>			Energy Efficiency Features <sup>3,4,5</sup> (%)	Electricity Consumption Factor <sup>6,7</sup> (kW-hr/unit/yr)	Annual Consumption Factor (MW-hr/yr)	CO <sub>2</sub> Emission Factor <sup>8</sup> GWP = 1 (lbs/MW-hr)	CH <sub>4</sub> Emission Factor <sup>9</sup> GWP = 21 (lbs/MW-hr)	N <sub>2</sub> O Emission Factor <sup>9</sup> GWP = 310 (lbs/MW-hr)	AB 32 Reductions in Place <sup>10</sup> (%)	Annual CO <sub>2</sub> e Emissions (MTCO <sub>2</sub> e/yr)	
		Title 24 2005 (%)	Title 24 2008 (%)	Cumulative Efficiency (%)								w/o AB 32	w/ AB 32
BAU Project													
Retail/Shopping	371,500 sf	0.0%	0.0%	0.0%	0.0%	16.75	6,222.63	678.88	0.030	0.011	0.0%	1,927.29	1,927.29
Office	137,000 sf	0.0%	0.0%	0.0%	0.0%	16.75	2,294.75	678.88	0.030	0.011	0.0%	710.74	710.74
Industrial	88,000 sf	0.0%	0.0%	0.0%	0.0%	10.50	924.00	678.88	0.030	0.011	0.0%	286.18	286.18
Subtotal							9,441.38					2,924.22	2,924.22
Proposed Project													
Retail/Shopping	371,500 sf	0.0%	4.9%	4.9%	0.0%	15.93	5,917.72	630.89	0.029	0.011	36.7%	1,704.24	1,078.79
Office	137,000 sf	0.0%	4.9%	4.9%	0.0%	15.93	2,182.31	630.89	0.029	0.011	36.7%	628.48	397.83
Industrial	88,000 sf	0.0%	4.9%	4.9%	0.0%	9.99	878.72	678.88	0.290	0.011	0.0%	274.38	274.38
Subtotal							8,978.75					2,607.10	1,750.99
<b>Proposed Project Reduction from BAU</b>												<b>317.12</b>	<b>1,173.23</b>
<b>Percent Reduction from BAU</b>												<b>10.8%</b>	<b>40.1%</b>

**Note:**

The cumulative efficiency percentage for the Title 24 Standards is calculated based on the following formula: (X% + Y%) - (X% × Y%).

**Sources:**

- California Energy Commission, *Impact Analysis: 2005 Update to the California Energy Efficiency Standards*, (2003) 4.
- California Energy Commission, *Impact Analysis: 2008 Update to the California Energy Efficiency Standards*, (2007) 4.
- Sacramento Metropolitan Air Quality Management District, *Recommended Guidance for Land Use Emission Reductions*, (2010).  
Energy-Saving Features include:  
- The project contains measures that will reduce electricity consumption. However, the measures cannot be quantified.
- California Air Pollution Control Officer's Association, *CEQA and Climate Change*, (2008).  
Energy-Saving Features include:  
- The project contains measures that will reduce electricity consumption. However, the measures cannot be quantified.
- Additional Project Applicant Measures.  
Energy-Saving Features include:  
- The project contains measures that will reduce electricity consumption. However, the measures cannot be quantified.
- California Air Pollution Control Officer's Association, *CEQA and Climate Change*, (2008) 61.
- South Coast Air Quality Management District, *CEQA Air Quality Handbook*, (1993) A9-114.
- California Climate Action Registry, "Climate Action Registry Reporting Online Tool," <https://www.climateregistry.org/CARROT/public/reports.aspx>. 2010. See *2007 Annual Entity Emissions: Electric Power Generation/Electric Utility Sector, Southern California Edison*.  
The CO<sub>2</sub> factor is for Southern California Edison. For BAU Project: The CO<sub>2</sub> factor is based on the 2004 value. For Proposed Project: The CO<sub>2</sub> factor is based on the 2007 value.
- California Air Resources Board, *Local Government Operations Protocol for the Quantification and Reporting of Greenhouse Gas Emissions Inventories*, Version 1.0, (2008) 174.  
For BAU Project: The CH<sub>4</sub> and N<sub>2</sub>O factors are based on the statewide average of the 2002-2004 values. For Proposed Project: The CH<sub>4</sub> and N<sub>2</sub>O factors are based on the statewide 2004 values.
- California Air Resources Board, *Climate Change Scoping Plan*, (2008).

**Where:**

CH <sub>4</sub>	Methane	lbs	Pounds
CO <sub>2</sub>	Carbon dioxide	MW-hr	Megawatt-hour
CO <sub>2</sub> e	Carbon dioxide equivalent	MT	Metric ton
gsf	Gross square feet	n/a	Not applicable
GWP	Global warming potential	N <sub>2</sub> O	Nitrous oxide
kW-hr	Kilowatt-hour	yr	Year

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**Table GP/SP-GHG-7  
Solid Waste GHG Emissions**

<b>Emissions Scenario</b>	<b>Units</b>	<b>Solid Waste Generation<sup>1</sup> (MT/yr)</b>	<b>CO<sub>2</sub>e Emission Factor<sup>2</sup> (MT CO<sub>2</sub>e/MT waste)</b>	<b>Annual CO<sub>2</sub>e Emissions (MT CO<sub>2</sub>e/yr)</b>
BAU Project				
Retail/Shopping	371,500 sf	244.94	0.37	90.63
Office	137,000 sf	-	0.37	-
Industrial	88,000 sf	-	0.37	-
Subtotal		244.94		90.63
Proposed Project				
Retail/Shopping	371,500 sf	244.94	0.37	90.63
Office	137,000 sf	-	0.37	-
Industrial	88,000 sf	-	0.37	-
Subtotal		244.94		90.63
<b>Proposed Project Reduction from BAU</b>				-
<b>Percent Reduction from BAU</b>				<b>0.0%</b>

Sources:

1. Draft EIR, Section 4.8, Solid Waste. Values converted to metric tons.
2. U.S. Environmental Protection Agency, *Solid Waste Management and Greenhouse Gases: A Lifecycle Assessment of Emissions and Sinks* (2006) 93. The net CO<sub>2</sub>e emission factors are based on mixed municipal solid waste (MSW) as disposed in landfills without landfill gas recovery.

Where:

CO <sub>2</sub> e	Carbon dioxide equivalent
gsf	Gross square feet
MT	Metric ton
yr	Year



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**Table GP/SP-GHG-8  
Potable Water Supply, Conveyance, Treatment, and Distribution GHG Emissions**

Emissions Scenario	Water Saving Features (%)	Potable Water Estimate <sup>1</sup> (MG/yr)	Electrical Consumption Factor <sup>2,3,4</sup> (kW-hr/MG)	Annual Electrical Consumption (MW-hr/yr)	CO <sub>2</sub> Emission Factor <sup>5</sup> GWP = 1 (lbs/MW-hr)	CH <sub>4</sub> Emission Factor <sup>6</sup> GWP = 21 (lbs/MW-hr)	N <sub>2</sub> O Emission Factor <sup>6</sup> GWP = 310 (lbs/MW-hr)	Annual CO <sub>2</sub> e Emissions (MTCO <sub>2</sub> e/yr)
BAU Project								
Supply & Conveyance	0.00%	27.38	9,727	266.28	678.88	0.030	0.011	82.47
Treatment	0.00%	27.38	111	3.04	678.88	0.030	0.011	0.94
Distribution	0.00%	27.38	1,272	34.82	678.88	0.030	0.011	10.78
Recycled Water	0.00%	-	875	-	678.88	0.030	0.011	-
Subtotal								94.20
Proposed Project								
Supply & Conveyance	0.00%	27.38	9,727	266.28	630.89	0.029	0.011	76.68
Treatment	0.00%	27.38	111	3.04	630.89	0.029	0.011	0.88
Distribution	0.00%	27.38	1,272	34.82	630.89	0.029	0.011	10.03
Recycled Water	0.00%	-	875	-	630.89	0.029	0.011	-
Subtotal								87.59
<b>Proposed Project Reduction from BAU Percent Reduction from BAU</b>								<b>6.61 7.02%</b>

Sources:

- Based on 125% of the wastewater generation.
- California Energy Commission, *California's Water-Energy Relationship, Final Staff Report*, CEC-700-2005-011-SF, (2005) 26.
- California Energy Commission, *Refining Estimates of Water-Related Energy Use in California, PIER Final Project Report*, CEC-500-2006-118, (2006) 22.
- R. C. Wilkinson, et. al, California Department of Water Resources, *Water Sources "Powering" Southern California*, n.d.  
Recycled water is estimated to use 285 kW-hr per acre-foot (West Basin Municipal Water District).
- California Climate Action Registry, "Climate Action Registry Reporting Online Tool," <https://www.climateregistry.org/CARROT/public/reports.aspx>. 2010. See *2008 Annual Entity Emissions: Electric Power Generation/Electric Utility Sector, Imperial Irrigation District*.  
The CO<sub>2</sub> factor is for the Imperial Irrigation District. For BAU Project: The CO<sub>2</sub> factor is based on the 2006 value (data is not available prior to this year). For Proposed Project: The CO<sub>2</sub> factor is based on the 2008 value.
- California Air Resources Board, *Local Government Operations Protocol for the Quantification and Reporting of Greenhouse Gas Emissions Inventories*, Version 1.0, (2008) 174.

For BAU Project: The CH<sub>4</sub> and N<sub>2</sub>O factors are based on the average of the 2002-2004 values. For Proposed Project: The CH<sub>4</sub> and N<sub>2</sub>O factors are based on the 2004 values.

Where:

CH <sub>4</sub>	Methane	MG	Million gallons
CO <sub>2</sub>	Carbon dioxide	MW-hr	Megawatt-hour
CO <sub>2</sub> e	Carbon dioxide equivalent	MT	Metric ton
GWP	Global warming potential	n/a	Not applicable
kW-hr	Kilowatt-hour	N <sub>2</sub> O	Nitrous oxide
lbs	Pounds	yr	Year

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**Table GP/SP-GHG-9  
Wastewater Treatment Electrical Demand GHG Emissions**

<b>Emissions Scenario</b>	<b>Net Wastewater Generation Rate<sup>1</sup> (MG/yr)</b>	<b>Electrical Demand Factor<sup>2</sup> (kW-hr/MG)</b>	<b>Annual Demand Factor (MW-hr/yr)</b>	<b>CO<sub>2</sub> Emission Factor<sup>3</sup> GWP = 1 (lbs/MW-hr)</b>	<b>CH<sub>4</sub> Emission Factor<sup>3</sup> GWP = 21 (lbs/MW-hr)</b>	<b>N<sub>2</sub>O Emission Factor<sup>3</sup> GWP = 310 (lbs/MW-hr)</b>	<b>Annual CO<sub>2</sub>e Emissions (MT CO<sub>2</sub>e/yr)</b>
BAU Project							
Retail/Shopping	21.90	1,911	41.85	678.88	0.030	0.011	12.96
Subtotal	21.90						12.96
Proposed Project							
Retail/Shopping	21.90	1,911	41.85	630.89	0.029	0.011	12.05
Subtotal	21.90						12.05
<b>Proposed Project Reduction from BAU</b>							<b>0.91</b>
<b>Percent Reduction from BAU</b>							<b>7.02%</b>

Sources:

1. Draft EIR, Section 4.9.5, Sewer. Values are converted to million gallons per year.
2. California Energy Commission, *Refining Estimates of Water-Related Energy Use in California, PIER Final Project Report (CEC-500-2006-118)*. Prepared by Navigant Consulting, Inc., (2006) 22.
3. California Air Resources Board, *Local Government Operations Protocol for the Quantification and Reporting of Greenhouse Gas Emissions Inventories*, Version 1.0, (2008) 174.

The CO<sub>2</sub> factor is for Southern California Edison. For BAU Project: The CO<sub>2</sub> factor is based on the 2004 value (data is not available for 2002 and 2003). The CH<sub>4</sub> and N<sub>2</sub>O factors are based on the average of the 2002-2004 values. For Proposed Project: The CO<sub>2</sub> factor is based on the 2006 value. The CH<sub>4</sub> and N<sub>2</sub>O factors are based on the 2004 values.

Where:

CH <sub>4</sub>	Methane	MG	Million gallons
CO <sub>2</sub>	Carbon dioxide	MT	Metric ton
CO <sub>2</sub> e	Carbon dioxide equivalent	MW-hr	Megawatt-hour
GWP	Global warming potential	N <sub>2</sub> O	Nitrous oxide
kW-hr	Kilowatt-hour	yr	Year
lbs	Pounds		

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**Table GP-GHG-1  
Summary of Annual GHG Emissions**

Emissions Scenario	Operational Direct Emissions		Operational Indirect Emissions				Total Emissions (MTCO <sub>2</sub> e/yr)
	Motor Vehicles (MTCO <sub>2</sub> e/yr)	Area Sources (MTCO <sub>2</sub> e/yr)	Electricity (MTCO <sub>2</sub> e/yr)	Solid Waste (MTCO <sub>2</sub> e/yr)	Water (MTCO <sub>2</sub> e/yr)	Wastewater (MTCO <sub>2</sub> e/yr)	
Without AB32 Measures							
BAU Project	1,754,195	245,378	246,913	40,181	24,381	3,355	<b>2,314,403</b>
General Plan	1,754,195	245,378	228,870	40,181	22,670	3,120	<b>2,294,413</b>
<b>General Plan Reduction from BAU</b>	-	-	18,043	-	1,711	235	<b>19,990</b>
<b>Percent Reduction from BAU</b>	0.0%	0.0%	7.3%	0.0%	7.0%	7.0%	<b>0.9%</b>
With AB32 Measures							
BAU Project	1,754,195	245,378	246,913	40,181	24,381	3,355	<b>2,314,403</b>
General Plan	1,233,199	224,823	144,874	40,181	22,670	3,120	<b>1,668,867</b>
<b>General Plan Reduction from BAU</b>	520,996	20,555	102,039	-	1,711	235	<b>645,536</b>
<b>Percent Reduction from BAU</b>	29.7%	8.4%	41.3%	0.0%	7.0%	7.0%	<b>27.9%</b>

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**Table GP-GHG-2  
AB 32 Measures<sup>1</sup>**

<b>Emissions Source</b>	<b>California Legislation</b>	<b>Reduction from 2020 GHG Inventory (%)</b>	<b>Land Use End Use Sector</b>	<b>Included in Project Reductions?</b>
Mobile	AB 1493 (Pavley Phase 1 and 2)	19.7%	On-road transportation (passenger, light-duty)	YES
Mobile	Passenger Vehicle Efficiency	2.8%	On-road transportation (passenger, light-duty)	YES
Mobile	Low Carbon Fuel Standard	7.2%	On-road transportation (passenger, light-duty)	YES
Mobile	Heavy/Medium Duty Efficiency	2.9%	On-road transportation (heavy- and medium-duty)	YES
Mobile	Low Carbon Fuel Standard	7.2%	On-road transportation (heavy- and medium-duty)	YES
Area	Energy Efficiency - Natural Gas	9.5%	Natural gas (residential)	YES
Area	Energy Efficiency - Natural Gas	9.5%	Natural gas (commercial)	YES
Indirect	Energy Efficiency - Electricity	15.7%	Electricity	YES
Indirect	Renewables Portfolio Standard (33%) <sup>2</sup>	21.0%	Electricity (exclude Cogen)	YES
Indirect	Solar Roof Initiative	1.5%	Electricity (exclude Cogen)	NO
<b>Total credits given to land use-driven emission inventory sectors from Scoping Plan measures</b>				

Sources:

1. California Air Resources Board, *Climate Change Scoping Plan*, (2008).
2. California Energy Commission, *2007 Net System Power Report, Commission Report*, (2008) 4-5.

The CEC estimated that about 12 percent of California's retail electric load was met with renewable resources, including wind, solar, geothermal, small hydroelectric, biomass, and biogas.

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**Table GP-GHG-3  
Operational Motor Vehicle GHG Emissions**

Emissions Scenario	ITE Code	Units	Trip Reduction Features <sup>1,2</sup> (%)	Base Trip Rate <sup>3</sup> (ADT/unit)	Adjusted Trip Rate with Features (ADT/unit)	Annual CO <sub>2</sub> Emissions <sup>4</sup> (Tons CO <sub>2</sub> /yr)	AB 32 Reductions in Place <sup>5</sup> (%)	CO <sub>2</sub> to CO <sub>2</sub> e Ratio <sup>6</sup>	Annual CO <sub>2</sub> e Emissions (MTCO <sub>2</sub> e/yr)	
									w/o AB 32	w/ AB 32
<b>BAU Project</b>										
Single Family Housing	210	31,800.00 DU	0.0%	12.27	12.27	587,029.12	0.0%	0.95	560,572.64	560,572.64
Apartments (mid rise) <sup>a</sup>	223	7,200.00 DU	0.0%	10.09	10.09	109,297.85	0.0%	0.95	104,371.97	104,371.97
Condo/Townhouse (general) <sup>a</sup>	230	8,300.00 DU	0.0%	7.65	7.65	95,527.30	0.0%	0.95	91,222.04	91,222.04
Elementary School	520	8,500.00 students	0.0%	1.29	1.29	14,900.03	0.0%	0.95	14,228.51	14,228.51
Junior High School	522	4,800.00 students	0.0%	1.62	1.62	10,566.59	0.0%	0.95	10,090.37	10,090.37
High School	530	7,300.00 students	0.0%	1.71	1.71	16,460.63	0.0%	0.95	15,718.78	15,718.78
Hotel <sup>b</sup>	310	1,500.00 rooms	0.0%	8.18	8.18	15,913.48	0.0%	0.95	15,196.28	15,196.28
Regional Shopping Center <sup>c</sup>	820	4,454.50 ksf	0.0%	67.96	67.96	389,447.69	0.0%	0.95	371,895.90	371,895.90
Strip Mall <sup>c</sup>	820	4,454.50 ksf	0.0%	45.91	45.91	263,089.22	0.0%	0.95	251,232.20	251,232.20
General Office Building	710	6,873.00 ksf	0.0%	13.51	13.51	131,780.06	0.0%	0.95	125,840.94	125,840.94
Government Civic Center <sup>d</sup>	733	1,100.00 ksf	0.0%	27.92	27.92	40,498.20	0.0%	0.95	38,673.01	38,673.01
Hospital <sup>d</sup>	610	650.00 ksf	0.0%	16.50	16.50	14,789.63	0.0%	0.95	14,123.08	14,123.08
General Light Industry	110	14,231.00 ksf	0.0%	6.97	6.97	147,685.45	0.0%	0.95	141,029.50	141,029.50
<b>Subtotal</b>						1,836,985.25			1,754,195.22	1,754,195.22
<b>General Plan</b>										
Single Family Housing	210	31,800.00 DU	0.0%	12.27	12.27	587,029.12	29.7%	0.95	560,572.64	394,082.57
Apartments (mid rise) <sup>a</sup>	223	7,200.00 DU	0.0%	10.09	10.09	109,297.85	29.7%	0.95	104,371.97	73,373.49
Condo/Townhouse (general) <sup>a</sup>	230	8,300.00 DU	0.0%	7.65	7.65	95,527.30	29.7%	0.95	91,222.04	64,129.09
Elementary School	520	8,500.00 students	0.0%	1.29	1.29	14,900.03	29.7%	0.95	14,228.51	10,002.64
Junior High School	522	4,800.00 students	0.0%	1.62	1.62	10,566.59	29.7%	0.95	10,090.37	7,093.53
High School	530	7,300.00 students	0.0%	1.71	1.71	16,460.63	29.7%	0.95	15,718.78	11,050.30
Hotel <sup>b</sup>	310	1,500.00 rooms	0.0%	8.18	8.18	15,913.48	29.7%	0.95	15,196.28	10,682.99
Regional Shopping Center <sup>c</sup>	820	4,454.50 ksf	0.0%	65.40	65.40	389,447.69	29.7%	0.95	371,895.90	261,442.81
Strip Mall <sup>c</sup>	820	4,454.50 ksf	0.0%	45.91	45.91	263,089.22	29.7%	0.95	251,232.20	176,616.24
General Office Building	710	6,873.00 ksf	0.0%	13.51	13.51	131,780.06	29.7%	0.95	125,840.94	88,466.18
Government Civic Center <sup>d</sup>	733	1,100.00 ksf	0.0%	27.92	27.92	40,498.20	29.7%	0.95	38,673.01	27,187.13
Hospital <sup>d</sup>	610	650.00 ksf	0.0%	16.50	16.50	14,789.63	29.7%	0.95	14,123.08	9,928.53
General Light Industry	110	14,231.00 ksf	0.0%	6.97	6.97	147,685.45	29.7%	0.95	141,029.50	99,143.74
<b>Subtotal</b>						1,836,985.25			1,754,195.22	1,233,199.24
<b>General Plan Reduction from BAU</b>									-	520,995.98
<b>Percent Reduction from BAU</b>									0.0%	29.7%

**Sources:**

- Sacramento Metropolitan Air Quality Management District, *Recommended Guidance for Land Use Emission Reductions*, (2010).  
Transportation-Related Features include:  
-None
- California Air Pollution Control Officer's Association, *CEQA and Climate Change*, (2008).  
Transportation-Related Features include:  
-None
- For BAU: Thousand Oaks Boulevard General Plan Amendment, *Projected Project Trip Rates and Generations*, (2010).  
For Proposed Project: Thousand Oaks Boulevard General Plan Amendment, *Projected Project Trip Rates and Generations*, (2010).
- Estimated CO<sub>2</sub> emissions from URBEMIS2007 Environmental Management Software.
- California Air Resources Board, *Climate Change Scoping Plan*, (2008). See Table GP-GHG-2.
- U.S. Environmental Protection Agency, *Emission Facts - Greenhouse Gas Emissions from a Typical Passenger Vehicle*, (2005) 4. It is assumed that CO<sub>2</sub> accounts for 95% of the greenhouse gas emissions, while CH<sub>4</sub>, N<sub>2</sub>O, and HFCs account for 5% of the emissions.

**Notes:**

- Analysis assumes multi-family units are 50% apartments and 50% condominiums. Specific breakdowns are not available.
- The URBEMIS2007 model assumes 500 square feet per hotel room.
- Analysis assumes commercial/retails is generally comprised of 50% regional shopping and 50% strip mall. Specific breakdowns are not available.
- Analysis assumes public/institutional, with the exception of schools, are 50% civic and 50% hospital uses. Specific breakdowns are not available.

**Where:**

ADT                      Average daily trips  
CO<sub>2</sub>                      Carbon dioxide  
CO<sub>2</sub>e                      Carbon dioxide equivalent

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**Table GP-GHG-4  
Vehicle Miles Traveled Adjustment in URBEMIS2007**

Emissions Scenario	Trip Type	VMT Reduction <sup>1</sup> (%)	Urban	Adjusted Trip Length (miles/trip)	VMT Reduction <sup>1</sup> (%)	Rural	Adjusted Trip Length (miles/trip)
			Base Trip Length <sup>2</sup> (miles/trip)			Base Trip Length <sup>2</sup> (miles/trip)	
BAU Project	Home-based Work	0.0%	10.8	10.8	0.0%	16.8	16.8
	Home-based Shop	0.0%	7.3	7.3	0.0%	7.1	7.1
	Home-based Other	0.0%	7.5	7.5	0.0%	7.9	7.9
	Commercial-based Commute	0.0%	9.5	9.5	0.0%	14.7	14.7
	Commercial-based Non-Work	0.0%	7.3	7.3	0.0%	6.6	6.6
	Commercial-based Customer	0.0%	7.3	7.3	0.0%	6.6	6.6
General Plan	Home-based Work	0.0%	10.8	10.8	0.0%	16.8	16.8
	Home-based Shop	0.0%	7.3	7.3	0.0%	7.1	7.1
	Home-based Other	0.0%	7.5	7.5	0.0%	7.9	7.9
	Commercial-based Commute	0.0%	9.5	9.5	0.0%	14.7	14.7
	Commercial-based Non-Work	0.0%	7.3	7.3	0.0%	6.6	6.6
	Commercial-based Customer	0.0%	7.3	7.3	0.0%	6.6	6.6

Sources:

- California Air Pollution Control Officer's Association, *CEQA and Climate Change*, (2008).

Vehicle Miles Traveled-Reduction Features include:

- None

- URBEMIS2007 (version 9.2.4) Environmental Management Software. Project was modeled using the "urban" setting.

Where:

VMT                      Vehicle miles traveled

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**Table GP-GHG-5  
Area Source GHG Emissions**

Emissions Scenario	Efficiency Standards <sup>1,2</sup>			CO <sub>2</sub> Emission Factor GWP = 1 (kg/MMBtu)	CH <sub>4</sub> Emission Factor GWP = 21 (kg/MMBtu)	N <sub>2</sub> O Emission Factor GWP = 310 (kg/MMBtu)	Annual CO <sub>2</sub> Emissions (Tons CO <sub>2</sub> /yr)	AB 32 Reductions in Place <sup>6</sup> (%)	Annual CO <sub>2</sub> e Emissions (MTCO <sub>2</sub> e/yr)	
	Title 24 2005 (%)	Title 24 2008 (%)	Cumulative Efficiency (%)						w/o AB 32	w/ AB 32
BAU Project										
Natural Gas <sup>3</sup>	0.00%	0.00%	0.00%	56.06	0.005	0.0001	237,928.86	0.0%	216,369.09	216,369.09
Landscape Maintenance <sup>4</sup>	-	-	-	70.88	0.011	0.0006	208.17	0.0%	189.96	189.96
Hearths (Natural Gas) <sup>3</sup>	-	-	-	56.06	0.005	0.0001	122.68	0.0%	111.56	111.56
Hearths (Wood) <sup>5</sup>	-	-	-	93.87	0.316	0.0042	29,176.91	0.0%	28,707.16	28,707.16
Subtotal							267,436.62		245,377.77	245,377.77
General Plan										
Natural Gas <sup>3</sup>	0.00%	0.00%	0.00%	56.06	0.005	0.0001	237,928.86	9.5%	216,369.09	195,814.03
Landscape Maintenance <sup>4</sup>	-	-	-	70.88	0.011	0.0006	208.17	0.0%	189.96	189.96
Hearths (Natural Gas) <sup>3</sup>	-	-	-	56.06	0.005	0.0001	122.68	0.0%	111.56	111.56
Hearths (Wood) <sup>5</sup>	-	-	-	93.87	0.316	0.0042	29,176.91	0.0%	28,707.16	28,707.16
Subtotal							267,436.62		245,377.77	224,822.71
<b>General Plan Reduction from BAU</b>									-	20,555.06
<b>Percent Reduction from BAU</b>									0.0%	8.4%

Note:

The cumulative efficiency percentage is calculated based on the following formula: (X% + Y%) - (X% × Y%).

Sources:

1. California Energy Commission, *Impact Analysis: 2005 Update to the California Energy Efficiency Standards*, (2003) 6.
2. California Energy Commission, *Impact Analysis: 2008 Update to the California Energy Efficiency Standards*, (2007) 6.
3. URBEMIS2007 uses a CO<sub>2</sub> emission factor of 120,000 pounds per million cubic feet for natural gas. This value was converted to kg/MMBtu based on 1.03 therms per cubic feet.
4. California Climate Action Registry, *General Reporting Protocol: Reporting Entity-Wide Greenhouse Gas Emissions*, Version 3.1, (2009) 101, 103. Landscape maintenance equipment were assumed to be fueled with motor gasoline.
5. California Climate Action Registry, *General Reporting Protocol: Reporting Entity-Wide Greenhouse Gas Emissions*, Version 3.1, (2009) 102, 103.
6. California Air Resources Board, *Climate Change Scoping Plan*, (2008).

Where:

CH <sub>4</sub>	Methane	MMBtu	Million British thermal units
CO <sub>2</sub>	Carbon dioxide	MT	Metric ton
CO <sub>2</sub> e	Carbon dioxide equivalent	N <sub>2</sub> O	Nitrous oxide
GWP	Global warming potential	yr	Year
kg	Kilogram		

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**Table GP-GHG-6  
Electrical Consumption GHG Emissions**

Emissions Scenario	Units	Efficiency Standards <sup>1,2</sup>			Energy Efficiency Features <sup>3,4,5</sup> (%)	Electricity Consumption Factor <sup>6,7</sup> (kW-hr/unit/yr)	Annual Consumption Factor (MW-hr/yr)	CO <sub>2</sub> Emission Factor <sup>8</sup> GWP = 1 (lbs/MW-hr)	CH <sub>4</sub> Emission Factor <sup>9</sup> GWP = 21 (lbs/MW-hr)	N <sub>2</sub> O Emission Factor <sup>9</sup> GWP = 310 (lbs/MW-hr)	AB 32 Reductions in Place <sup>10</sup> (%)	Annual CO <sub>2</sub> e Emissions (MTCO <sub>2</sub> e/yr)	
		Title 24 2005 (%)	Title 24 2008 (%)	Cumulative Efficiency (%)									
												w/o AB 32	w/ AB 32
BAU Project													
Single Family Housing	31,800 DU	0.0%	0.0%	0.0%	0.0%	7,000.00	222,600.00	678.88	0.030	0.011	0.0%	68,944.49	68,944.49
Multi-Family Housing	15,500 DU	0.0%	0.0%	0.0%	0.0%	5,626.50	87,210.75	678.88	0.030	0.011	0.0%	27,011.24	27,011.24
Retail/Shopping	8,909,000 sf	0.0%	0.0%	0.0%	0.0%	16.75	149,225.75	678.88	0.030	0.011	0.0%	46,218.75	46,218.75
Office	6,873,000 sf	0.0%	0.0%	0.0%	0.0%	16.75	115,122.75	678.88	0.030	0.011	0.0%	35,656.24	35,656.24
Hotel/Motel	1,500 rooms	0.0%	0.0%	0.0%	0.0%	8,375.00	12,562.50	678.88	0.030	0.011	0.0%	3,890.90	3,890.90
Schools	1,895,200 sf	0.0%	0.0%	0.0%	0.0%	16.75	31,744.60	678.88	0.030	0.011	0.0%	9,832.05	9,832.05
Public Institution	1,750,000 sf	0.0%	0.0%	0.0%	0.0%	16.75	29,312.50	678.88	0.030	0.011	0.0%	9,078.78	9,078.78
Industrial	14,231,000 sf	0.0%	0.0%	0.0%	0.0%	10.50	149,425.50	678.88	0.030	0.011	0.0%	46,280.62	46,280.62
Subtotal							797,204.35					246,913.08	246,913.08
General Plan													
Single Family Housing	31,800 DU	0.0%	0.0%	0.0%	0.0%	7,000.00	222,600.00	630.89	0.029	0.011	36.7%	64,106.56	40,579.46
Multi-Family Housing	15,500 DU	0.0%	0.0%	0.0%	0.0%	5,626.50	87,210.75	630.89	0.029	0.011	36.7%	25,115.82	15,898.31
Retail/Shopping	8,909,000 sf	0.0%	0.0%	0.0%	0.0%	16.75	149,225.75	630.89	0.029	0.011	36.7%	42,975.52	27,203.50
Office	6,873,000 sf	0.0%	0.0%	0.0%	0.0%	16.75	115,122.75	630.89	0.029	0.011	36.7%	33,154.20	20,986.61
Hotel/Motel	1,500 rooms	0.0%	0.0%	0.0%	0.0%	8,375.00	12,562.50	630.89	0.029	0.011	36.7%	3,617.87	2,290.11
Schools	1,895,200 sf	0.0%	4.9%	4.9%	0.0%	15.93	30,189.11	630.89	0.290	0.011	36.7%	8,769.22	5,550.91
Public Institution	1,750,000 sf	0.0%	4.9%	4.9%	0.0%	15.93	27,876.19	630.89	0.290	0.011	36.7%	8,097.37	5,125.63
Industrial	14,231,000 sf	0.0%	0.0%	0.0%	0.0%	10.50	149,425.50	630.89	0.029	0.011	36.7%	43,033.04	27,239.92
Subtotal							794,212.55					228,869.60	144,874.46
<b>General Plan Reduction from BAU</b>												<b>18,043.48</b>	<b>102,038.62</b>
<b>Percent Reduction from BAU</b>												<b>7.3%</b>	<b>41.3%</b>

Note:

The cumulative efficiency percentage for the Title 24 Standards is calculated based on the following formula: (X% + Y%) - (X% × Y%).

Sources:

- California Energy Commission, *Impact Analysis: 2005 Update to the California Energy Efficiency Standards*, (2003) 4.
- California Energy Commission, *Impact Analysis: 2008 Update to the California Energy Efficiency Standards*, (2007) 4.
- Sacramento Metropolitan Air Quality Management District, *Recommended Guidance for Land Use Emission Reductions*, (2010).  
Energy-Saving Features include:  
- The project contains measures that will reduce electricity consumption. However, the measures cannot be quantified.
- California Air Pollution Control Officer's Association, *CEQA and Climate Change*, (2008).  
Energy-Saving Features include:  
- The project contains measures that will reduce electricity consumption. However, the measures cannot be quantified.
- Additional Project Applicant Measures.**  
Energy-Saving Features include:  
- The project contains measures that will reduce electricity consumption. However, the measures cannot be quantified.
- California Air Pollution Control Officer's Association, *CEQA and Climate Change*, (2008) 61.
- South Coast Air Quality Management District, *CEQA Air Quality Handbook*, (1993) A9-114.
- California Climate Action Registry, "Climate Action Registry Reporting Online Tool," <https://www.climateregistry.org/CARROT/public/reports.aspx>. 2010. See *2007 Annual Entity Emissions: Electric Power Generation/Electric Utility Sector, Southern California Edison*.  
The CO<sub>2</sub> factor is for Southern California Edison. For BAU Project: The CO<sub>2</sub> factor is based on the 2004 value. For Proposed Project: The CO<sub>2</sub> factor is based on the 2007 value.
- California Air Resources Board, *Local Government Operations Protocol for the Quantification and Reporting of Greenhouse Gas Emissions Inventories*, Version 1.0, (2008) 174.  
For BAU Project: The CH<sub>4</sub> and N<sub>2</sub>O factors are based on the statewide average of the 2002-2004 values. For Proposed Project: The CH<sub>4</sub> and N<sub>2</sub>O factors are based on the statewide 2004 values.
- California Air Resources Board, *Climate Change Scoping Plan*, (2008).

Where:

CH <sub>4</sub>	Methane	lbs	Pounds
CO <sub>2</sub>	Carbon dioxide	MW-hr	Megawatt-hour
CO <sub>2</sub> e	Carbon dioxide equivalent	MT	Metric ton
gsf	Gross square feet	n/a	Not applicable
GWP	Global warming potential	N <sub>2</sub> O	Nitrous oxide
kW-hr	Kilowatt-hour	yr	Year



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**Table GP-GHG-7  
Solid Waste GHG Emissions**

<b>Emissions Scenario</b>	<b>Units</b>	<b>Solid Waste Generation<sup>1</sup> (MT/yr)</b>	<b>CO<sub>2</sub>e Emission Factor<sup>2</sup> (MT CO<sub>2</sub>e/MT waste)</b>	<b>Annual CO<sub>2</sub>e Emissions (MT CO<sub>2</sub>e/yr)</b>
BAU Project				
Single Family Housing	31,800 DU	70,534.52	0.37	26,097.77
Multi-Family Housing	15,500 DU	11,348.88	0.37	4,199.09
Retail/Shopping	8,909,000 sf	3,636.90	0.37	1,345.65
Office	6,873,000 sf	6,734.03	0.37	2,491.59
Hotel/Motel	1,500 rooms	2,863.98	0.37	1,059.67
Schools	1,895,200 sf	928.70	0.37	343.62
Public Institution	1,750,000 sf	857.55	0.37	317.29
Industrial	14,231,000 sf	11,692.70	0.37	4,326.30
Subtotal		108,597.27		40,180.99
General Plan				
Single Family Housing	31,800 DU	70,534.52	0.37	26,097.77
Multi-Family Housing	15,500 DU	11,348.88	0.37	4,199.09
Retail/Shopping	8,909,000 sf	3,636.90	0.37	1,345.65
Office	6,873,000 sf	6,734.03	0.37	2,491.59
Hotel/Motel	1,500 rooms	2,863.98	0.37	1,059.67
Schools	1,895,200 sf	928.70	0.37	343.62
Public Institution	1,750,000 sf	857.55	0.37	317.29
Industrial	14,231,000 sf	11,692.70	0.37	4,326.30
Subtotal		108,597.27		40,180.99
<b>General Plan Reduction from BAU</b>				-
<b>Percent Reduction from BAU</b>				<b>0.0%</b>

Sources:

1. Draft EIR, Section 4.8, Solid Waste. Values converted to metric tons.
2. U.S. Environmental Protection Agency, *Solid Waste Management and Greenhouse Gases: A Lifecycle Assessment of Emissions and Sinks* (2006) 93. The net CO<sub>2</sub>e emission factors are based on mixed municipal solid waste (MSW) as disposed in landfills without landfill gas recovery.

Where:

CO <sub>2</sub> e	Carbon dioxide equivalent
gsf	Gross square feet
MT	Metric ton
yr	Year

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**Table GP-GHG-8  
Potable Water Supply, Conveyance, Treatment, and Distribution GHG Emissions**

Emissions Scenario	Water Saving Features (%)	Potable Water Estimate <sup>1</sup> (MG/yr)	Electrical Consumption Factor <sup>2,3,4</sup> (kW-hr/MG)	Annual Electrical Consumption (MW-hr/yr)	CO <sub>2</sub> Emission Factor <sup>5</sup> GWP = 1 (lbs/MW-hr)	CH <sub>4</sub> Emission Factor <sup>6</sup> GWP = 21 (lbs/MW-hr)	N <sub>2</sub> O Emission Factor <sup>6</sup> GWP = 310 (lbs/MW-hr)	Annual CO <sub>2</sub> e Emissions (MTCO <sub>2</sub> e/yr)
BAU Project								
Supply & Conveyance	0.00%	7,085.28	9,727	68,918.54	678.88	0.030	0.011	21,345.71
Treatment	0.00%	7,085.28	111	786.47	678.88	0.030	0.011	243.59
Distribution	0.00%	7,085.28	1,272	9,012.48	678.88	0.030	0.011	2,791.38
Recycled Water	0.00%	-	875	-	678.88	0.030	0.011	-
Subtotal								24,380.67
General Plan								
Supply & Conveyance	0.00%	7,085.28	9,727	68,918.54	630.89	0.029	0.011	19,847.85
Treatment	0.00%	7,085.28	111	786.47	630.89	0.029	0.011	226.49
Distribution	0.00%	7,085.28	1,272	9,012.48	630.89	0.029	0.011	2,595.50
Recycled Water	0.00%	-	875	-	630.89	0.029	0.011	-
Subtotal								22,669.85
<b>General Plan Reduction from BAU</b>								<b>1,710.82</b>
<b>Percent Reduction from BAU</b>								<b>7.02%</b>

Sources:

- Based on 125% of the wastewater generation.
- California Energy Commission, *California's Water-Energy Relationship, Final Staff Report*, CEC-700-2005-011-SF, (2005) 26.
- California Energy Commission, *Refining Estimates of Water-Related Energy Use in California, PIER Final Project Report*, CEC-500-2006-118, (2006) 22.
- R. C. Wilkinson, et. al, California Department of Water Resources, *Water Sources "Powering" Southern California*, n.d.  
Recycled water is estimated to use 285 kW-hr per acre-foot (West Basin Municipal Water District).
- California Climate Action Registry, "Climate Action Registry Reporting Online Tool," <https://www.climateregistry.org/CARROT/public/reports.aspx>. 2010. See *2008 Annual Entity Emissions: Electric Power Generation/Electric Utility Sector, Imperial Irrigation District*.  
The CO<sub>2</sub> factor is for the Imperial Irrigation District. For BAU Project: The CO<sub>2</sub> factor is based on the 2006 value (data is not available prior to this year). For Proposed Project: The CO<sub>2</sub> factor is based on the 2008 value.
- California Air Resources Board, *Local Government Operations Protocol for the Quantification and Reporting of Greenhouse Gas Emissions Inventories*, Version 1.0, (2008) 174.

For BAU Project: The CH<sub>4</sub> and N<sub>2</sub>O factors are based on the average of the 2002-2004 values. For Proposed Project: The CH<sub>4</sub> and N<sub>2</sub>O factors are based on the 2004 values.

Where:

CH <sub>4</sub>	Methane	MG	Million gallons
CO <sub>2</sub>	Carbon dioxide	MW-hr	Megawatt-hour
CO <sub>2</sub> e	Carbon dioxide equivalent	MT	Metric ton
GWP	Global warming potential	n/a	Not applicable
kW-hr	Kilowatt-hour	N <sub>2</sub> O	Nitrous oxide
lbs	Pounds	yr	Year

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**Table GP-GHG-9  
Wastewater Treatment Electrical Demand GHG Emissions**

<b>Emissions Scenario</b>	<b>Net Wastewater Generation Rate<sup>1</sup> (MG/yr)</b>	<b>Electrical Demand Factor<sup>2</sup> (kW-hr/MG)</b>	<b>Annual Demand Factor (MW-hr/yr)</b>	<b>CO<sub>2</sub> Emission Factor<sup>3</sup> GWP = 1 (lbs/MW-hr)</b>	<b>CH<sub>4</sub> Emission Factor<sup>3</sup> GWP = 21 (lbs/MW-hr)</b>	<b>N<sub>2</sub>O Emission Factor<sup>3</sup> GWP = 310 (lbs/MW-hr)</b>	<b>Annual CO<sub>2</sub>e Emissions (MT CO<sub>2</sub>e/yr)</b>
BAU Project							
Single Family Housing	3,594.17	1,911	6,868.45	678.88	0.030	0.011	2,127.32
Multi-Family Housing	888.61	1,911	1,698.14	678.88	0.030	0.011	525.95
Retail/Shopping	325.18	1,911	621.42	678.88	0.030	0.011	192.47
Office	250.86	1,911	479.40	678.88	0.030	0.011	148.48
Hotel/Motel	29.64	1,911	56.64	678.88	0.030	0.011	17.54
Schools	29.66	1,911	56.68	678.88	0.030	0.011	17.56
Public Institution	27.39	1,911	52.34	678.88	0.030	0.011	16.21
Industrial	522.72	1,911	998.91	678.88	0.030	0.011	309.39
Subtotal	5,668.23						3,354.92
General Plan							
Single Family Housing	3,594.17	1,911	6,868.45	630.89	0.029	0.011	1,978.05
Multi-Family Housing	888.61	1,911	1,698.14	630.89	0.029	0.011	489.05
Retail/Shopping	325.18	1,911	621.42	630.89	0.029	0.011	178.96
Office	250.86	1,911	479.40	630.89	0.029	0.011	138.06
Hotel/Motel	29.64	1,911	56.64	630.89	0.029	0.011	16.31
Schools	29.66	1,911	56.68	630.89	0.029	0.011	16.32
Public Institution	27.39	1,911	52.34	630.89	0.029	0.011	15.07
Industrial	522.72	1,911	998.91	630.89	0.029	0.011	287.68
Subtotal	5,668.23						3,119.50
<b>General Plan Reduction from BAU</b>							<b>235.42</b>
<b>Percent Reduction from BAU</b>							<b>7.02%</b>

**Sources:**

1. Draft EIR, Section 4.9.5, Sewer. Values are converted to million gallons per year.
2. California Energy Commission, *Refining Estimates of Water-Related Energy Use in California, PIER Final Project Report (CEC-500-2006-118)*. Prepared by Navigant Consulting, Inc., (2006) 22.
3. California Air Resources Board, *Local Government Operations Protocol for the Quantification and Reporting of Greenhouse Gas Emissions Inventories*, Version 1.0, (2008) 174.

The CO<sub>2</sub> factor is for Southern California Edison. For BAU Project: The CO<sub>2</sub> factor is based on the 2004 value (data is not available for 2002 and 2003). The CH<sub>4</sub> and N<sub>2</sub>O factors are based on the average of the 2002-2004 values. For Proposed Project: The CO<sub>2</sub> factor is based on the 2006 value. The CH<sub>4</sub> and N<sub>2</sub>O factors are based on the 2004 values.

**Where:**

CH <sub>4</sub>	Methane	MG	Million gallons
CO <sub>2</sub>	Carbon dioxide	MT	Metric ton
CO <sub>2</sub> e	Carbon dioxide equivalent	MW-hr	Megawatt-hour
GWP	Global warming potential	N <sub>2</sub> O	Nitrous oxide
kW-hr	Kilowatt-hour	yr	Year
lbs	Pounds		

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**Table SP-GHG-1  
Summary of Annual GHG Emissions**

<b>Emissions Scenario</b>	<b>Operational Direct Emissions</b>		<b>Operational Indirect Emissions</b>				<b>Total</b>
	<b>Motor Vehicles (MTCO<sub>2</sub>e/yr)</b>	<b>Area Sources (MTCO<sub>2</sub>e/yr)</b>	<b>Electricity (MTCO<sub>2</sub>e/yr)</b>	<b>Solid Waste (MTCO<sub>2</sub>e/yr)</b>	<b>Water (MTCO<sub>2</sub>e/yr)</b>	<b>Wastewater (MTCO<sub>2</sub>e/yr)</b>	<b>Emissions (MTCO<sub>2</sub>e/yr)</b>
Without AB32 Measures							
BAU Project	38,759	2,333	4,133	359	290	40	<b>45,914</b>
Proposed Project	28,945	2,158	3,299	359	269	37	<b>35,068</b>
<b>Project Reduction from BAU</b>	9,814	175	834	-	20	3	<b>10,846</b>
<b>Percent Reduction from BAU</b>	25.3%	7.5%	20.2%	0.0%	7.0%	7.0%	<b>23.6%</b>
With AB32 Measures							
BAU Project	38,759	2,333	4,133	359	290	40	<b>45,914</b>
Proposed Project	20,348	1,975	2,088	359	269	37	<b>25,077</b>
<b>Project Reduction from BAU</b>	18,410	358	2,045	-	20	3	<b>20,836</b>
<b>Percent Reduction from BAU</b>	47.5%	15.3%	49.5%	0.0%	7.0%	7.0%	<b>45.4%</b>

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**Table SP-GHG-2  
AB 32 Measures<sup>1</sup>**

<b>Emissions Source</b>	<b>California Legislation</b>	<b>Reduction from 2020 GHG Inventory (%)</b>	<b>Land Use End Use Sector</b>	<b>Included in Project Reductions?</b>
Mobile	AB 1493 (Pavley Phase 1 and 2)	19.7%	On-road transportation (passenger, light-duty)	YES
Mobile	Passenger Vehicle Efficiency	2.8%	On-road transportation (passenger, light-duty)	YES
Mobile	Low Carbon Fuel Standard	7.2%	On-road transportation (passenger, light-duty)	YES
Mobile	Heavy/Medium Duty Efficiency	2.9%	On-road transportation (heavy- and medium-duty)	YES
Mobile	Low Carbon Fuel Standard	7.2%	On-road transportation (heavy- and medium-duty)	YES
Area	Energy Efficiency - Natural Gas	9.5%	Natural gas (residential)	YES
Area	Energy Efficiency - Natural Gas	9.5%	Natural gas (commercial)	YES
Indirect	Energy Efficiency - Electricity	15.7%	Electricity	YES
Indirect	Renewables Portfolio Standard (33%) <sup>2</sup>	21.0%	Electricity (exclude Cogen)	YES
Indirect	Solar Roof Initiative	1.5%	Electricity (exclude Cogen)	NO
<b>Total credits given to land use-driven emission inventory sectors from Scoping Plan measures</b>				

Sources:

1. California Air Resources Board, *Climate Change Scoping Plan*, (2008).
2. California Energy Commission, *2007 Net System Power Report, Commission Report*, (2008) 4-5.  
The CEC estimated that about 12 percent of California's retail electric load was met with renewable resources, including wind, solar, geothermal, small hydroelectric, biomass, and biogas.

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**Table SP-GHG-3  
Operational Motor Vehicle GHG Emissions**

Emissions Scenario	ITE Code	Units	Trip Reduction Features <sup>1,2</sup> (%)	Base Trip Rate <sup>3</sup> (ADT/unit)	Adjusted Trip Rate with Features (ADT/unit)	Annual CO <sub>2</sub> Emissions <sup>4</sup> (Tons CO <sub>2</sub> /yr)	AB 32 Reductions in Place <sup>5</sup> (%)	CO <sub>2</sub> to CO <sub>2</sub> e Ratio <sup>6</sup>	Annual CO <sub>2</sub> e Emissions (MTCO <sub>2</sub> e/yr)	
									w/o AB 32	w/ AB 32
BAU Project										
Apartments (mid rise)	223	375.00 DU	0.0%	10.34	10.34	5,833.64	0.0%	0.95	5,570.73	5,570.73
Quality Restaurant	931	90.00 ksf	0.0%	89.95	89.95	10,609.95	0.0%	0.95	10,131.78	10,131.78
Strip Mall	820	400.00 ksf	0.0%	39.44	39.44	20,295.22	0.0%	0.95	19,380.55	19,380.55
General Office Building	710	122.00 ksf	0.0%	22.23	22.23	3,848.99	0.0%	0.95	3,675.52	3,675.52
Subtotal						40,587.80			38,758.57	38,758.57
Proposed Project										
Apartments (mid rise)	223	375.00 DU	6.5%	10.34	9.67	4,385.49	29.7%	0.95	4,187.84	2,944.05
Quality Restaurant	931	90.00 ksf	6.1%	89.95	84.46	7,916.56	29.7%	0.95	7,559.77	5,314.52
Strip Mall	820	400.00 ksf	6.1%	39.44	37.03	15,121.66	29.7%	0.95	14,440.15	10,151.43
General Office Building	710	122.00 ksf	6.1%	22.23	20.87	2,887.22	29.7%	0.95	2,757.10	1,938.24
Subtotal						30,310.93			28,944.86	20,348.24
<b>Proposed Project Reduction from BAU</b>									<b>9,813.71</b>	<b>18,410.33</b>
<b>Percent Reduction from BAU</b>									<b>25.3%</b>	<b>47.5%</b>

Sources:

1. Sacramento Metropolitan Air Quality Management District, *Recommended Guidance for Land Use Emission Reductions*, (2010).
2. California Air Pollution Control Officer's Association, *CEQA and Climate Change*, (2008).

Transportation-Related Features include:

- *Bicycle Parking*: On-street bicycle parking will be distributed throughout the commercial areas of the project and placed conveniently near building entrances without obstructing pedestrian movement. (0.625% reduction applied to commercial uses)
- *Proximity to bike path/bike lanes*: Entire project is located within 1/2 mile of an existing Class I or Class II bike lane and project design includes a comparable network that connects the project uses to the existing offsite facility. (0.625% reduction applied to residential and commercial uses)
- *Pedestrian Network*: Creation of a denser, more compact pattern of development that positively defines the public realm, and supports a vibrant, "walkable" community. (1% reduction applied to residential and commercial uses)
- *Bus Shelter for Existing Transit Service*: Bus service provides headways of one hour or less for stops within 1/4 mile; project provides safe and convenient bicycle/pedestrian access to transit stops and provides essential transit stop improvements (i.e., shelters, route information, benches, and lighting). (0.25% reduction applied to residential and commercial uses)
- *Traffic Calming*: Project design includes pedestrian/bicycle safety and traffic calming measures in excess of jurisdiction requirements. Roadways are designed to reduce motor vehicle speeds and encourage pedestrian and bicycle trips by featuring traffic calming features. (0.25% reduction applied to residential and commercial uses)
- *Office/Mixed-use Density*: Project provides high density office or mixed-use proximate to transit. (0.1% reduction applied to residential and commercial uses)
- *Orientation Toward Planned Transit, Bikeway, or Pedestrian Corridor*: Project is oriented towards planned transit, bicycle, or pedestrian corridor. Setback distance is minimized. (0.25% reduction applied to residential and commercial uses)
- *Residential Density*: Project provides high-density residential development. (1% reduction applied to residential uses)
- *Urban Mixed-use*: Development of projects predominantly characterized by properties or which various uses, such as office, commercial, institutional, and residential, are combined in a single building or on a single site in an integrated development project with functional interrelationships and a coherent physical design. (3% reduction applied to residential and commercial uses)

3. For BAU: Thousand Oaks Boulevard General Plan Amendment, *Projected Project Trip Rates and Generations*, (2010).

For Proposed Project: Thousand Oaks Boulevard General Plan Amendment, *Projected Project Trip Rates and Generations*, (2010).

4. Estimated CO<sub>2</sub> emissions from URBEMIS2007 Environmental Management Software.
5. California Air Resources Board, *Climate Change Scoping Plan*, (2008). See Table SP-GHG-2.
6. U.S. Environmental Protection Agency, *Emission Facts - Greenhouse Gas Emissions from a Typical Passenger Vehicle*, (2005) 4. It is assumed that CO<sub>2</sub> accounts for 95% of the greenhouse gas emissions, while CH<sub>4</sub>, N<sub>2</sub>O, and HFCs account for 5% of the emissions.

Where:

ADT           Average daily trips  
CO<sub>2</sub>           Carbon dioxide  
CO<sub>2</sub>e          Carbon dioxide equivalent

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**Table SP-GHG-4  
Vehicle Miles Traveled Adjustment in URBEMIS2007**

Emissions Scenario	Trip Type	VMT Reduction <sup>1</sup> (%)	Urban	Adjusted Trip Length (miles/trip)	VMT Reduction <sup>1</sup> (%)	Rural	Adjusted Trip Length (miles/trip)
			Base Trip Length <sup>2</sup> (miles/trip)			Base Trip Length <sup>2</sup> (miles/trip)	
BAU Project	Home-based Work	0.0%	10.8	10.8	0.0%	16.8	16.8
	Home-based Shop	0.0%	7.3	7.3	0.0%	7.1	7.1
	Home-based Other	0.0%	7.5	7.5	0.0%	7.9	7.9
	Commercial-based Commute	0.0%	9.5	9.5	0.0%	14.7	14.7
	Commercial-based Non-Work	0.0%	7.3	7.3	0.0%	6.6	6.6
	Commercial-based Customer	0.0%	7.3	7.3	0.0%	6.6	6.6
Proposed Project	Home-based Work	20.0%	10.8	8.6	0.0%	16.8	16.8
	Home-based Shop	20.0%	7.3	5.8	0.0%	7.1	7.1
	Home-based Other	20.0%	7.5	6.0	0.0%	7.9	7.9
	Commercial-based Commute	20.0%	9.5	7.6	0.0%	14.7	14.7
	Commercial-based Non-Work	20.0%	7.3	5.8	0.0%	6.6	6.6
	Commercial-based Customer	20.0%	7.3	5.8	0.0%	6.6	6.6

Sources:

- California Air Pollution Control Officer's Association, *CEQA and Climate Change*, (2008).

Vehicle Miles Traveled-Reduction Features include:

- MM D-12: Infill Development - Infill development reduces VMT by 20%.

- URBEMIS2007 (version 9.2.4) Environmental Management Software. Project was modeled using the "urban" setting.

Where:

VMT                      Vehicle miles traveled

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**Table SP-GHG-5  
Area Source GHG Emissions**

Emissions Scenario	Efficiency Standards <sup>1,2</sup>			CO <sub>2</sub> Emission Factor GWP = 1 (kg/MMBtu)	CH <sub>4</sub> Emission Factor GWP = 21 (kg/MMBtu)	N <sub>2</sub> O Emission Factor GWP = 310 (kg/MMBtu)	Annual CO <sub>2</sub> Emissions (Tons CO <sub>2</sub> /yr)	AB 32 Reductions in Place <sup>6</sup> (%)	Annual CO <sub>2</sub> e Emissions (MTCO <sub>2</sub> e/yr)	
	Title 24 2005 (%)	Title 24 2008 (%)	Cumulative Efficiency (%)						w/o AB 32	w/ AB 32
BAU Project										
Natural Gas <sup>3</sup>	0.00%	0.00%	0.00%	56.06	0.005	0.0001	2,313.60	0.0%	2,103.95	2,103.95
Landscape Maintenance <sup>4</sup>	-	-	-	70.88	0.011	0.0006	1.01	0.0%	0.92	0.92
Hearths (Natural Gas) <sup>3</sup>	-	-	-	56.06	0.005	0.0001	0.72	0.0%	0.65	0.65
Hearths (Wood) <sup>5</sup>	-	-	-	93.87	0.316	0.0042	231.07	0.0%	227.35	227.35
Subtotal							2,546.40		2,332.88	2,332.88
Proposed Project										
Natural Gas <sup>3</sup> (Non-Res.)	0.00%	9.40%	9.40%	56.06	0.005	0.0001	2,121.52	9.5%	1,929.28	1,746.00
(Multi-Fam Res.)	0.00%	7.00%	7.00%	(Multi-family nat. gas emissions included in above calcs; Title 24 efficiency shown for informational purposes.)						
Landscape Maintenance <sup>4</sup>	-	-	-	70.88	0.011	0.0006	1.01	0.0%	0.92	0.92
Hearths (Natural Gas) <sup>3</sup>	-	-	-	56.06	0.005	0.0001	0.73	0.0%	0.66	0.66
Hearths (Wood) <sup>5</sup>	-	-	-	93.87	0.316	0.0042	231.07	0.0%	227.35	227.35
Subtotal							2,354.33		2,158.22	1,974.93
<b>Proposed Project Reduction from BAU</b>									<b>174.67</b>	<b>357.95</b>
<b>Percent Reduction from BAU</b>									<b>7.5%</b>	<b>15.3%</b>

Note:

The cumulative efficiency percentage is calculated based on the following formula: (X% + Y%) - (X% × Y%).

Sources:

1. California Energy Commission, *Impact Analysis: 2005 Update to the California Energy Efficiency Standards*, (2003) 6.
2. California Energy Commission, *Impact Analysis: 2008 Update to the California Energy Efficiency Standards*, (2007) 6.
3. URBEMIS2007 uses a CO<sub>2</sub> emission factor of 120,000 pounds per million cubic feet for natural gas. This value was converted to kg/MMBtu based on 1.03 therms per cubic feet.
4. California Climate Action Registry, *General Reporting Protocol: Reporting Entity-Wide Greenhouse Gas Emissions*, Version 3.1, (2009) 101, 103. Landscape maintenance equipment were assumed to be fueled with motor gasoline.
5. California Climate Action Registry, *General Reporting Protocol: Reporting Entity-Wide Greenhouse Gas Emissions*, Version 3.1, (2009) 102, 103.
6. California Air Resources Board, *Climate Change Scoping Plan*, (2008).

Where:

CH <sub>4</sub>	Methane	MMBtu	Million British thermal units
CO <sub>2</sub>	Carbon dioxide	MT	Metric ton
CO <sub>2</sub> e	Carbon dioxide equivalent	N <sub>2</sub> O	Nitrous oxide
GWP	Global warming potential	yr	Year
kg	Kilogram		



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**Table SP-GHG-6  
Electrical Consumption GHG Emissions**

Emissions Scenario	Units	Efficiency Standards <sup>1,2</sup>			Energy Efficiency Features <sup>3,4,5</sup> (%)	Electricity Consumption Factor <sup>6,7</sup> (kW-hr/unit/yr)	Annual Consumption Factor (MW-hr/yr)	CO <sub>2</sub> Emission Factor <sup>8</sup> GWP = 1 (lbs/MW-hr)	CH <sub>4</sub> Emission Factor <sup>9</sup> GWP = 21 (lbs/MW-hr)	N <sub>2</sub> O Emission Factor <sup>9</sup> GWP = 310 (lbs/MW-hr)	AB 32 Reductions in Place <sup>10</sup> (%)	Annual CO <sub>2</sub> e Emissions (MTCO <sub>2</sub> e/yr)	
		Title 24 2005 (%)	Title 24 2008 (%)	Cumulative Efficiency (%)								w/o AB 32	w/ AB 32
BAU Project													
Multi-Family Housing	375 DU	0.0%	0.0%	0.0%	0.0%	5,626.50	2,109.94	678.88	0.030	0.011	0.0%	653.50	653.50
Retail/Shopping	400,000 sf	0.0%	0.0%	0.0%	0.0%	16.75	6,700.00	678.88	0.030	0.011	0.0%	2,075.15	2,075.15
Office	122,000 sf	0.0%	0.0%	0.0%	0.0%	16.75	2,043.50	678.88	0.030	0.011	0.0%	632.92	632.92
Other Commercial	90,000 sf	0.0%	0.0%	0.0%	0.0%	16.75	1,507.50	1,124.79	0.030	0.011	0.0%	771.82	771.82
Subtotal							12,360.94					4,133.38	4,133.38
Proposed Project													
Multi-Family Housing	375 DU	0.0%	19.7%	19.7%	0.0%	4,518.08	1,694.28	630.89	0.029	0.011	36.7%	487.94	308.86
Retail/Shopping	400,000 sf	0.0%	4.9%	4.9%	0.0%	15.93	6,371.70	630.89	0.029	0.011	36.7%	1,834.99	1,161.55
Office	122,000 sf	0.0%	4.9%	4.9%	0.0%	15.93	1,943.37	630.89	0.029	0.011	36.7%	559.67	354.27
Other Commercial	90,000 sf	0.0%	4.9%	4.9%	0.0%	15.93	1,433.63	630.89	0.290	0.011	36.7%	416.44	263.60
Subtotal							11,442.98					3,299.03	2,088.28
<b>Proposed Project Reduction from BAU</b>												<b>834.36</b>	<b>2,045.10</b>
<b>Percent Reduction from BAU</b>												<b>20.2%</b>	<b>49.5%</b>

Note:

The cumulative efficiency percentage for the Title 24 Standards is calculated based on the following formula: (X% + Y%) - (X% × Y%).

Sources:

- California Energy Commission, *Impact Analysis: 2005 Update to the California Energy Efficiency Standards*, (2003) 4.
- California Energy Commission, *Impact Analysis: 2008 Update to the California Energy Efficiency Standards*, (2007) 4.
- Sacramento Metropolitan Air Quality Management District, *Recommended Guidance for Land Use Emission Reductions*, (2010).  
Energy-Saving Features include:  
- The project contains measures that will reduce electricity consumption. However, the measures cannot be quantified.
- California Air Pollution Control Officer's Association, *CEQA and Climate Change*, (2008).  
Energy-Saving Features include:  
- The project contains measures that will reduce electricity consumption. However, the measures cannot be quantified.
- Additional Project Applicant Measures.  
Energy-Saving Features include:  
- The project contains measures that will reduce electricity consumption. However, the measures cannot be quantified.
- California Air Pollution Control Officer's Association, *CEQA and Climate Change*, (2008) 61.
- South Coast Air Quality Management District, *CEQA Air Quality Handbook*, (1993) A9-114.
- California Climate Action Registry, "Climate Action Registry Reporting Online Tool," <https://www.climateregistry.org/CARROT/public/reports.aspx>. 2010. See *2007 Annual Entity Emissions: Electric Power Generation/Electric Utility Sector, Southern California Edison*.  
The CO<sub>2</sub> factor is for Southern California Edison. For BAU Project: The CO<sub>2</sub> factor is based on the 2004 value. For Proposed Project: The CO<sub>2</sub> factor is based on the 2007 value.
- California Air Resources Board, *Local Government Operations Protocol for the Quantification and Reporting of Greenhouse Gas Emissions Inventories*, Version 1.0, (2008) 174.  
For BAU Project: The CH<sub>4</sub> and N<sub>2</sub>O factors are based on the statewide average of the 2002-2004 values. For Proposed Project: The CH<sub>4</sub> and N<sub>2</sub>O factors are based on the statewide 2004 values.
- California Air Resources Board, *Climate Change Scoping Plan*, (2008).

Where:

CH <sub>4</sub>	Methane	lbs	Pounds
CO <sub>2</sub>	Carbon dioxide	MW-hr	Megawatt-hour
CO <sub>2</sub> e	Carbon dioxide equivalent	MT	Metric ton
gsf	Gross square feet	n/a	Not applicable
GWP	Global warming potential	N <sub>2</sub> O	Nitrous oxide
kW-hr	Kilowatt-hour	yr	Year

**Thousand Oaks Boulevard Specific Plan  
Evaluation of Global Climate Change Impacts - New Proposed Development under the Specific Plan**

**Table SP-GHG-7  
Solid Waste GHG Emissions**

<b>Emissions Scenario</b>	<b>Units</b>	<b>Solid Waste Generation<sup>1</sup> (MT/yr)</b>	<b>CO<sub>2</sub>e Emission Factor<sup>2</sup> (MT CO<sub>2</sub>e/MT waste)</b>	<b>Annual CO<sub>2</sub>e Emissions (MT CO<sub>2</sub>e/yr)</b>
BAU Project				
Multi-Family Housing	375 DU	320.05	0.37	118.42
Retail/Shopping	400,000 sf	291.93	0.37	108.01
Office	122,000 sf	269.43	0.37	99.69
Other Commercial	90,000 sf	89.81	0.37	33.23
Subtotal		971.23		359.36
Proposed Project				
Multi-Family Housing	375 DU	320.05	0.37	118.42
Retail/Shopping	400,000 sf	291.93	0.37	108.01
Office	122,000 sf	269.43	0.37	99.69
Other Commercial	90,000 sf	89.81	0.37	33.23
Subtotal		971.23		359.36
<b>Proposed Project Reduction from BAU</b>				<b>-</b>
<b>Percent Reduction from BAU</b>				<b>0.0%</b>

Sources:

1. Draft EIR, Section 4.8, Solid Waste. Values converted to metric tons.
2. U.S. Environmental Protection Agency, *Solid Waste Management and Greenhouse Gases: A Lifecycle Assessment of Emissions and Sinks* (2006) 93. The net CO<sub>2</sub>e emission factors are based on mixed municipal solid waste (MSW) as disposed in landfills without landfill gas recovery.

Where:

CO <sub>2</sub> e	Carbon dioxide equivalent
gsf	Gross square feet
MT	Metric ton
yr	Year

**Thousand Oaks Boulevard Specific Plan  
Evaluation of Global Climate Change Impacts - New Proposed Development under the Specific Plan**

**Table SP-GHG-8  
Potable Water Supply, Conveyance, Treatment, and Distribution GHG Emissions**

Emissions Scenario	Water Saving Features (%)	Potable Water Estimate <sup>1</sup> (MG/yr)	Electrical Consumption Factor <sup>2,3,4</sup> (kW-hr/MG)	Annual Electrical Consumption (MW-hr/yr)	CO <sub>2</sub> Emission Factor <sup>5</sup> GWP = 1 (lbs/MW-hr)	CH <sub>4</sub> Emission Factor <sup>6</sup> GWP = 21 (lbs/MW-hr)	N <sub>2</sub> O Emission Factor <sup>6</sup> GWP = 310 (lbs/MW-hr)	Annual CO <sub>2</sub> e Emissions (MTCO <sub>2</sub> e/yr)
BAU Project								
Supply & Conveyance	0.00%	84.17	9,727	818.70	678.88	0.030	0.011	253.57
Treatment	0.00%	84.17	111	9.34	678.88	0.030	0.011	2.89
Distribution	0.00%	84.17	1,272	107.06	678.88	0.030	0.011	33.16
Recycled Water	0.00%	-	875	-	678.88	0.030	0.011	-
Subtotal								289.62
Proposed Project								
Supply & Conveyance	0.00%	84.17	9,727	818.70	630.89	0.029	0.011	235.78
Treatment	0.00%	84.17	111	9.34	630.89	0.029	0.011	2.69
Distribution	0.00%	84.17	1,272	107.06	630.89	0.029	0.011	30.83
Recycled Water	0.00%	-	875	-	630.89	0.029	0.011	-
Subtotal								269.30
<b>Proposed Project Reduction from BAU</b>								<b>20.32</b>
<b>Percent Reduction from BAU</b>								<b>7.02%</b>

Sources:

- Based on 125% of the wastewater generation.
- California Energy Commission, *California's Water-Energy Relationship, Final Staff Report*, CEC-700-2005-011-SF, (2005) 26.
- California Energy Commission, *Refining Estimates of Water-Related Energy Use in California, PIER Final Project Report*, CEC-500-2006-118, (2006) 22.
- R. C. Wilkinson, et. al, California Department of Water Resources, *Water Sources "Powering" Southern California*, n.d.  
Recycled water is estimated to use 285 kW-hr per acre-foot (West Basin Municipal Water District).
- California Climate Action Registry, "Climate Action Registry Reporting Online Tool," <https://www.climateregistry.org/CARROT/public/reports.aspx>. 2010. See *2008 Annual Entity Emissions: Electric Power Generation/Electric Utility Sector, Imperial Irrigation District*.  
The CO<sub>2</sub> factor is for the Imperial Irrigation District. For BAU Project: The CO<sub>2</sub> factor is based on the 2006 value (data is not available prior to this year). For Proposed Project: The CO<sub>2</sub> factor is based on the 2008 value.
- California Air Resources Board, *Local Government Operations Protocol for the Quantification and Reporting of Greenhouse Gas Emissions Inventories*, Version 1.0, (2008) 174.

For BAU Project: The CH<sub>4</sub> and N<sub>2</sub>O factors are based on the average of the 2002-2004 values. For Proposed Project: The CH<sub>4</sub> and N<sub>2</sub>O factors are based on the 2004 values.

Where:

CH <sub>4</sub>	Methane	MG	Million gallons
CO <sub>2</sub>	Carbon dioxide	MW-hr	Megawatt-hour
CO <sub>2</sub> e	Carbon dioxide equivalent	MT	Metric ton
GWP	Global warming potential	n/a	Not applicable
kW-hr	Kilowatt-hour	N <sub>2</sub> O	Nitrous oxide
lbs	Pounds	yr	Year

**Thousand Oaks Boulevard Specific Plan  
Evaluation of Global Climate Change Impacts - New Proposed Development under the Specific Plan**

**Table SP-GHG-9  
Wastewater Treatment Electrical Demand GHG Emissions**

<b>Emissions Scenario</b>	<b>Net Wastewater Generation Rate<sup>1</sup> (MG/yr)</b>	<b>Electrical Demand Factor<sup>2</sup> (kW-hr/MG)</b>	<b>Annual Demand Factor (MW-hr/yr)</b>	<b>CO<sub>2</sub> Emission Factor<sup>3</sup> GWP = 1 (lbs/MW-hr)</b>	<b>CH<sub>4</sub> Emission Factor<sup>3</sup> GWP = 21 (lbs/MW-hr)</b>	<b>N<sub>2</sub>O Emission Factor<sup>3</sup> GWP = 310 (lbs/MW-hr)</b>	<b>Annual CO<sub>2</sub>e Emissions (MT CO<sub>2</sub>e/yr)</b>
BAU Project							
Multi-Family Housing	27.18	1,911	51.95	678.88	0.030	0.011	16.09
Retail/Shopping	30.11	1,911	57.54	678.88	0.030	0.011	17.82
Office	10.04	1,911	19.18	678.88	0.030	0.011	5.94
Subtotal	67.33						39.85
Proposed Project							
Multi-Family Housing	27.18	1,911	51.95	630.89	0.029	0.011	14.96
Retail/Shopping	30.11	1,911	57.54	630.89	0.029	0.011	16.57
Office	10.04	1,911	19.18	630.89	0.029	0.011	5.52
Subtotal	67.33						37.06
<b>Proposed Project Reduction from BAU</b>							<b>2.80</b>
<b>Percent Reduction from BAU</b>							<b>7.02%</b>

Sources:

1. Draft EIR, Section 4.9.5, Sewer. Values are converted to million gallons per year.
2. California Energy Commission, *Refining Estimates of Water-Related Energy Use in California, PIER Final Project Report (CEC-500-2006-118)*. Prepared by Navigant Consulting, Inc., (2006) 22.
3. California Air Resources Board, *Local Government Operations Protocol for the Quantification and Reporting of Greenhouse Gas Emissions Inventories*, Version 1.0, (2008) 174.

The CO<sub>2</sub> factor is for Southern California Edison. For BAU Project: The CO<sub>2</sub> factor is based on the 2004 value (data is not available for 2002 and 2003). The CH<sub>4</sub> and N<sub>2</sub>O factors are based on the average of the 2002-2004 values. For Proposed Project: The CO<sub>2</sub> factor is based on the 2006 value. The CH<sub>4</sub> and N<sub>2</sub>O factors are based on the 2004 values.

Where:

CH <sub>4</sub>	Methane	MG	Million gallons
CO <sub>2</sub>	Carbon dioxide	MT	Metric ton
CO <sub>2</sub> e	Carbon dioxide equivalent	MW-hr	Megawatt-hour
GWP	Global warming potential	N <sub>2</sub> O	Nitrous oxide
kW-hr	Kilowatt-hour	yr	Year
lbs	Pounds		

Combined Annual Emissions Reports (Tons/Year)

File Name: Z:\Air Quality\095.11 Thousand Oaks Blvd SP\GHG Emissions\Revised Emissions\Thousand Oaks Boulevard Buildout Existing G

Project Name: Thousand Oaks Boulevard - Buildout Existing GP in SP Area - BAU

Project Location: Ventura County APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

CO2

TOTALS (tons/year, unmitigated) 1,163.62

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

CO2

TOTALS (tons/year, unmitigated) 24,078.91

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

CO2

TOTALS (tons/year, unmitigated) 25,242.53

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

<u>Source</u>	<u>CO2</u>
Natural Gas	1,162.86
Hearth	0.00
Landscape	0.76
Consumer Products	
Architectural Coatings	
TOTALS (tons/year, unmitigated)	1,163.62

Area Source Changes to Defaults

Percent residential using natural gas changed from 60% to 100%

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

<u>Source</u>	<u>CO2</u>
Strip mall	18,849.18
General office building	4,322.23
General light industry	907.50
TOTALS (tons/year, unmitigated)	24,078.91

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2035 Season: Annual

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Strip mall		39.44	1000 sq ft	371.50	14,651.96	108,321.94
General office building		22.23	1000 sq ft	137.00	3,045.51	24,676.24
General light industry		6.97	1000 sq ft	88.00	613.36	5,167.56
					18,310.83	138,165.74

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	43.6	0.0	100.0	0.0
Light Truck < 3750 lbs	8.7	0.0	100.0	0.0
Light Truck 3751-5750 lbs	25.5	0.0	100.0	0.0
Med Truck 5751-8500 lbs	12.7	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	2.0	0.0	80.0	20.0
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	66.7	33.3
Med-Heavy Truck 14,001-33,000 lbs	0.8	0.0	25.0	75.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.3	0.0	0.0	100.0
Other Bus	0.0	0.0	0.0	0.0
Urban Bus	0.0	0.0	0.0	0.0
Motorcycle	3.2	34.4	65.6	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	2.5	0.0	92.0	8.0

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Strip mall				2.0	1.0	97.0
General office building				35.0	17.5	47.5
General light industry				50.0	25.0	25.0

Combined Annual Emissions Reports (Tons/Year)

File Name: Z:\Air Quality\095.11 Thousand Oaks Blvd SP\GHG Emissions\Revised Emissions\Thousand Oaks Boulevard Buildout Existing

Project Name: Thousand Oaks Boulevard - Buildout Existing GP in SP Area - Project

Project Location: Ventura County APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	<u>CO2</u>
TOTALS (tons/year, unmitigated)	1,163.62
TOTALS (tons/year, mitigated)	1,070.89
Percent Reduction	7.97

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>CO2</u>
TOTALS (tons/year, unmitigated)	22,662.69
TOTALS (tons/year, mitigated)	22,662.69
Percent Reduction	0.00

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>CO2</u>
TOTALS (tons/year, unmitigated)	23,826.31
TOTALS (tons/year, mitigated)	23,733.58
Percent Reduction	0.39



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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

<u>Source</u>	<u>CO2</u>
Natural Gas	1,162.86
Hearth	0.00
Landscape	0.76
Consumer Products	
Architectural Coatings	
TOTALS (tons/year, unmitigated)	1,163.62

Area Source Mitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Mitigated

<u>Source</u>	<u>CO2</u>
Natural Gas	1,070.13
Hearth	0.00
Landscape	0.76
Consumer Products	
Architectural Coatings	
TOTALS (tons/year, mitigated)	1,070.89

Area Source Changes to Defaults

Percent residential using natural gas changed from 60% to 100%

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

<u>Source</u>	<u>CO2</u>
Strip mall	17,697.39
General office building	4,057.80
General light industry	907.50
TOTALS (tons/year, unmitigated)	22,662.69

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Operational Mitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Mitigated

<u>Source</u>	CO2
Strip mall	17,697.39
General office building	4,057.80
General light industry	907.50
TOTALS (tons/year, mitigated)	22,662.69

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2035 Season: Annual

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Strip mall		37.03	1000 sq ft	371.50	13,756.64	101,702.87
General office building		20.87	1000 sq ft	137.00	2,859.19	23,166.59
General light industry		6.97	1000 sq ft	88.00	613.36	5,167.56
					17,229.19	130,037.02

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	43.6	0.0	100.0	0.0
Light Truck < 3750 lbs	8.7	0.0	100.0	0.0
Light Truck 3751-5750 lbs	25.5	0.0	100.0	0.0
Med Truck 5751-8500 lbs	12.7	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	2.0	0.0	80.0	20.0
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	66.7	33.3
Med-Heavy Truck 14,001-33,000 lbs	0.8	0.0	25.0	75.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.3	0.0	0.0	100.0
Other Bus	0.0	0.0	0.0	0.0
Urban Bus	0.0	0.0	0.0	0.0
Motorcycle	3.2	34.4	65.6	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	2.5	0.0	92.0	8.0

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Strip mall				2.0	1.0	97.0
General office building				35.0	17.5	47.5
General light industry				50.0	25.0	25.0

Combined Annual Emissions Reports (Tons/Year)

File Name: Z:\Air Quality\095.11 Thousand Oaks Blvd SP\GHG Emissions\Thousand Oaks Boulevard GP - BAU.urb924

Project Name: Thousand Oaks Boulevard - General Plan

Project Location: Ventura County APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	<u>CO2</u>
TOTALS (tons/year, unmitigated)	267,313.94

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>CO2</u>
TOTALS (tons/year, unmitigated)	1,798,855.57

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>CO2</u>
TOTALS (tons/year, unmitigated)	2,066,169.51

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

<u>Source</u>	<u>CO2</u>
Natural Gas	237,928.86
Hearth	29,176.91
Landscape	208.17
Consumer Products	
Architectural Coatings	
TOTALS (tons/year, unmitigated)	267,313.94

Area Source Changes to Defaults

Percent residential using natural gas changed from 60% to 100%

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

<u>Source</u>	<u>CO2</u>
Single family housing	587,029.12
Apartments mid rise	71,168.17
Condo/townhouse general	95,527.30
Elementary school	14,900.03
Junior high school	10,566.59
High school	16,460.63
Hotel	15,913.48
Regnl shop. center	389,447.69
Strip mall	263,089.22
General office building	131,780.06
Government (civic center)	40,498.20
Hospital	14,789.63
General light industry	147,685.45
TOTALS (tons/year, unmitigated)	1,798,855.57

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2035 Season: Annual

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Single family housing	10,600.00	12.27	dwelling units	31,800.00	390,186.01	3,335,973.43
Apartments mid rise	360.00	6.57	dwelling units	7,200.00	47,304.00	404,435.03
Condo/townhouse general	518.75	7.65	dwelling units	8,300.00	63,495.00	542,863.22
Elementary school		1.29	students	8,500.00	10,965.00	85,307.70
Junior high school		1.62	students	4,800.00	7,776.00	60,497.28
High school		1.71	students	7,300.00	12,483.00	94,433.90
Hotel		8.17	rooms	1,500.00	12,255.00	91,391.66
Regnl shop. center		67.96	1000 sq ft	4,454.50	302,727.82	2,238,066.71
Strip mall		45.91	1000 sq ft	4,454.50	204,506.09	1,511,913.54
General office building		13.51	1000 sq ft	6,873.00	92,854.23	752,351.41
Government (civic center)		27.92	1000 sq ft	1,100.00	30,712.00	232,336.28
Hospital		16.50	1000 sq ft	650.00	10,725.00	84,593.44
General light industry		6.97	1000 sq ft	14,321.00	99,817.37	840,961.31
					1,285,806.52	10,275,124.91

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	43.6	0.0	100.0	0.0
Light Truck < 3750 lbs	8.7	0.0	100.0	0.0
Light Truck 3751-5750 lbs	25.5	0.0	100.0	0.0
Med Truck 5751-8500 lbs	12.7	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	2.0	0.0	80.0	20.0
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	66.7	33.3
Med-Heavy Truck 14,001-33,000 lbs	0.8	0.0	25.0	75.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.3	0.0	0.0	100.0
Other Bus	0.0	0.0	0.0	0.0
Urban Bus	0.0	0.0	0.0	0.0
Motorcycle	3.2	34.4	65.6	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	2.5	0.0	92.0	8.0

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Elementary school				20.0	10.0	70.0
Junior high school				20.0	10.0	70.0
High school				10.0	5.0	85.0
Hotel				5.0	2.5	92.5
Regnl shop. center				2.0	1.0	97.0
Strip mall				2.0	1.0	97.0
General office building				35.0	17.5	47.5
Government (civic center)				10.0	5.0	85.0
Hospital				25.0	12.5	62.5
General light industry				50.0	25.0	25.0

Combined Annual Emissions Reports (Tons/Year)

File Name: Z:\Air Quality\095.11 Thousand Oaks Blvd SP\Emissions\Thousand Oaks Boulevard GP - Project.urb924

Project Name: Thousand Oaks Boulevard - General Plan

Project Location: Ventura County APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

CO2

TOTALS (tons/year, unmitigated) 267,313.94

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

CO2

TOTALS (tons/year, unmitigated) 1,822,334.55

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

CO2

TOTALS (tons/year, unmitigated) 2,089,648.49

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source

CO2

Natural Gas 237,928.86

Hearth 29,176.91

Landscape 208.17

Consumer Products

Architectural Coatings

TOTALS (tons/year, unmitigated) 267,313.94



Area Source Changes to Defaults

Percent residential using natural gas changed from 60% to 100%

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

<u>Source</u>	CO2
Single family housing	587,029.12
Apartments mid rise	109,297.85
Condo/townhouse general	95,527.30
Elementary school	14,900.03
Junior high school	10,566.59
High school	16,460.63
Hotel	15,932.96
Regnl shop. center	374,777.51
Strip mall	263,089.22
General office building	131,780.06
Government (civic center)	40,498.20
Hospital	14,789.63
General light industry	147,685.45
TOTALS (tons/year, unmitigated)	1,822,334.55

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2035 Season: Annual

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Single family housing	10,600.00	12.27	dwelling units	31,800.00	390,186.01	3,335,973.43
Apartments mid rise	189.47	10.09	dwelling units	7,200.00	72,648.00	621,118.63

Condo/townhouse general	518.75	7.65	dwelling units	8,300.00	63,495.00	542,863.22
Elementary school		1.29	students	8,500.00	10,965.00	85,307.70
Junior high school		1.62	students	4,800.00	7,776.00	60,497.28
High school		1.71	students	7,300.00	12,483.00	94,433.90
Hotel		8.18	rooms	1,500.00	12,270.00	91,503.53
Regnl shop. center		65.40	1000 sq ft	4,454.50	291,324.31	2,153,760.57
Strip mall		45.91	1000 sq ft	4,454.50	204,506.09	1,511,913.54
General office building		13.51	1000 sq ft	6,873.00	92,854.23	752,351.41
Government (civic center)		27.92	1000 sq ft	1,100.00	30,712.00	232,336.28
Hospital		16.50	1000 sq ft	650.00	10,725.00	84,593.44
General light industry		6.97	1000 sq ft	14,321.00	99,817.37	840,961.31
					1,299,762.01	10,407,614.24

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	43.6	0.0	100.0	0.0
Light Truck < 3750 lbs	8.7	0.0	100.0	0.0
Light Truck 3751-5750 lbs	25.5	0.0	100.0	0.0
Med Truck 5751-8500 lbs	12.7	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	2.0	0.0	80.0	20.0
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	66.7	33.3
Med-Heavy Truck 14,001-33,000 lbs	0.8	0.0	25.0	75.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.3	0.0	0.0	100.0
Other Bus	0.0	0.0	0.0	0.0
Urban Bus	0.0	0.0	0.0	0.0
Motorcycle	3.2	34.4	65.6	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	2.5	0.0	92.0	8.0

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			

% of Trips - Commercial (by land use)

Elementary school	20.0	10.0	70.0
Junior high school	20.0	10.0	70.0
High school	10.0	5.0	85.0
Hotel	5.0	2.5	92.5
Regnl shop. center	2.0	1.0	97.0
Strip mall	2.0	1.0	97.0
General office building	35.0	17.5	47.5
Government (civic center)	10.0	5.0	85.0
Hospital	25.0	12.5	62.5
General light industry	50.0	25.0	25.0

Combined Annual Emissions Reports (Tons/Year)

File Name: Z:\Air Quality\095.11 Thousand Oaks Blvd SP\GHG Emissions\Revised Emissions\Thousand Oaks Boulevard GP - Project (55%  
Hearth)\urbemis2007

Project Name: Thousand Oaks Boulevard - General Plan

Project Location: Ventura County APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

<u>Source</u>	<u>CO2</u>
Natural Gas	
Hearth	122.68
Landscape	
Consumer Products	
Architectural Coatings	
TOTALS (tons/year, unmitigated)	122.68

Area Source Changes to Defaults

Percentage of residences with wood stoves changed from 35% to 0%

Percentage of residences with wood fireplaces changed from 10% to 0%

Percentage of residences with natural gas fireplaces changed from 55% to 100%

Combined Annual Emissions Reports (Tons/Year)

File Name: Z:\Air Quality\095.11 Thousand Oaks Blvd SP\GHG Emissions\Revised Emissions\Thousand Oaks Boulevard SP - BAU.urb924

Project Name: Thousand Oaks Boulevard - Specific Plan

Project Location: Ventura County APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	<u>CO2</u>
TOTALS (tons/year, unmitigated)	2,545.68

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>CO2</u>
TOTALS (tons/year, unmitigated)	40,587.80

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>CO2</u>
TOTALS (tons/year, unmitigated)	43,133.48

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

<u>Source</u>	<u>CO2</u>
Natural Gas	2,313.60
Hearth	231.07
Landscape	1.01
Consumer Products	
Architectural Coatings	
TOTALS (tons/year, unmitigated)	2,545.68

Area Source Changes to Defaults

Percent residential using natural gas changed from 60% to 100%

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

<u>Source</u>	<u>CO2</u>
Apartments mid rise	5,833.64
Quality resturant	10,609.95
Strip mall	20,295.22
General office building	3,848.99
TOTALS (tons/year, unmitigated)	40,587.80

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2035 Season: Annual

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Apartments mid rise	9.87	10.34	dwelling units	375.00	3,877.50	33,151.46
Quality resturant		89.95	1000 sq ft	90.00	8,095.50	60,894.35
Strip mall		39.44	1000 sq ft	400.00	15,776.00	116,631.96
General office building		22.23	1000 sq ft	122.00	2,712.06	21,974.47
					30,461.06	232,652.24

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	43.6	0.0	100.0	0.0
Light Truck < 3750 lbs	8.7	0.0	100.0	0.0
Light Truck 3751-5750 lbs	25.5	0.0	100.0	0.0
Med Truck 5751-8500 lbs	12.7	0.0	100.0	0.0

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Lite-Heavy Truck 8501-10,000 lbs	2.0	0.0	80.0	20.0
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	66.7	33.3
Med-Heavy Truck 14,001-33,000 lbs	0.8	0.0	25.0	75.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.3	0.0	0.0	100.0
Other Bus	0.0	0.0	0.0	0.0
Urban Bus	0.0	0.0	0.0	0.0
Motorcycle	3.2	34.4	65.6	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	2.5	0.0	92.0	8.0

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Quality resturant				8.0	4.0	88.0
Strip mall				2.0	1.0	97.0
General office building				35.0	17.5	47.5

Combined Annual Emissions Reports (Tons/Year)

File Name: Z:\Air Quality\095.11 Thousand Oaks Blvd SP\Emissions\Thousand Oaks Boulevard SP - Project.urb924

Project Name: Thousand Oaks Boulevard - Specific Plan

Project Location: Ventura County APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

CO2

TOTALS (tons/year, unmitigated)	2,544.62
TOTALS (tons/year, mitigated)	2,353.60
Percent Reduction	7.51

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

CO2

TOTALS (tons/year, unmitigated)	30,266.95
TOTALS (tons/year, mitigated)	30,266.95
Percent Reduction	0.00

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

CO2

TOTALS (tons/year, unmitigated)	32,811.57
TOTALS (tons/year, mitigated)	32,620.55
Percent Reduction	0.58



Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

<u>Source</u>	<u>CO2</u>
Natural Gas	2,312.54
Hearth	231.07
Landscape	1.01
Consumer Products	
Architectural Coatings	
TOTALS (tons/year, unmitigated)	2,544.62

Area Source Mitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Mitigated

<u>Source</u>	<u>CO2</u>
Natural Gas	2,121.52
Hearth	231.07
Landscape	1.01
Consumer Products	
Architectural Coatings	
TOTALS (tons/year, mitigated)	2,353.60

Area Source Changes to Defaults

Percent residential using natural gas changed from 60% to 100%

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Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

<u>Source</u>	CO2
Apartments mid rise	4,385.49
Quality resturant	7,872.58
Strip mall	15,121.66
General office building	2,887.22
TOTALS (tons/year, unmitigated)	30,266.95

Operational Mitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Mitigated

<u>Source</u>	CO2
Apartments mid rise	4,385.49
Quality resturant	7,872.58
Strip mall	15,121.66
General office building	2,887.22
TOTALS (tons/year, mitigated)	30,266.95

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2035 Season: Annual

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Apartments mid rise	9.87	9.67	dwelling units	375.00	3,626.25	24,728.85
Quality resturant		84.46	1000 sq ft	89.50	7,559.17	44,931.71
Strip mall		37.03	1000 sq ft	400.00	14,812.00	86,442.83
General office building		20.87	1000 sq ft	122.00	2,546.14	16,371.68
					28,543.56	172,475.07

<u>Vehicle Fleet Mix</u>				
Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	43.6	0.0	100.0	0.0
Light Truck < 3750 lbs	8.7	0.0	100.0	0.0
Light Truck 3751-5750 lbs	25.5	0.0	100.0	0.0
Med Truck 5751-8500 lbs	12.7	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	2.0	0.0	80.0	20.0
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	66.7	33.3
Med-Heavy Truck 14,001-33,000 lbs	0.8	0.0	25.0	75.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.3	0.0	0.0	100.0
Other Bus	0.0	0.0	0.0	0.0
Urban Bus	0.0	0.0	0.0	0.0
Motorcycle	3.2	34.4	65.6	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	2.5	0.0	92.0	8.0

<u>Travel Conditions</u>						
	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	8.6	5.8	6.0	7.6	5.8	5.8
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Quality restaurant				8.0	4.0	88.0
Strip mall				2.0	1.0	97.0
General office building				35.0	17.5	47.5

Combined Annual Emissions Reports (Tons/Year)

File Name: Z:\Air Quality\095.11 Thousand Oaks Blvd SP\GHG Emissions\Revised Emissions\Thousand Oaks Boulevard SP - Project (55%  
Hearth)\urb-004

Project Name: Thousand Oaks Boulevard - Specific Plan

Project Location: Ventura County APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

<u>Source</u>	<u>CO2</u>
Natural Gas	
Hearth	0.73
Landscape	
Consumer Products	
Architectural Coatings	
TOTALS (tons/year, unmitigated)	0.73

Area Source Changes to Defaults

Percentage of residences with wood stoves changed from 35% to 0%

Percentage of residences with wood fireplaces changed from 10% to 0%

Percentage of residences with natural gas fireplaces changed from 55% to 100%



# BAY AREA AQMD SIMPLIFIED CALINE4 ANALYSIS; UPDATED WITH EMFAC2007

Project Title: Thousand Oaks Boulevard Specific Plan  
Intersection: Moorpark Road and Hillcrest Drive  
Analysis Condition: Forecast Existing Plus Proposed Specific Plan  
Nearest Air Monitoring Station measuring CO: 5400 Cochran Street, Simi Valley, CA  
Background 1-hour CO Concentration (ppm): 4.2  
Background 8-hour CO Concentration (ppm): 2.6  
Persistence Factor: 0.7  
Analysis Year: 2035

		Roadway Type	No. of Lanes	Approach/Departure Speed	
				A.M.	P.M.
North-South Roadway:	Moorpark Road	AT GRADE	4	5	5
East-West Roadway:	Hillcrest Drive	AT GRADE	2	5	5

## EMFAC2007 COMPOSITE EMISSION FACTORS FOR CO

Air Basin: South Central Coast County: Ventura  
Assumes lowest mean wintertime temperature of 49 degrees F and 71% humidity.

Year	Average Speed (miles per hour)									
	5	8	11	14	17	20	23	26	29	32
2010	6.419	5.647	5.034	4.542	4.142	3.818	3.553	3.333	3.15	3
2011	5.798	5.116	4.572	4.134	3.777	3.487	3.249	3.051	2.886	2.749
2012	5.251	4.645	4.161	3.77	3.451	3.19	2.976	2.797	2.647	2.522
2013	4.757	4.22	3.79	3.44	3.154	2.92	2.728	2.566	2.43	2.316
2014	4.323	3.844	3.46	3.146	2.889	2.679	2.505	2.359	2.235	2.13
2015	3.937	3.51	3.165	2.883	2.651	2.461	2.305	2.172	2.059	1.963
2020	2.646	2.387	2.174	1.997	1.85	1.728	1.627	1.539	1.464	1.398
2025	1.949	1.77	1.621	1.496	1.392	1.306	1.233	1.17	1.115	1.067
2030	1.615	1.471	1.35	1.248	1.163	1.093	1.034	0.983	0.937	0.898
2035	1.403	1.276	1.17	1.081	1.007	0.946	0.896	0.852	0.813	0.779
2040	1.283	1.164	1.065	0.982	0.913	0.858	0.813	0.773	0.738	0.706

## PEAK HOUR TURNING VOLUMES

A.M. Peak				P.M. Peak			
N	24	702	102	N	93	748	155
W	<	v	>	W	<	v	>
68 ^			57	178 ^			210
165 >			218	309 >			336
193 v			105	401 v			218
	<	^	>		<	^	>
	194	471	98		391	944	100
S				S			

## Representative Traffic Volumes (Vehicles per Hour)

N-S Road	1,763	N-S Road	2,802
E-W Road	862	E-W Road	1,708
Primary Road =	N-S Road	Primary Road =	N-S Road

## ROADWAY CO CONTRIBUTIONS

Roadway	Reference CO Concentrations				Traffic Volume		Emission Factor		
	0 Feet	25 Feet	50 Feet						
A.M. Peak Hour									
N-S Road	11.9	7.0	5.4	*	1,763	*	1.40	÷	100,000
E-W Road	3.7	2.7	2.2	*	862	*	1.40	÷	100,000
P.M. Peak Hour									
N-S Road	11.9	7.0	5.4	*	2,802	*	1.40	÷	100,000
E-W Road	3.7	2.7	2.2	*	1,708	*	1.40	÷	100,000

## TOTAL CO CONCENTRATIONS (ppm)

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
0 Feet from Roadway Edge	4.5	4.8	3.0
25 Feet from Roadway Edge	4.4	4.5	2.8
50 Feet from Roadway Edge	4.4	4.5	2.8

# BAY AREA AQMD SIMPLIFIED CALINE4 ANALYSIS; UPDATED WITH EMFAC2007

Project Title: Thousand Oaks Boulevard Specific Plan  
Intersection: Rancho Road and Thousand Oaks Boulevard  
Analysis Condition: Forecast Existing Plus Proposed Specific Plan  
Nearest Air Monitoring Station measuring CO: 5400 Cochran Street, Simi Valley, CA  
Background 1-hour CO Concentration (ppm): 4.2  
Background 8-hour CO Concentration (ppm): 2.6  
Persistence Factor: 0.7  
Analysis Year: 2035

		Roadway Type	No. of Lanes	Approach/Departure Speed	
				A.M.	P.M.
North-South Roadway:	Rancho Road	AT GRADE	4	5	5
East-West Roadway:	Thousand Oaks Boulevard	AT GRADE	4	5	5

## EMFAC2007 COMPOSITE EMISSION FACTORS FOR CO

Air Basin: South Central Coast County: Ventura  
Assumes lowest mean wintertime temperature of 49 degrees F and 71% humidity.

Year	Average Speed (miles per hour)									
	5	8	11	14	17	20	23	26	29	32
2010	6.419	5.647	5.034	4.542	4.142	3.818	3.553	3.333	3.15	3
2011	5.798	5.116	4.572	4.134	3.777	3.487	3.249	3.051	2.886	2.749
2012	5.251	4.645	4.161	3.77	3.451	3.19	2.976	2.797	2.647	2.522
2013	4.757	4.22	3.79	3.44	3.154	2.92	2.728	2.566	2.43	2.316
2014	4.323	3.844	3.46	3.146	2.889	2.679	2.505	2.359	2.235	2.13
2015	3.937	3.51	3.165	2.883	2.651	2.461	2.305	2.172	2.059	1.963
2020	2.646	2.387	2.174	1.997	1.85	1.728	1.627	1.539	1.464	1.398
2025	1.949	1.77	1.621	1.496	1.392	1.306	1.233	1.17	1.115	1.067
2030	1.615	1.471	1.35	1.248	1.163	1.093	1.034	0.983	0.937	0.898
2035	1.403	1.276	1.17	1.081	1.007	0.946	0.896	0.852	0.813	0.779
2040	1.283	1.164	1.065	0.982	0.913	0.858	0.813	0.773	0.738	0.706

## PEAK HOUR TURNING VOLUMES

A.M. Peak				P.M. Peak			
N	18	326	107	N	27	308	163
W	<	v	>	W	<	v	>
16 ^			112	42 ^			146
570 >			653	1,080 >			1,301
237 v			513	499 v			702
	<	^	>		<	^	>
	230	341	497		362	446	679
S				S			

## Representative Traffic Volumes (Vehicles per Hour)

N-S Road	2,144	N-S Road	2,996
E-W Road	2,452	E-W Road	4,071
Primary Road =	E-W Road	Primary Road =	E-W Road

## ROADWAY CO CONTRIBUTIONS

Roadway	Reference CO Concentrations				Traffic Volume		Emission Factor		
	0 Feet	25 Feet	50 Feet						
A.M. Peak Hour									
N-S Road	3.3	2.6	2.2	*	2,144	*	1.40	÷	100,000
E-W Road	11.9	7.0	5.4	*	2,452	*	1.40	÷	100,000
P.M. Peak Hour									
N-S Road	3.3	2.6	2.2	*	2,996	*	1.40	÷	100,000
E-W Road	11.9	7.0	5.4	*	4,071	*	1.40	÷	100,000

## TOTAL CO CONCENTRATIONS (ppm)

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
0 Feet from Roadway Edge	4.7	5.0	3.2
25 Feet from Roadway Edge	4.5	4.7	3.0
50 Feet from Roadway Edge	4.5	4.6	2.9

# BAY AREA AQMD SIMPLIFIED CALINE4 ANALYSIS; UPDATED WITH EMFAC2007

Project Title: Thousand Oaks Boulevard Specific Plan  
Intersection: Erbes Road and Hillcrest Drive  
Analysis Condition: Forecast Existing Plus Proposed Specific Plan  
Nearest Air Monitoring Station measuring CO: 5400 Cochran Street, Simi Valley, CA  
Background 1-hour CO Concentration (ppm): 4.2  
Background 8-hour CO Concentration (ppm): 2.6  
Persistence Factor: 0.7  
Analysis Year: 2035

		Roadway Type	No. of Lanes	Approach/Departure Speed	
				A.M.	P.M.
North-South Roadway:	Erbes Road	AT GRADE	2	5	5
East-West Roadway:	Hillcrest Drive	AT GRADE	2	5	5

## EMFAC2007 COMPOSITE EMISSION FACTORS FOR CO

Air Basin: South Central Coast County: Ventura  
Assumes lowest mean wintertime temperature of 49 degrees F and 71% humidity.

Year	Average Speed (miles per hour)									
	5	8	11	14	17	20	23	26	29	32
2010	6.419	5.647	5.034	4.542	4.142	3.818	3.553	3.333	3.15	3
2011	5.798	5.116	4.572	4.134	3.777	3.487	3.249	3.051	2.886	2.749
2012	5.251	4.645	4.161	3.77	3.451	3.19	2.976	2.797	2.647	2.522
2013	4.757	4.22	3.79	3.44	3.154	2.92	2.728	2.566	2.43	2.316
2014	4.323	3.844	3.46	3.146	2.889	2.679	2.505	2.359	2.235	2.13
2015	3.937	3.51	3.165	2.883	2.651	2.461	2.305	2.172	2.059	1.963
2020	2.646	2.387	2.174	1.997	1.85	1.728	1.627	1.539	1.464	1.398
2025	1.949	1.77	1.621	1.496	1.392	1.306	1.233	1.17	1.115	1.067
2030	1.615	1.471	1.35	1.248	1.163	1.093	1.034	0.983	0.937	0.898
2035	1.403	1.276	1.17	1.081	1.007	0.946	0.896	0.852	0.813	0.779
2040	1.283	1.164	1.065	0.982	0.913	0.858	0.813	0.773	0.738	0.706

## PEAK HOUR TURNING VOLUMES

A.M. Peak				P.M. Peak			
N	391	346	118	N	273	265	53
W	<	v	>	W	<	v	>
87 ^			233	90 ^			687
295 >			319	302 >			442
95 v			57	129 v			42
	<	^	>		<	^	>
	104	172	165		103	391	44
S				S			

## Representative Traffic Volumes (Vehicles per Hour)

N-S Road	1,347	N-S Road	1,759
E-W Road	1,291	E-W Road	1,570
Primary Road =	N-S Road	Primary Road =	N-S Road

## ROADWAY CO CONTRIBUTIONS

Roadway	Reference CO Concentrations				Traffic Volume		Emission Factor		
	0 Feet	25 Feet	50 Feet						
A.M. Peak Hour									
N-S Road	14.0	7.6	5.7	*	1,347	*	1.40	÷	100,000
E-W Road	3.7	2.7	2.2	*	1,291	*	1.40	÷	100,000
P.M. Peak Hour									
N-S Road	14.0	7.6	5.7	*	1,759	*	1.40	÷	100,000
E-W Road	3.7	2.7	2.2	*	1,570	*	1.40	÷	100,000

## TOTAL CO CONCENTRATIONS (ppm)

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
0 Feet from Roadway Edge	4.5	4.6	2.9
25 Feet from Roadway Edge	4.4	4.4	2.8
50 Feet from Roadway Edge	4.3	4.4	2.7



# BAY AREA AQMD SIMPLIFIED CALINE4 ANALYSIS; UPDATED WITH EMFAC2007

Project Title: Thousand Oaks Boulevard Specific Plan  
 Intersection: Conejo School Road and Thousand Oaks Boulevard  
 Analysis Condition: Forecast Existing Plus Proposed Specific Plan  
 Nearest Air Monitoring Station measuring CO: 5400 Cochran Street, Simi Valley, CA  
 Background 1-hour CO Concentration (ppm): 4.2  
 Background 8-hour CO Concentration (ppm): 2.6  
 Persistence Factor: 0.7  
 Analysis Year: 2035

		Roadway Type	No. of Lanes	Approach/Departure Speed	
				A.M.	P.M.
North-South Roadway:	Conejo School Road	AT GRADE	2	5	5
East-West Roadway:	Thousand Oaks Boulevard	AT GRADE	4	5	5

## EMFAC2007 COMPOSITE EMISSION FACTORS FOR CO

Air Basin: South Central Coast County: Ventura  
 Assumes lowest mean wintertime temperature of 49 degrees F and 71% humidity.

Year	Average Speed (miles per hour)									
	5	8	11	14	17	20	23	26	29	32
2010	6.419	5.647	5.034	4.542	4.142	3.818	3.553	3.333	3.15	3
2011	5.798	5.116	4.572	4.134	3.777	3.487	3.249	3.051	2.886	2.749
2012	5.251	4.645	4.161	3.77	3.451	3.19	2.976	2.797	2.647	2.522
2013	4.757	4.22	3.79	3.44	3.154	2.92	2.728	2.566	2.43	2.316
2014	4.323	3.844	3.46	3.146	2.889	2.679	2.505	2.359	2.235	2.13
2015	3.937	3.51	3.165	2.883	2.651	2.461	2.305	2.172	2.059	1.963
2020	2.646	2.387	2.174	1.997	1.85	1.728	1.627	1.539	1.464	1.398
2025	1.949	1.77	1.621	1.496	1.392	1.306	1.233	1.17	1.115	1.067
2030	1.615	1.471	1.35	1.248	1.163	1.093	1.034	0.983	0.937	0.898
2035	1.403	1.276	1.17	1.081	1.007	0.946	0.896	0.852	0.813	0.779
2040	1.283	1.164	1.065	0.982	0.913	0.858	0.813	0.773	0.738	0.706

## PEAK HOUR TURNING VOLUMES

A.M. Peak				P.M. Peak			
N	91	109	170	N	155	40	200
W	<	v	>	W	<	v	>
107 ^			^	119 ^			^
764 >			<	1,324 >			<
186 v			v	87 v			v
	<	^	>		<	^	>
	165	59	29		152	89	64
S				S			

## Representative Traffic Volumes (Vehicles per Hour)

N-S Road	662	N-S Road	849
E-W Road	1,998	E-W Road	3,280
Primary Road =	E-W Road	Primary Road =	E-W Road

## ROADWAY CO CONTRIBUTIONS

Roadway	Reference CO Concentrations				Traffic Volume		Emission Factor		
	0 Feet	25 Feet	50 Feet						
A.M. Peak Hour									
N-S Road	3.7	2.7	2.2	*	662	*	1.40	÷	100,000
E-W Road	11.9	7.0	5.4	*	1,998	*	1.40	÷	100,000
P.M. Peak Hour									
N-S Road	3.7	2.7	2.2	*	849	*	1.40	÷	100,000
E-W Road	11.9	7.0	5.4	*	3,280	*	1.40	÷	100,000

## TOTAL CO CONCENTRATIONS (ppm)

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
0 Feet from Roadway Edge	4.6	4.8	3.0
25 Feet from Roadway Edge	4.4	4.6	2.8
50 Feet from Roadway Edge	4.4	4.5	2.8

# BAY AREA AQMD SIMPLIFIED CALINE4 ANALYSIS; UPDATED WITH EMFAC2007

Project Title: Thousand Oaks Boulevard Specific Plan  
Intersection: Skyline Drive and Hillcrest Drive  
Analysis Condition: Forecast Existing Plus Proposed Specific Plan  
Nearest Air Monitoring Station measuring CO: 5400 Cochran Street, Simi Valley, CA  
Background 1-hour CO Concentration (ppm): 4.2  
Background 8-hour CO Concentration (ppm): 2.6  
Persistence Factor: 0.7  
Analysis Year: 2035

		Roadway Type	No. of Lanes	Approach/Departure Speed	
				A.M.	P.M.
North-South Roadway:	Skyline Drive	AT GRADE	0	5	5
East-West Roadway:	Hillcrest Drive	AT GRADE	4	5	5

## EMFAC2007 COMPOSITE EMISSION FACTORS FOR CO

Air Basin: South Central Coast County: Ventura  
Assumes lowest mean wintertime temperature of 49 degrees F and 71% humidity.

Year	Average Speed (miles per hour)									
	5	8	11	14	17	20	23	26	29	32
2010	6.419	5.647	5.034	4.542	4.142	3.818	3.553	3.333	3.15	3
2011	5.798	5.116	4.572	4.134	3.777	3.487	3.249	3.051	2.886	2.749
2012	5.251	4.645	4.161	3.77	3.451	3.19	2.976	2.797	2.647	2.522
2013	4.757	4.22	3.79	3.44	3.154	2.92	2.728	2.566	2.43	2.316
2014	4.323	3.844	3.46	3.146	2.889	2.679	2.505	2.359	2.235	2.13
2015	3.937	3.51	3.165	2.883	2.651	2.461	2.305	2.172	2.059	1.963
2020	2.646	2.387	2.174	1.997	1.85	1.728	1.627	1.539	1.464	1.398
2025	1.949	1.77	1.621	1.496	1.392	1.306	1.233	1.17	1.115	1.067
2030	1.615	1.471	1.35	1.248	1.163	1.093	1.034	0.983	0.937	0.898
2035	1.403	1.276	1.17	1.081	1.007	0.946	0.896	0.852	0.813	0.779
2040	1.283	1.164	1.065	0.982	0.913	0.858	0.813	0.773	0.738	0.706

## PEAK HOUR TURNING VOLUMES

A.M. Peak				P.M. Peak			
N	0	0	0	N	0	0	0
W	<	v	>	W	<	v	>
0 ^			^	0 ^			^
692 >			<	389 >			<
188 v			v	153 v			v
S	62	0	41	S	161	0	63
E				E			
0			0	0			0
383			732				
22			78				

## Representative Traffic Volumes (Vehicles per Hour)

N-S Road	313	N-S Road	455
E-W Road	1,325	E-W Road	1,435
Primary Road =	E-W Road	Primary Road =	E-W Road

## ROADWAY CO CONTRIBUTIONS

Roadway	Reference CO Concentrations				Traffic Volume		Emission Factor		
	0 Feet	25 Feet	50 Feet						
A.M. Peak Hour									
N-S Road	0.0	0.0	0.0	*	313	*	1.40	÷	100,000
E-W Road	11.9	7.0	5.4	*	1,325	*	1.40	÷	100,000
P.M. Peak Hour									
N-S Road	0.0	0.0	0.0	*	455	*	1.40	÷	100,000
E-W Road	11.9	7.0	5.4	*	1,435	*	1.40	÷	100,000

## TOTAL CO CONCENTRATIONS (ppm)

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
0 Feet from Roadway Edge	4.4	4.4	2.8
25 Feet from Roadway Edge	4.3	4.3	2.7
50 Feet from Roadway Edge	4.3	4.3	2.7

# BAY AREA AQMD SIMPLIFIED CALINE4 ANALYSIS; UPDATED WITH EMFAC2007

Project Title: Thousand Oaks Boulevard Specific Plan  
 Intersection: Skyline Drive and Thousand Oaks Boulevard  
 Analysis Condition: Forecast Existing Plus Proposed Specific Plan  
 Nearest Air Monitoring Station measuring CO: 5400 Cochran Street, Simi Valley, CA  
 Background 1-hour CO Concentration (ppm): 4.2  
 Background 8-hour CO Concentration (ppm): 2.6  
 Persistence Factor: 0.7  
 Analysis Year: 2035

	Roadway Type	No. of Lanes	Approach/Departure Speed	
			A.M.	P.M.
North-South Roadway:	Skyline Drive	AT GRADE	2	5
East-West Roadway:	Thousand Oaks Boulevard	AT GRADE	4	5

## EMFAC2007 COMPOSITE EMISSION FACTORS FOR CO

Air Basin: South Central Coast County: Ventura  
 Assumes lowest mean wintertime temperature of 49 degrees F and 71% humidity.

Year	Average Speed (miles per hour)									
	5	8	11	14	17	20	23	26	29	32
2010	6.419	5.647	5.034	4.542	4.142	3.818	3.553	3.333	3.15	3
2011	5.798	5.116	4.572	4.134	3.777	3.487	3.249	3.051	2.886	2.749
2012	5.251	4.645	4.161	3.77	3.451	3.19	2.976	2.797	2.647	2.522
2013	4.757	4.22	3.79	3.44	3.154	2.92	2.728	2.566	2.43	2.316
2014	4.323	3.844	3.46	3.146	2.889	2.679	2.505	2.359	2.235	2.13
2015	3.937	3.51	3.165	2.883	2.651	2.461	2.305	2.172	2.059	1.963
2020	2.646	2.387	2.174	1.997	1.85	1.728	1.627	1.539	1.464	1.398
2025	1.949	1.77	1.621	1.496	1.392	1.306	1.233	1.17	1.115	1.067
2030	1.615	1.471	1.35	1.248	1.163	1.093	1.034	0.983	0.937	0.898
2035	1.403	1.276	1.17	1.081	1.007	0.946	0.896	0.852	0.813	0.779
2040	1.283	1.164	1.065	0.982	0.913	0.858	0.813	0.773	0.738	0.706

## PEAK HOUR TURNING VOLUMES

A.M. Peak				P.M. Peak			
N	52	22	202	N	60	14	194
W	<	v	>	W	<	v	>
26 ^			121	44 ^			209
828 >			894	1,663 >			1,579
7 v			24	5 v			17
	<	^	>		<	^	>
S	16	18	9	S	29	14	15

## Representative Traffic Volumes (Vehicles per Hour)

N-S Road	441	N-S Road	535
E-W Road	2,078	E-W Road	3,677
Primary Road =	E-W Road	Primary Road =	E-W Road

## ROADWAY CO CONTRIBUTIONS

Roadway	Reference CO Concentrations				Traffic Volume		Emission Factor		
	0 Feet	25 Feet	50 Feet						
A.M. Peak Hour									
N-S Road	3.7	2.7	2.2	*	441	*	1.40	÷	100,000
E-W Road	11.9	7.0	5.4	*	2,078	*	1.40	÷	100,000
P.M. Peak Hour									
N-S Road	3.7	2.7	2.2	*	535	*	1.40	÷	100,000
E-W Road	11.9	7.0	5.4	*	3,677	*	1.40	÷	100,000

## TOTAL CO CONCENTRATIONS (ppm)

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
0 Feet from Roadway Edge	4.6	4.8	3.0
25 Feet from Roadway Edge	4.4	4.6	2.9
50 Feet from Roadway Edge	4.4	4.5	2.8

# BAY AREA AQMD SIMPLIFIED CALINE4 ANALYSIS; UPDATED WITH EMFAC2007

Project Title: Thousand Oaks Boulevard Specific Plan  
Intersection: Hampshire Road and Thousand Oaks Boulevard  
Analysis Condition: Forecast Existing Plus Proposed Specific Plan  
Nearest Air Monitoring Station measuring CO: 5400 Cochran Street, Simi Valley, CA  
Background 1-hour CO Concentration (ppm): 4.2  
Background 8-hour CO Concentration (ppm): 2.6  
Persistence Factor: 0.7  
Analysis Year: 2035

		Roadway Type	No. of Lanes	Approach/Departure Speed	
				A.M.	P.M.
North-South Roadway:	Hampshire Road	AT GRADE	0	5	5
East-West Roadway:	Thousand Oaks Boulevard	AT GRADE	4	5	5

## EMFAC2007 COMPOSITE EMISSION FACTORS FOR CO

Air Basin: South Central Coast County: Ventura  
Assumes lowest mean wintertime temperature of 49 degrees F and 71% humidity.

Year	Average Speed (miles per hour)									
	5	8	11	14	17	20	23	26	29	32
2010	6.419	5.647	5.034	4.542	4.142	3.818	3.553	3.333	3.15	3
2011	5.798	5.116	4.572	4.134	3.777	3.487	3.249	3.051	2.886	2.749
2012	5.251	4.645	4.161	3.77	3.451	3.19	2.976	2.797	2.647	2.522
2013	4.757	4.22	3.79	3.44	3.154	2.92	2.728	2.566	2.43	2.316
2014	4.323	3.844	3.46	3.146	2.889	2.679	2.505	2.359	2.235	2.13
2015	3.937	3.51	3.165	2.883	2.651	2.461	2.305	2.172	2.059	1.963
2020	2.646	2.387	2.174	1.997	1.85	1.728	1.627	1.539	1.464	1.398
2025	1.949	1.77	1.621	1.496	1.392	1.306	1.233	1.17	1.115	1.067
2030	1.615	1.471	1.35	1.248	1.163	1.093	1.034	0.983	0.937	0.898
2035	1.403	1.276	1.17	1.081	1.007	0.946	0.896	0.852	0.813	0.779
2040	1.283	1.164	1.065	0.982	0.913	0.858	0.813	0.773	0.738	0.706

## PEAK HOUR TURNING VOLUMES

A.M. Peak				P.M. Peak			
N	3	0	0	N	43	0	0
W	<	v	>	W	<	v	>
10 ^			^	20 ^			^
513 >			<	1,159 >			<
587 v			v	737 v			v
	<	^	>		<	^	>
	543	61	620		843	32	543
S				S			

## Representative Traffic Volumes (Vehicles per Hour)

N-S Road	2,157	N-S Road	2,921
E-W Road	2,195	E-W Road	3,816
Primary Road =	E-W Road	Primary Road =	E-W Road

## ROADWAY CO CONTRIBUTIONS

Roadway	Reference CO Concentrations				Traffic Volume		Emission Factor		
	0 Feet	25 Feet	50 Feet						
A.M. Peak Hour									
N-S Road	0.0	0.0	0.0	*	2,157	*	1.40	÷	100,000
E-W Road	11.9	7.0	5.4	*	2,195	*	1.40	÷	100,000
P.M. Peak Hour									
N-S Road	0.0	0.0	0.0	*	2,921	*	1.40	÷	100,000
E-W Road	11.9	7.0	5.4	*	3,816	*	1.40	÷	100,000

## TOTAL CO CONCENTRATIONS (ppm)

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
0 Feet from Roadway Edge	4.6	4.8	3.0
25 Feet from Roadway Edge	4.4	4.6	2.9
50 Feet from Roadway Edge	4.4	4.5	2.8

# BAY AREA AQMD SIMPLIFIED CALINE4 ANALYSIS; UPDATED WITH EMFAC2007

Project Title: Thousand Oaks Boulevard Specific Plan  
 Intersection: Duesenberg Street and Thousand Oaks Boulevard  
 Analysis Condition: Forecast Existing Plus Proposed Specific Plan  
 Nearest Air Monitoring Station measuring CO: 5400 Cochran Street, Simi Valley, CA  
 Background 1-hour CO Concentration (ppm): 4.2  
 Background 8-hour CO Concentration (ppm): 2.6  
 Persistence Factor: 0.7  
 Analysis Year: 2035

		Roadway Type	No. of Lanes	Approach/Departure Speed	
				A.M.	P.M.
North-South Roadway:	Duesenberg Street	AT GRADE	2	5	5
East-West Roadway:	Thousand Oaks Boulevard	AT GRADE	4	5	5

## EMFAC2007 COMPOSITE EMISSION FACTORS FOR CO

Air Basin: South Central Coast County: Ventura  
 Assumes lowest mean wintertime temperature of 49 degrees F and 71% humidity.

Year	Average Speed (miles per hour)									
	5	8	11	14	17	20	23	26	29	32
2010	6.419	5.647	5.034	4.542	4.142	3.818	3.553	3.333	3.15	3
2011	5.798	5.116	4.572	4.134	3.777	3.487	3.249	3.051	2.886	2.749
2012	5.251	4.645	4.161	3.77	3.451	3.19	2.976	2.797	2.647	2.522
2013	4.757	4.22	3.79	3.44	3.154	2.92	2.728	2.566	2.43	2.316
2014	4.323	3.844	3.46	3.146	2.889	2.679	2.505	2.359	2.235	2.13
2015	3.937	3.51	3.165	2.883	2.651	2.461	2.305	2.172	2.059	1.963
2020	2.646	2.387	2.174	1.997	1.85	1.728	1.627	1.539	1.464	1.398
2025	1.949	1.77	1.621	1.496	1.392	1.306	1.233	1.17	1.115	1.067
2030	1.615	1.471	1.35	1.248	1.163	1.093	1.034	0.983	0.937	0.898
2035	1.403	1.276	1.17	1.081	1.007	0.946	0.896	0.852	0.813	0.779
2040	1.283	1.164	1.065	0.982	0.913	0.858	0.813	0.773	0.738	0.706

## PEAK HOUR TURNING VOLUMES

A.M. Peak				P.M. Peak			
N	167	37	217	N	211	22	249
W	<	v	>	W	<	v	>
190 ^			131	212 ^			424
683 >			577	1,297 >			1,178
176 v			29	100 v			51
<	39	9	25	<	102	36	29
S				S			

## Representative Traffic Volumes (Vehicles per Hour)

N-S Road	751	N-S Road	1,154
E-W Road	1,832	E-W Road	3,228
Primary Road =	E-W Road	Primary Road =	E-W Road

## ROADWAY CO CONTRIBUTIONS

Roadway	Reference CO Concentrations				Traffic Volume		Emission Factor		
	0 Feet	25 Feet	50 Feet						
A.M. Peak Hour									
N-S Road	3.7	2.7	2.2	*	751	*	1.40	÷	100,000
E-W Road	11.9	7.0	5.4	*	1,832	*	1.40	÷	100,000
P.M. Peak Hour									
N-S Road	3.7	2.7	2.2	*	1,154	*	1.40	÷	100,000
E-W Road	11.9	7.0	5.4	*	3,228	*	1.40	÷	100,000

## TOTAL CO CONCENTRATIONS (ppm)

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
0 Feet from Roadway Edge	4.5	4.8	3.0
25 Feet from Roadway Edge	4.4	4.6	2.9
50 Feet from Roadway Edge	4.4	4.5	2.8

# BAY AREA AQMD SIMPLIFIED CALINE4 ANALYSIS; UPDATED WITH EMFAC2007

Project Title: Thousand Oaks Boulevard Specific Plan  
 Intersection: Westlake Boulevard and Thousand Oaks Boulevard  
 Analysis Condition: Forecast Existing Plus Proposed Specific Plan  
 Nearest Air Monitoring Station measuring CO: 5400 Cochran Street, Simi Valley, CA  
 Background 1-hour CO Concentration (ppm): 4.2  
 Background 8-hour CO Concentration (ppm): 2.6  
 Persistence Factor: 0.7  
 Analysis Year: 2035

		Roadway Type	No. of Lanes	Approach/Departure Speed	
				A.M.	P.M.
North-South Roadway:	Westlake Boulevard	AT GRADE	6	5	5
East-West Roadway:	Thousand Oaks Boulevard	AT GRADE	4	5	5

## EMFAC2007 COMPOSITE EMISSION FACTORS FOR CO

Air Basin: South Central Coast County: Ventura  
 Assumes lowest mean wintertime temperature of 49 degrees F and 71% humidity.

Year	Average Speed (miles per hour)									
	5	8	11	14	17	20	23	26	29	32
2010	6.419	5.647	5.034	4.542	4.142	3.818	3.553	3.333	3.15	3
2011	5.798	5.116	4.572	4.134	3.777	3.487	3.249	3.051	2.886	2.749
2012	5.251	4.645	4.161	3.77	3.451	3.19	2.976	2.797	2.647	2.522
2013	4.757	4.22	3.79	3.44	3.154	2.92	2.728	2.566	2.43	2.316
2014	4.323	3.844	3.46	3.146	2.889	2.679	2.505	2.359	2.235	2.13
2015	3.937	3.51	3.165	2.883	2.651	2.461	2.305	2.172	2.059	1.963
2020	2.646	2.387	2.174	1.997	1.85	1.728	1.627	1.539	1.464	1.398
2025	1.949	1.77	1.621	1.496	1.392	1.306	1.233	1.17	1.115	1.067
2030	1.615	1.471	1.35	1.248	1.163	1.093	1.034	0.983	0.937	0.898
2035	1.403	1.276	1.17	1.081	1.007	0.946	0.896	0.852	0.813	0.779
2040	1.283	1.164	1.065	0.982	0.913	0.858	0.813	0.773	0.738	0.706

## PEAK HOUR TURNING VOLUMES

A.M. Peak				P.M. Peak			
N	42	695	439	N	125	748	390
W	<	v	>	W	<	v	>
44 ^			^	99 ^			^
510 >			<	1,135 >			<
262 v			v	414 v			v
	<	^	>		<	^	>
	421	310	613		853	663	162
S				S			

## Representative Traffic Volumes (Vehicles per Hour)

N-S Road	2,698	N-S Road	3,485
E-W Road	2,944	E-W Road	3,598
Primary Road =	E-W Road	Primary Road =	E-W Road

## ROADWAY CO CONTRIBUTIONS

Roadway	Reference CO Concentrations				Traffic Volume		Emission Factor		
	0 Feet	25 Feet	50 Feet						
A.M. Peak Hour									
N-S Road	2.8	2.3	2.0	*	2,698	*	1.40	÷	100,000
E-W Road	11.9	7.0	5.4	*	2,944	*	1.40	÷	100,000
P.M. Peak Hour									
N-S Road	2.8	2.3	2.0	*	3,485	*	1.40	÷	100,000
E-W Road	11.9	7.0	5.4	*	3,598	*	1.40	÷	100,000

## TOTAL CO CONCENTRATIONS (ppm)

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
0 Feet from Roadway Edge	4.8	4.9	3.1
25 Feet from Roadway Edge	4.6	4.7	2.9
50 Feet from Roadway Edge	4.5	4.6	2.9

## **APPENDIX 4.4**

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### **Noise Calculations**





**Thousand Oaks Boulevard Specific Plan  
On-Site Noise Contours  
Existing Conditions**

	<b>Number</b>											
	<b>of Lanes</b>			<b>Design</b>		<b>Vehicle Mix</b>		<b>Distance from Center of Roadway</b>				
<b>ROADWAY NAME/SEGMENT</b>	<b>in Each</b>	<b>Median</b>	<b>ADT</b>	<b>Speed</b>	<b>Alpha</b>	<b>Medium</b>	<b>Heavy</b>	<b>CNEL at</b>	<b>DISTANCE TO CONTOUR</b>			
	<b>Direction</b>	<b>Width</b>	<b>Volume</b>	<b>(mph)</b>	<b>Factor (1)</b>	<b>Trucks</b>	<b>Trucks</b>	<b>75 Feet</b>	<b>75 CNEL</b>	<b>70 CNEL</b>	<b>65 CNEL</b>	<b>60 CNEL</b>
North Moorpark Road - Between the 101 and TO Blvd.	3	0	33759	35	0	1.8%	0.7%	68.3	-	-	157	488
North Moorpark Road - Between Hillcrest Dr and TO Blvd	3	0	28170	35	0	1.8%	0.7%	67.5	-	-	131	408
Hillcrest Drive - Between N. Moorpark Road and Hodencamp Rd	2	0	12850	45	0	1.8%	0.7%	66.8	-	-	113	352
Thousand Oaks Blvd - Between N. Moorpark Road and Hodencamp Rd.	2	0	19125	35	0	1.8%	0.7%	65.8	-	-	90	279
Boardwalk Ave - Between TO Blvd and Hillcrest Dr	1	0	1700	25	0	1.8%	0.7%	52.2	-	-	-	-
Hodencamp Rd - Between TO Blvd and Hillcrest Dr	2	0	4900	35	0	1.8%	0.7%	59.9	-	-	-	-
Hillcrest Drive - Between Hodencamp Rd and Rancho Rd.	2	0	11190	35	0	1.8%	0.7%	63.5	-	-	-	165
TO Blvd - Between Hodencamp Rd and Rancho Rd.	2	0	15111	35	0	1.8%	0.7%	64.8	-	-	-	221
Rancho Rd. - Between Hillcrest Dr. and TO Blvd.	2	0	8603	35	0	1.8%	0.7%	62.3	-	-	-	127
Hillcrest Dr - Between Rancho Rd and Erbes Rd	2	0	10820	35	0	1.8%	0.7%	63.3	-	-	-	159
TO Blvd - Between Rancho Rd and Erbes Rd	2	0	26776	35	0	1.8%	0.7%	67.3	-	-	125	389
Rancho Rd - Between 101 Freeway and TO Blvd	2	0	19675	35	0	1.8%	0.7%	65.9	-	-	92	287
Erbes Rd - Between TO Blvd and Hillcrest Dr.	1	0	7705	35	0	1.8%	0.7%	61.8	-	-	-	114
TO Blvd - Between Erbes Rd and Skyline Dr	2	0	20402	35	0	1.8%	0.7%	66.1	-	-	96	297
Conejo School Rd - Between Hillcrest Dr and TO Blvd	1	0	4824	30	0	1.8%	0.7%	58.5	-	-	-	-
Hillcrest Dr - Between Conejo School Rd and Duesenberg St	2	0	12556	45	0	1.8%	0.7%	66.7	-	-	111	344
Skyline Dr - Between Hillcrest Dr and TO Blvd	1	0	4981	30	0	1.8%	0.7%	58.7	-	-	-	-
Hampshire Rd - Between 101 Freeway and TO Blvd	2	0	24343	35	0	1.8%	0.7%	66.8	-	-	114	354
Duesenberg St - Between Hillcrest Dr and TO Blvd	1	0	6963	35	0	1.8%	0.7%	61.4	-	-	-	103
Hillcrest Dr - Between Skyline Dr and Westlake Blvd	2	0	8650	45	0	1.8%	0.7%	65.1	-	-	77	238
TO Blvd - Between Skyline Dr and Westlake Blvd	2	0	19613	35	0	1.8%	0.7%	65.9	-	-	92	286
Westlake Blvd - Between 101 Freeway and TO Blvd	4	0	40225	45	0	1.8%	0.7%	71.8	-	112	348	1,082
Westlake Blvd - Between Hillcrest Dr and TO Blvd	3	0	21622	50	0	1.8%	0.7%	70.3	-	80	247	769
<b>Notes:</b>												
(1) Alpha Factor: Coefficient of absorption relating to the effects of the ground surface. An alpha factor of 0 indicates that the site is an acoustically "hard" site, such as asphalt. An alpha factor of 0.5 indicates that the site is an acoustically "soft" site such, as heavily vegetated ground cover.												
"-" = contour is located within the roadway lanes or within 75 feet of the roadway centerline.												
Noise levels and distances to contours do not assume any natural or constructed barriers that may attenuate noise.												
<b>Assumed 24-Hour Traffic Distribution:</b>	<b>Day</b>	<b>Evening</b>	<b>Night</b>	<b>Total</b>								
Total ADT Volumes	77.70%	12.70%	9.60%	100.00%								
Medium-Duty Trucks	87.43%	5.05%	7.52%	100.00%								
Heavy-Duty Trucks	89.10%	2.84%	8.06%	100.00%								

**Thousand Oaks Boulevard Specific Plan  
On-Site Noise Contours  
Existing Plus Specific Plan Conditions**

	<b>Number</b>											
	<b>of Lanes</b>			<b>Design</b>		<b>Vehicle Mix</b>		<b>Distance from Center of Roadway</b>				
<b>ROADWAY NAME/SEGMENT</b>	<b>in Each</b>	<b>Median</b>	<b>ADT</b>	<b>Speed</b>	<b>Alpha</b>	<b>Medium</b>	<b>Heavy</b>	<b>CNEL at</b>	<b>DISTANCE TO CONTOUR</b>			
	<b>Direction</b>	<b>Width</b>	<b>Volume</b>	<b>(mph)</b>	<b>Factor (1)</b>	<b>Trucks</b>	<b>Trucks</b>	<b>75 Feet</b>	<b>75 CNEL</b>	<b>70 CNEL</b>	<b>65 CNEL</b>	<b>60 CNEL</b>
North Moorpark Road - Between the 101 and TO Blvd.	3	0	40017	35	0	1.8%	0.7%	69.0	-	-	186	577
North Moorpark Road - Between Hillcrest Dr and TO Blvd	3	0	33335	35	0	1.8%	0.7%	68.2	-	-	155	482
Hillcrest Drive - Between N. Moorpark Road and Hodencamp Rd	2	0	13925	45	0	1.8%	0.7%	67.2	-	-	122	381
Thousand Oaks Blvd - Between N. Moorpark Road and Hodencamp Rd.	2	0	33266	35	0	1.8%	0.7%	68.2	-	-	155	481
Boardwalk Ave - Between TO Blvd and Hillcrest Dr	1	0	1940	25	0	1.8%	0.7%	52.8	-	-	-	-
Hodencamp Rd - Between TO Blvd and Hillcrest Dr	2	0	4975	35	0	1.8%	0.7%	59.9	-	-	-	-
Hillcrest Drive - Between Hodencamp Rd and Rancho Rd.	2	0	12143	35	0	1.8%	0.7%	63.8	-	-	-	178
TO Blvd - Between Hodencamp Rd and Rancho Rd.	2	0	30629	35	0	1.8%	0.7%	67.8	-	-	143	444
Rancho Rd. - Between Hillcrest Dr. and TO Blvd.	2	0	11379	35	0	1.8%	0.7%	63.5	-	-	-	167
Hillcrest Dr - Between Rancho Rd and Erbes Rd	2	0	11687	35	0	1.8%	0.7%	63.7	-	-	-	172
TO Blvd - Between Rancho Rd and Erbes Rd	2	0	43085	35	0	1.8%	0.7%	69.3	-	-	200	621
Rancho Rd - Between 101 Freeway and TO Blvd	2	0	32181	35	0	1.8%	0.7%	68.1	-	-	150	466
Erbes Rd - Between TO Blvd and Hillcrest Dr.	1	0	11702	35	0	1.8%	0.7%	63.7	-	-	-	172
TO Blvd - Between Erbes Rd and Skyline Dr	2	0	37135	35	0	1.8%	0.7%	68.7	-	-	173	536
Conejo School Rd - Between Hillcrest Dr and TO Blvd	1	0	6016	30	0	1.8%	0.7%	59.5	-	-	-	-
Hillcrest Dr - Between Conejo School Rd and Duesenberg St	2	0	13145	45	0	1.8%	0.7%	66.9	-	-	116	360
Skyline Dr - Between Hillcrest Dr and TO Blvd	1	0	5439	30	0	1.8%	0.7%	59.0	-	-	-	-
Hampshire Rd - Between 101 Freeway and TO Blvd	2	0	32881	35	0	1.8%	0.7%	68.1	-	-	153	476
Duesenberg St - Between Hillcrest Dr and TO Blvd	1	0	7430	35	0	1.8%	0.7%	61.7	-	-	-	110
Hillcrest Dr - Between Skyline Dr and Westlake Blvd	2	0	8986	45	0	1.8%	0.7%	65.3	-	-	80	247
TO Blvd - Between Skyline Dr and Westlake Blvd	2	0	32079	35	0	1.8%	0.7%	68.0	-	-	149	464
Westlake Blvd - Between 101 Freeway and TO Blvd	4	0	40455	45	0	1.8%	0.7%	71.8	-	113	350	1,088
Westlake Blvd - Between Hillcrest Dr and TO Blvd	3	0	21622	50	0	1.8%	0.7%	70.3	-	80	247	769
<b>Notes:</b>												
(1) Alpha Factor: Coefficient of absorption relating to the effects of the ground surface. An alpha factor of 0 indicates that the site is an acoustically "hard" site, such as asphalt. An alpha factor of 0.5 indicates that the site is an acoustically "soft" site such, as heavily vegetated ground cover.												
"-" = contour is located within the roadway lanes or within 75 feet of the roadway centerline.												
Noise levels and distances to contours do not assume any natural or constructed barriers that may attenuate noise.												
<b>Assumed 24-Hour Traffic Distribution:</b>	<b>Day</b>	<b>Evening</b>	<b>Night</b>	<b>Total</b>								
Total ADT Volumes	77.70%	12.70%	9.60%	100.00%								
Medium-Duty Trucks	87.43%	5.05%	7.52%	100.00%								
Heavy-Duty Trucks	89.10%	2.84%	8.06%	100.00%								

**Thousand Oaks Boulevard Specific Plan  
On-Site Noise Contours  
General Plan Plus Specific Plan Conditions**

	<b>Number</b>											
	<b>of Lanes</b>			<b>Design</b>		<b>Vehicle Mix</b>		<b>Distance from Center of Roadway</b>				
<b>ROADWAY NAME/SEGMENT</b>	<b>in Each</b>	<b>Median</b>	<b>ADT</b>	<b>Speed</b>	<b>Alpha</b>	<b>Medium</b>	<b>Heavy</b>	<b>CNEL at</b>	<b>DISTANCE TO CONTOUR</b>			
	<b>Direction</b>	<b>Width</b>	<b>Volume</b>	<b>(mph)</b>	<b>Factor (1)</b>	<b>Trucks</b>	<b>Trucks</b>	<b>75 Feet</b>	<b>75 CNEL</b>	<b>70 CNEL</b>	<b>65 CNEL</b>	<b>60 CNEL</b>
North Moorpark Road - Between the 101 and TO Blvd.	3	0	53671	35	0	1.8%	0.7%	70.3	-	80	248	771
North Moorpark Road - Between Hillcrest Dr and TO Blvd	3	0	51627	35	0	1.8%	0.7%	70.1	-	77	239	742
Hillcrest Drive - Between N. Moorpark Road and Hodencamp Rd	2	0	16741	45	0	1.8%	0.7%	68.0	-	-	147	456
Thousand Oaks Blvd - Between N. Moorpark Road and Hodencamp Rd.	2	0	38099	35	0	1.8%	0.7%	68.8	-	-	177	550
Boardwalk Ave - Between TO Blvd and Hillcrest Dr	1	0	2000	25	0	1.8%	0.7%	53.0	-	-	-	-
Hodencamp Rd - Between TO Blvd and Hillcrest Dr	2	0	4993	35	0	1.8%	0.7%	60.0	-	-	-	-
Hillcrest Drive - Between Hodencamp Rd and Rancho Rd.	2	0	15000	35	0	1.8%	0.7%	64.7	-	-	-	220
TO Blvd - Between Hodencamp Rd and Rancho Rd.	2	0	35208	35	0	1.8%	0.7%	68.4	-	-	164	509
Rancho Rd. - Between Hillcrest Dr. and TO Blvd.	2	0	11131	35	0	1.8%	0.7%	63.4	-	-	-	164
Hillcrest Dr - Between Rancho Rd and Erbes Rd	2	0	15005	35	0	1.8%	0.7%	64.7	-	-	-	220
TO Blvd - Between Rancho Rd and Erbes Rd	2	0	50987	35	0	1.8%	0.7%	70.1	-	76	236	733
Rancho Rd - Between 101 Freeway and TO Blvd	2	0	32732	35	0	1.8%	0.7%	68.1	-	-	152	473
Erbes Rd - Between TO Blvd and Hillcrest Dr.	1	0	11461	35	0	1.8%	0.7%	63.6	-	-	-	168
TO Blvd - Between Erbes Rd and Skyline Dr	2	0	40815	35	0	1.8%	0.7%	69.1	-	-	189	588
Conejo School Rd - Between Hillcrest Dr and TO Blvd	1	0	9148	30	0	1.8%	0.7%	61.3	-	-	-	101
Hillcrest Dr - Between Conejo School Rd and Duesenberg St	2	0	15342	45	0	1.8%	0.7%	67.6	-	-	135	419
Skyline Dr - Between Hillcrest Dr and TO Blvd	1	0	6075	30	0	1.8%	0.7%	59.5	-	-	-	-
Hampshire Rd - Between 101 Freeway and TO Blvd	2	0	34069	35	0	1.8%	0.7%	68.3	-	-	159	493
Duesenberg St - Between Hillcrest Dr and TO Blvd	1	0	8169	35	0	1.8%	0.7%	62.1	-	-	-	121
Hillcrest Dr - Between Skyline Dr and Westlake Blvd	2	0	10837	45	0	1.8%	0.7%	66.1	-	-	96	297
TO Blvd - Between Skyline Dr and Westlake Blvd	2	0	36869	35	0	1.8%	0.7%	68.6	-	-	171	532
Westlake Blvd - Between 101 Freeway and TO Blvd	4	0	42016	45	0	1.8%	0.7%	72.0	-	117	363	1,129
Westlake Blvd - Between Hillcrest Dr and TO Blvd	3	0	23862	50	0	1.8%	0.7%	70.7	-	88	273	847
<b>Notes:</b>												
(1) Alpha Factor: Coefficient of absorption relating to the effects of the ground surface. An alpha factor of 0 indicates that the site is an acoustically "hard" site, such as asphalt. An alpha factor of 0.5 indicates that the site is an acoustically "soft" site such, as heavily vegetated ground cover.												
"-" = contour is located within the roadway lanes or within 75 feet of the roadway centerline.												
Noise levels and distances to contours do not assume any natural or constructed barriers that may attenuate noise.												
<b>Assumed 24-Hour Traffic Distribution:</b>		<b>Day</b>	<b>Evening</b>	<b>Night</b>	<b>Total</b>							
Total ADT Volumes		77.70%	12.70%	9.60%	100.00%							
Medium-Duty Trucks		87.43%	5.05%	7.52%	100.00%							
Heavy-Duty Trucks		89.10%	2.84%	8.06%	100.00%							



**Thousand Oaks Boulevard Specific Plan  
Construction Equipment Vibration Model**

Equipment		Pieces of Equipment	PPV at 25 feet (in/sec)	Distance from Equipment	PPV at adjusted distance	RMS velocity amplitude in in/sec at adjusted distance <sup>a</sup>	RMS Vibration level in VdB at adjusted distance
Air Compressor		1	0.090	25	0.090	0.022	87.0
Backhoe		1	0.040	25	0.040	0.010	80.0
Caisson drilling		1	0.089	25	0.089	0.022	86.9
Clam shovel drop (slurry wall)		1	0.202	25	0.202	0.051	94.1
Compactor		1	0.050	25	0.050	0.013	82.0
Compressor		1	0.045	25	0.045	0.011	81.0
Concrete Mixer		1	0.040	25	0.040	0.010	80.0
Concrete Pump		1	0.028	25	0.028	0.007	77.0
Concrete Vibrator		1	0.014	25	0.014	0.004	71.0
Crane (Derrick)		1	0.057	25	0.057	0.014	83.0
Crane (Mobile)		1	0.057	25	0.057	0.014	83.0
Generator		1	0.018	25	0.018	0.004	73.0
Grader		1	0.040	25	0.040	0.010	80.0
Hydromill (slurry wall)	in soil	1	0.008	25	0.008	0.002	66.0
	in rock	1	0.017	25	0.017	0.004	72.6
Jackhammer		1	0.035	25	0.035	0.009	78.8
Large bulldozer		1	0.089	25	0.089	0.022	86.9
Loaded trucks		1	0.076	25	0.076	0.019	85.6
Loader		1	0.071	25	0.071	0.018	85.0
Pavement Breaker		1	0.100	25	0.100	0.025	88.0
Paver		1	0.063	25	0.063	0.016	84.0
Pile Driver (impact)	upper range	1	1.518	25	1.518	0.380	111.6
	typical	1	0.644	25	0.644	0.161	104.1
Pile Driver (sonic)	upper range	1	0.734	25	0.734	0.184	105.3
	typical	1	0.170	25	0.170	0.043	92.6
Pneumatic Tool		1	0.040	25	0.040	0.010	80.0
Pump		1	0.014	25	0.014	0.004	71.0
Roller		1	0.020	25	0.020	0.005	74.0
Saw		1	0.018	25	0.018	0.004	73.0
Scraper		1	0.057	25	0.057	0.014	83.0
Shovel		1	0.028	25	0.028	0.007	77.0
Tub Grinder		1	0.252	25	0.252	0.063	96.0
Small bulldozer		1	0.003	25	0.003	0.001	57.5

**\* Suggested Vibration Thresholds per the Federal Transit Administration, United States Department of Transportation, Transit Noise and Vibration Impact Assessment (FTA-VA-90-1003-06), May 2006, pg. 12-12.**

**Fragile Buildings- 0.20 in/sec**

**Extremely Fragile Buildings- 0.12 in/sec**

**a. PPV is typically a factor of 1.7 to 6 times greater than RMS vibration velocity. In this analysis a factor of 4 has been used to calculate the approximate RMS vibration velocity levels above.**

## **APPENDIX 4.5**

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### **Special-Status Plant and Animal Species Reported from the Region**

**Table 1**  
**Special-status Plant Species Reported from the Region**

Common name <i>Scientific name</i>	Federal Status	State Status	CNPS List	Habitat	Growth form Blooming period*	Potential to occur on site
<b>Ferns and allies</b>						
Sonoran maiden fern <i>Thelypteris puberula</i> var. <i>sonorensis</i>	—	—	2.2	Meadows, seeps and streams between 50 and 610 m msl.	Perennial rhizomatous herb January – September	Not expected— appropriate habitat is not present within the planning area.
<b>Dicots</b>						
Braunton's milk-vetch <i>Astragalus brauntonii</i>	FE	—	1B.1	Usually on recent burns or disturbed communities in sandstone soils with carbonate layers in closed-cone coniferous forest, chaparral, coastal scrub, valley and foothill grassland communities between 4 and 640 m msl.	Perennial herb January – August	Not expected— appropriate habitat is not present within the planning area.
Coulter's saltbush <i>Atriplex coulteri</i>	—	—	1B.2	Ocean bluffs, ridge tops and alkaline lowlands in coastal bluff scrub, coastal dunes, coastal scrub, and valley and foothill grassland communities between 3 and 460 m msl.	Perennial herb March – October	Not expected— appropriate habitat is not present within the planning area.
Malibu baccharis <i>Baccharis malibuensis</i> [Not in <i>The Jepson Manual</i> .]	—	—	1B.1	Chaparral, cismontane woodland, coastal scrub, and riparian woodland communities between 150 and 305 m msl.	Perennial Deciduous shrub August	Not expected—the planning area is outside the known geographic range of the species.
Round-leaved filaree <i>California macrophylla</i> [Treated as <i>Erodium macrophyllum</i> in <i>The Jepson Manual</i> .]	—	—	1B.1	Clay soils in cismontane woodland, valley and foothill grassland communities between 15 and 1200 m msl.	Annual herb March – May	Potential—appropriate habitat may be present within native habitats south of Erbes Road.

Common name Scientific name	Federal Status	State Status	CNPS List	Habitat	Growth form Blooming period*	Potential to occur on site
Lewis' evening-primrose <i>Camissonia lewisii</i>	—	—	3	Sandy or clay soils in coastal bluff scrub, cismontane woodland, coastal dunes, coastal scrub, valley and foothill grassland communities between 0 and 300 m msl.	Annual herb March – May (June)	Potential—appropriate habitat may be present within native habitats south of Erbes Road.
Southern tarplant <i>Centromadia parryi</i> ssp. <i>Australis</i>	—	—	1B.1	Vernally mesic, often alkaline, habitats in marshes and swamp margins, valley and foothill grassland, and vernal pool communities between 0 and 427 m msl.	Annual herb May – November	Not expected—appropriate habitat is not present within the planning area.
Orcutt's pincushion <i>Chaenactis glabriuscula</i> var. <i>orcuttiana</i>	—	—	1B.1	Sandy habitats in coastal bluff scrub and coastal dunes communities between 3 and 100 m msl.	Annual herb January – August	Not expected—the planning area is outside the known geographic range of the species.
San Fernando Valley spineflower <i>Chorizanthe parryi</i> var. <i>fernandina</i>	FC	SE	1B.1	Sandy soils in coastal scrub and valley and foothill grassland communities between 150 and 1220 m msl.	Annual herb April – July	Potential—appropriate habitat may be present within native habitats south of Erbes Road.
Parry's spineflower <i>Chorizanthe parryi</i> var. <i>parryi</i>	—	—	1B.1	Sandy or rocky habitats and openings in chaparral, cismontane woodland, coastal scrub, valley and foothill grassland communities between 275 and 1220 m msl.	Annual herb April – June	Potential—appropriate habitat may be present within native habitats south of Erbes Road.
Santa Susana tarplant <i>Deinandra minthornii</i> [State-listed as <i>Hemizonia minthornii</i> ; see this name in <i>The Jepson Manual</i> .]	—	Rare	1B.2	Sandstone outcrops and crevices in chaparral and coastal scrub communities between 280 and 760 m msl.	Perennial deciduous shrub July – November	Not expected—appropriate habitat is not present within the planning area.
Dune larkspur <i>Delphinium parryi</i> ssp. <i>Blochmaniae</i>	—	—	1B.2	Maritime chaparral and coastal dunes between 0 and 200 m msl.	Perennial herb April – May	Not expected—the planning area is outside the known geographic range of the species.
Blochman's dudleya <i>Dudleya blochmaniae</i> ssp.	—	—	1B.1	Rocky, clay or serpentinite substrates in coastal bluff scrub, chaparral, coastal scrub, and valley	Perennial herb April – June	Not expected—the planning area is outside



Common name Scientific name	Federal Status	State Status	CNPS List	Habitat	Growth form Blooming period*	Potential to occur on site
<i>Blochmaniae</i>				and foothill grassland communities between 5 and 450 m msl.		the known geographic range of the species.
Agoura Hills dudleya <i>Dudleya cymosa</i> ssp. <i>agourensis</i> [A synonym of <i>D. cymosa</i> ssp. <i>ovatifolia</i> in <i>The Jepson Manual</i> ; USFWS also uses this name.]	FT	—	1B.2	Rocky, volcanic substrates in chaparral and cismontane woodland communities between 200 and 500 m msl.	Perennial herb May – June	Not expected—appropriate habitat is not present within the planning area.
Marcescant dudleya <i>Dudleya cymosa</i> ssp. <i>Marcescens</i>	FT	Rare	1B.2	Rocky, volcanic substrates in chaparral communities between 150 and 520 m msl.	Perennial herb April – June	Not expected—appropriate habitat is not present within the planning area.
Santa Monica dudleya <i>Dudleya cymosa</i> ssp. <i>ovatifolia</i> [CNPS listing does not include <i>D. cymosa</i> ssp. <i>agourensis</i> .]	FT	—	1B.2	Volcanic, rocky substrates in chaparral and coastal scrub communities between 150 and 1675 m msl.	Perennial herb March – June	Not expected—appropriate habitat is not present within the planning area.
Many-stemmed dudleya <i>Dudleya multicaulis</i>	—	—	1B.2	Heavy, often clay, soils in chaparral, coastal scrub, valley and foothill grassland habitats between 15 and 790 m msl.	Perennial herb April – July	Potential—appropriate habitat may be present within native habitats south of Erbes Road.
Conejo dudleya <i>Dudleya parva</i> [Federally-listed as <i>D. abramsii</i> ssp. <i>parva</i> ; see this name in <i>The Jepson Manual</i> .]	FT	—	1B.2	Clay or volcanic substrates in coastal scrub and valley and foothill grassland communities between 60 and 450 m msl.	Perennial herb May – June	Not expected—appropriate habitat is not present within the planning area.
Verity's dudleya <i>Dudleya verityi</i>	FT	—	1B.2	Volcanic outcrops in chaparral, cismontane woodland, and coastal scrub communities between 60 and 120 m msl.	Perennial herb May – June	Not expected—appropriate habitat is not present within the planning area.

Common name Scientific name	Federal Status	State Status	CNPS List	Habitat	Growth form Blooming period*	Potential to occur on site
Conejo buckwheat <i>Eriogonum crocatum</i>	—	Rare	1B.2	Conejo volcanic outcrops in chaparral, coastal scrub, valley and foothill grassland communities between 50 and 580 m msl.	Perennial herb April – July	Not expected— appropriate habitat is not present within the planning area.
Palmer's grapplinghook <i>Harpagonella palmeri</i>	—	—	4.2	Clay soils in chaparral, coastal scrub, and valley and foothill grassland communities between 20 and 955 m msl.	Annual herb March – May	Potential—appropriate habitat may be present within native habitats south of Erbes Road.
Mesa horkelia <i>Horkelia cuneata</i> ssp. <i>puberula</i>	—	—	1B.1	Sandy or gravelly sites in chaparral, cismontane woodland, and coastal scrub communities between 70 and 810 m msl.	Perennial herb February – July (September)	Potential—appropriate habitat may be present within native habitats south of Erbes Road.
Ojai navarretia <i>Navarretia ojaiensis</i> [Not in <i>The Jepson Manual</i> ]	—	—	1B.1	Openings in chaparral, coastal scrub, and valley and foothill grassland communities between 275 and 620 m msl.	Annual herb May – July	Potential—appropriate habitat may be present within native habitats south of Erbes Road.
Lyon's pentachaeta <i>Pentachaeta lyonii</i>	FE	SE	1B.1	Rocky and clay soils in openings within chaparral, coastal scrub, and valley and foothill grassland communities between 30 and 630 m msl.	Annual herb March – August	Potential—appropriate habitat may be present within native habitats south of Erbes Road.
White rabbit-tobacco <i>Pseudognaphalium leucocephalum</i> [Treated in <i>The Jepson Manual</i> as <i>Gnaphalium leucocephalum</i> .]	—	—	2.2	Sandy or gravelly soils in chaparral, cismontane woodland, coastal scrub, and riparian woodland habitats between 0 and 2100 m msl.	Perennial herb (July) August – November (December)	Potential—appropriate habitat may be present within native habitats south of Erbes Road.
Chaparral ragwort <i>Senecio aphanactis</i>	—	—	2.2	Drying alkaline flats in chaparral, cismontane woodland, and coastal scrub habitats between 15 and 800 m msl.	Annual herb January – April	Not expected— appropriate habitat is not present within the planning area.
<b>Monocots</b>						
Slender mariposa lily	—	—	1B.2	Shaded foothill canyons, often on grassy slopes	Perennial	Potential—appropriate

Common name <i>Scientific name</i>	Federal Status	State Status	CNPS List	Habitat	Growth form Blooming period*	Potential to occur on site
<i>Calochortus clavatus</i> var. <i>gracilis</i>				within chaparral and coastal scrub communities between 360 and 1000 m msl.	bulbiferous herb March – June	habitat may be present within native habitats south of Erbes Road.
Plummer’s mariposa lily <i>Calochortus plummerae</i>	—	—	1B.2	Rocky and sandy sites, usually of granitic or alluvial material in coastal scrub, chaparral, valley and foothill grassland, cismontane woodland, and lower montane coniferous forest communities between 100 and 1700 m msl.	Perennial bulbiferous herb May – July	Potential—appropriate habitat may be present within native habitats south of Erbes Road.
Vernal barley <i>Hordeum intercedens</i>	—	—	3.2	Saline flats and depressions in coastal dune, coastal scrub, valley and foothill grassland and vernal pool communities between 5 and 1000 m msl.	Annual herb March – June	Not expected— appropriate habitat is not present within the planning area.
Peninsular nolina <i>Nolina cismontana</i>	—	—	1B.2	Sandstone, shale and gabbro substrates in chaparral and coastal scrub communities between 140 and 1275 m msl.	Perennial evergreen shrub May – July	Potential—appropriate habitat may be present within native habitats south of Erbes Road.
California Orcutt grass <i>Orcuttia californica</i>	FE	SE	1B.1	Vernal pools between 15 and 660 m msl.	Annual herb April – August	Not expected— appropriate habitat is not present within the planning area.
Status abbreviations						
<u>Federal</u>		<u>CNPS lists</u>		<u>CNPS threat ranks</u>		
FE—federally listed as Endangered		1B—rare, threatened, or endangered in California and elsewhere		0.1—seriously threatened in California		
FT—federally listed as Threatened		2—rare, threatened, or endangered in California, but more common elsewhere		0.2—fairly threatened in California		
FC—federal Candidate for listing as Endangered or Threatened		3—more information needed to determine rarity				
<u>State</u>		4—limited distribution				
SE—state listed as Endangered						

\* – Months given in parentheses indicate dates on which unusually early or late flowering records have been reported

**Table 2**  
**Special-status Animal Species Reported from the Region**

<b>Common name</b> <i>Scientific name</i>	<b>Federal status</b>	<b>State status</b>	<b>Other lists</b>	<b>Habitat</b>	<b>Potential to occur on site</b>
<b>Arachnids</b>					
Gertsch's socalchemmis spider <i>Socalchemmis gertschi</i>	—	—	CDFG Special Animals List	Known only from Brentwood and Topanga Canyon.	Not expected—the planning area is outside the known geographic range of the species.
<b>Insects</b>					
Monarch butterfly (wintering sites) <i>Danaus plexippus</i>	—	—	CDFG Special Animals List	Roosts located in wind-protected tree groves (especially eucalyptus and Monterey cypress), with nectar and water sources nearby. Winter Roost sites extend along the coast from northern Mendocino County to Baja California, Mexico.	Not expected—roosts of this species are used repeatedly, and historic roosts are not known to be present within the planning area.
Santa Monica grasshopper <i>Trimerotropis occidentiloides</i>	—	—	CDFG Special Animals List	Known only from the Santa Monica Mountains Found on bare hillsides and along dirt trails in chaparral.	Not expected—the planning area is outside the known geographic range of the species.
<b>Fish</b>					
Santa Ana sucker <i>Catostomus santaanae</i>	FT, FSS	SSC	—	Habitat generalist, but prefers sand, rubble, or boulder bottoms, in cool, clear water with algae to graze.	Not expected—appropriate habitat is not available within the planning area.
Tidewater goby <i>Eucyclogobius newberryi</i>	FE	SSC	AFS: Endangered	Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego County to the mouth of the Smith River. Found in shallow lagoons and lower stream reaches, they need fairly still but not stagnant water & high oxygen levels.	Not expected—appropriate habitat is not available within the planning area.
Arroyo chub <i>Gila orcuttii</i>	FSS	SSC	—	Slow water stream sections with mud or sand bottoms. Feeds heavily on aquatic vegetation and associated	Not expected—appropriate habitat is not available

Common name <i>Scientific name</i>	Federal status	State status	Other lists	Habitat	Potential to occur on site
				invertebrates.	within the planning area.
Southern steelhead— southern California ESU <i>Oncorhynchus mykiss irideus</i>	FT	SSC	—	Federal listing refers to populations from the Santa Maria River south to the southern extent of the species range (San Mateo Creek in San Diego County). Southern steelhead likely has greater physiological tolerance of warmer water and more variable conditions than northern subspecies.	Not expected—appropriate habitat is not available within the planning area.
<b>Amphibians</b>					
Arroyo toad <i>Anaxyrus californicus</i>	FE	SSC	—	Rivers, washes or intermittent streams with sandy banks, willows, cottonwoods and sycamores within valley-foothill, desert riparian and desert wash communities in semi-arid regions; loose gravelly areas of streams in drier parts of range.	Not expected—appropriate habitat is not available within the planning area.
California red-legged frog <i>Rana draytonii</i>	FT	SSC	—	Requires 11 to 20 weeks of permanent water for larval development; must have access to aestivation habitat. Occurs in lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation.	Not expected—appropriate habitat is not available within the planning area.
Western spadefoot <i>Spea hammondi</i>	BLMS	SSC	—	Vernal pools and other areas of seasonally ponded water, primarily in grasslands habitats, but can be found in valley-foothill hardwood woodlands.	Potential—appropriate habitat may be present within native habitats south of Erbes Road.
<b>Reptiles</b>					
Western pond turtle <i>Actinemys marmorata</i>	BLMS, FSS	SSC	—	Requires basking sites such as partially submerged logs, vegetation mats or open mud banks and needs suitable nesting sites in permanent or near permanent bodies of water in many habitat types below 2000 m msl.	Not expected—appropriate habitat is not available within the planning area.
Coastal western whiptail <i>Aspidoscelis tigris stejnegeri</i>	—	—	CDFG Special Animals List	Various habitats in firm, sandy or rocky soils within sparse vegetation, open areas, woodlands and riparian communities of deserts and semi-arid areas.	Potential—appropriate habitat may be present within native habitats south of Erbes Road.

Common name <i>Scientific name</i>	Federal status	State status	Other lists	Habitat	Potential to occur on site
San Bernardino ringneck snake <i>Diadophis punctatus modestus</i>	FSS	—	—	Surface litter or herbaceous vegetation in open, relatively rocky areas, often in somewhat moist areas near intermittent streams.	Potential—appropriate habitat may be present within native habitats south of Erbes Road.
San Diego mountain kingsnake <i>Lampropeltis zonata pulchra</i>	FSS	SSC	—	Most common in the vicinity of rocks or boulders near streams or lake shores. May also utilize rotting logs and seek cover under dense shrubs. Occurs in a variety of habitats including valley-foothill hardwood, and hardwood-conifer, mixed and montane chaparral, valley-foothill riparian, coniferous forests, and wet meadows.	Potential—appropriate habitat may be present within native habitats south of Erbes Road.
Coast horned lizard <i>Phrynosoma blainvillii</i>	BLMS, FSS	SSC	—	Prefers friable, rocky or shallow sandy soils in scrub and chaparral habitats in arid and semi-arid regions. Requires the presence of native ants for prey.	Potential—appropriate habitat may be present within native habitats south of Erbes Road.
Two-striped garter snake <i>Thamnophis hammondi</i>	BLMS, FSS	SSC	—	Associated with permanent or semi-permanent bodies of water in a variety of habitats from sea level to 2400 m (8000 ft).	Not expected—appropriate habitat is not available within the planning area.
<b>Birds</b>					
Cooper's hawk (nesting) <i>Accipiter cooperii</i>	—	CDFG Watch List	—	Nests in open forests, groves, or trees along rivers, or low scrub of treeless areas. The wooded area is often near the edge of a field or water opening.	Potential—appropriate habitat may be present in oak trees within the planning area.
Tricolored blackbird (nesting colony) <i>Agelaius tricolor</i>	BCC, BLMS	SSC	USBC, AWL, ABC	Highly colonial species, requiring open water, protected nesting substrate and foraging areas with insect prey within a few km of the colony.	Not expected—appropriate habitat is not available within the planning area.
Southern California rufous-crowned sparrow <i>Aimophila ruficeps canescens</i>	—	CDFG Watch List	—	Frequents relatively steep, often rocky hillsides with grass and forb patches. Resident in southern California coastal sage scrub and mixed chaparral.	Potential—appropriate habitat may be present within native habitats south of Erbes Road.

Common name <i>Scientific name</i>	Federal status	State status	Other lists	Habitat	Potential to occur on site
Golden eagle (nesting and wintering) <i>Aquila chrysaetos</i>	BCC, BLMS	CDFG Watch List, CDFG Fully Protected, CDF	—	Nests and winters in cliff walls, large trees and rolling foothill and mountain areas supporting sage-juniper and desert vegetation.	Not expected—appropriate habitat is not available within the planning area.
Southwestern willow flycatcher (nesting) <i>Empidonax traillii extimus</i>	FE, FSS (full species)	SE (full species)	USBC, AWL, ABC (all include full species)	Dense willow thickets are required for nesting and roosting. Nesting site usually near languid stream, standing water, or seep. Most numerous where extensive thickets of low, dense willows edge on wet meadows, ponds, or backwaters.	Not expected—appropriate habitat is not available within the planning area.
Coastal California gnatcatcher <i>Poliophtila californica californica</i>	FT	SSC	USBC, AWL, ABC	Obligate permanent resident of coastal sage and alluvial scrub habitats below 800 m msl in southern California.	Potential—appropriate habitat may be present within native habitats south of Erbes Road.
Bank swallow (nesting) <i>Riparia riparia</i>	—	ST	—	Colonial nester; nests primarily in riparian and other lowland habitats west of the desert. Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, ocean to dig nesting hole.	Not expected—appropriate habitat is not available within the planning area.
Least Bell's vireo <i>Vireo bellii pusillus</i>	FE, BCC	SE	USBC, AWL, ABC	Resident below about 600 m (2000 ft) in willows and other low, dense valley foothill riparian habitat. Thickets of willow and other low shrubs afford nesting and roosting cover. May inhabit thickets along dry, intermittent streams.	Not expected—appropriate habitat is not available within the planning area.
<b>Mammals</b>					
Pallid bat <i>Antrozous pallidus</i>	FSS, BLMS	SSC	WBWG High	Day roosts are in caves, crevices, mines, and occasionally in hollow trees and buildings. Night roosts may be in more open sites, such as porches and open buildings.	Potential—appropriate roosting habitat may be present in trees and buildings within the planning area.
Spotted bat <i>Euderma</i>	BLMS	SSC	WBWG High	Habitats occupied include arid deserts, grasslands and mixed conifer forests from below sea level in California to above 3000 m (10000 ft) in New Mexico. Prefers to roost in	Not expected—appropriate habitat is not available

Common name <i>Scientific name</i>	Federal status	State status	Other lists	Habitat	Potential to occur on site
<i>maculatum</i>				rock crevices. Occasionally found in caves and buildings. Cliffs provide optimal roosting habitat.	within the planning area.
Western mastiff bat <i>Eumops perotis californicus</i>	BLMS	SSC	WBWG High	Roosts in crevices in cliff faces, high buildings, trees and tunnels within many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, chaparral, etc.	Not expected — appropriate habitat is not available within the planning area.
Western red bat <i>Lasiurus blossevilli</i>	FSS	—	WBWG High	Roosting habitat includes forests and woodlands from sea level up through mixed conifer forests. Roosts primarily in trees, less often in shrubs. Roost sites often are in edge habitats adjacent to streams, fields, or urban areas.	Potential — appropriate roosting habitat may be present in trees and buildings within the planning area.
Hoary bat <i>Lasiurus cinereus</i>	—	—	WBWG Medium	Habitats suitable for bearing young include all woodlands and forests with medium to large-size trees and dense foliage. Generally roosts in dense foliage of medium to large trees.	Not expected — appropriate habitat is not available within the planning area.
California leaf-nosed bat <i>Macrotus californicus</i>	FSS	SSC	WBWG High	Roosts in rocky, rugged terrain with mines or caves in riparian, wash, succulent scrub, alkali scrub and palm oasis habitats of deserts.	Not expected — appropriate habitat is not available within the planning area.
Western small-footed myotis <i>Myotis ciliolabrum</i>	BLMS	—	WBWG Medium	Occurs in a wide variety of habitats, primarily in relatively arid wooded and brushy uplands near water from sea level to 8900 ft. Separate night roosts may be used, and have been found in buildings and caves. Maternity colonies of females and young are found in buildings, caves, and mines.	Potential — appropriate roosting habitat may be present in trees and buildings within the planning area.
Yuma myotis <i>Myotis yumaensis</i>	BLMS	—	WBWG Low – Medium	Found in a wide variety of habitats ranging from sea level to 11000 ft, uncommon to rare above 8000 ft. Roosts in buildings, mines, caves, or crevices, abandoned swallow nests and under bridges. Maternity colonies of several thousand females and young may be found in buildings, caves, mines, and under bridges.	Potential — appropriate roosting habitat may be present in trees and buildings within the planning area.
San Diego desert	—	SSC	—	Moderate to dense canopies in coastal scrub of southern California from San Diego County to San Luis Obispo	Potential — appropriate roosting habitat may be



Common name <i>Scientific name</i>	Federal status	State status	Other lists	Habitat	Potential to occur on site
woodrat <i>Neotoma lepida intermedia</i>				County. Particularly abundant in rock outcrops, rocky cliffs and slopes.	present in trees and buildings within the planning area.
American badger <i>Taxidea taxus</i>	—	SSC	—	Drier, open stages of most shrub, forest, and herbaceous habitats with friable soils.	Not expected —remaining habitat patches within the planning area are too small and isolated to support this species.

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*Status abbreviations*

Federal

FE: Federally listed as Endangered

FT: Federally listed as Threatened

BLMS: Bureau of Land Management Sensitive Species

FSS: USDA Forest Service Sensitive

BCC: Fish and Wildlife Service Birds of Conservation Concern

State

SE: State-listed as Endangered

ST: State-listed as Threatened

CDF: California Department of Forestry and Fire Protection

Sensitive

SSC: CDFG Species of Special Concern

Other

AFS: American Fisheries Society categories of risk: vulnerable, threatened, or endangered

AWL: Audubon Watchlist

ABC: American Bird Conservancy Green List

USBC: United States Bird Conservation Watch List

WBWG: Western Bat Working Group: High, Medium and Low priority

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## **APPENDIX 4.6**

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### **Cultural Resources Documentation**



## **South Central Coastal Information Center**

California State University, Fullerton  
Department of Anthropology MH-426  
800 North State College Boulevard  
Fullerton, CA 92834-6846  
657.278.5395 / FAX 657.278.5542  
[anthro.fullerton.edu/sccic.html](http://anthro.fullerton.edu/sccic.html) - [sccic@fullerton.edu](mailto:sccic@fullerton.edu)  
*California Historical Resources Information System*  
*Orange, Los Angeles, and Ventura Counties*

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April 22, 2010

SCCIC #10409.7270

Mr. Evan Sharp  
Impact Sciences, Inc.  
803-A Camarillo Springs Rd.  
Camarillo, CA 93012  
805.437.1900

RE: Records Search for the Thousand Oaks Boulevard Specific Plan

Dear Mr. Sharp,

As per your request received on March 24, 2010, a records search was conducted for the above referenced project. The search includes a review of all recorded archaeological sites within a 1/2-mile radius of the project site as well as a review of cultural resource reports on file. In addition, the California Points of Historical Interest (PHI), the California Historical Landmarks (CHL), the California Register of Historical Resources (CR), the National Register of Historic Places (NR), and the California State Historic Resources Inventory (HRI) listings were reviewed for the above referenced project site. The following is a discussion of the findings.

Due to the sensitive nature of cultural resources, archaeological site locations are not released.

### **Newbury Park and Thousand Oaks, CA. USGS 7.5' Quadrangles**

#### **ARCHAEOLOGICAL RESOURCES:**

Thirteen archaeological sites (56-000490, 56-000535, 56-000561, 56-000620, 56-000654\*, 56-000761, 56-000924, 56-001090, 56-001091, 56-001107\*, 56-001782, 56-001783, and 56-001786) have been identified within a 1/2-mile radius of the project site. Two sites are located within the project site. No sites are listed on the Archaeological Determination of Eligibility (DOE) list. No isolates have been identified within a 1/2-mile radius of the project site. No isolates are located within the project site.

#### **HISTORIC RESOURCES:**

A review of the historic maps – Triunfo Pass (1921, 1943) 15' USGS - indicated that in 1921 there were two improved roads present. There was also one intermittent stream named Arroyo Canyon. The only place-name nearby was El Conejo. In 1943, there was some development in the area. There were two major improved roads, many unimproved roads and many buildings present. Other features mentioned above were still present.

The California Point of Historical Interest (20010) of the Office of Historic Preservation, Department of Parks and Recreation, lists no properties within a ½-mile radius of the project site.

The California Historical Landmarks (2010) of the Office of Historic Preservation, Department of Parks and Recreation, lists no properties within a ½-mile radius of the project site.

The California Register of Historical Resources lists no properties within a ½-mile radius of the project site. These are properties determined to have a National Register of Historic Places Status of 1 or 2, a California Historical Landmark numbering 770 and higher, or a Point of Historical Interest listed after 1/1/1998.

The National Register of Historic Places lists no properties within a ½-mile radius of the project site.

The California Historic Resources Inventory lists no properties that have been evaluated for historical significance within a ½-mile radius of the project site.

### **PREVIOUS CULTURAL RESOURCES INVESTIGATIONS:**

Fifty-four studies (VN28, VN111\*, VN114, VN119, VN136, VN195, VN195, VN203, VN240, VN479, VN483, VN485, VN518, VN524, VN580, VN591, VN643, VN650, VN654, VN728, VN814, VN921, VN931\*, VN936, VN944\*, VN1040, VN1102\*, VN1180, VN1206\*, VN1207, VN1215, VN1322\*, VN1424, VN1520, VN1533\*, VN1536\*, VN1640, VN1667, VN1810, VN1903\*, VN1905, VN1954, VN1969, VN1971, VN2096\*, VN2236\*, VN2239, VN2358, VN2361\*, VN2366\*, VN2639, VN2695, VN2710, VN2798) have been conducted within a ½-mile radius of the project site. Of these, 13 are located within the project site. There are 56 additional investigations located on the Newbury Park and Thousand Oaks, CA. 7.5' USGS Quadrangles that are potentially within a ½-mile radius of the project site. The reports are not mapped due to insufficient locational information.  
(\* = Located within the project site)

### **RECOMMENDATIONS**

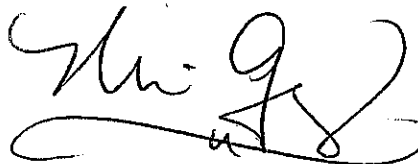
According to our records, there are known archaeological sites within and adjacent to the project site boundaries. However, there are also areas that have not yet been surveyed for cultural resources and may also be sensitive. Because most of the area is known to be (or is potentially) archaeologically sensitive, a qualified archaeologist should be retained for projects that involve ground-disturbing activities. The archaeologist can identify areas that should be monitored or avoided, and provide Phase I surveys for areas lacking cultural resource studies. It is also recommended that any historic properties (45 years and older) in the built environment's area of potential effect be identified, recorded, and evaluated for local, state, or national significance by a qualified consultant prior to the approval of project plans. Finally, the Native American Heritage Commission should be consulted to identify if any additional traditional cultural properties or other sacred sites are known to be in the area.

The professional consultant you retain may request the records search map, cultural resource records, and bibliography from the Information Center referencing the SCCIC number listed above for a fee (per the fee schedule). Any resulting reports by the qualified consultant should be submitted to the South Central Coastal Information Center as soon as possible.

If you have any questions regarding the results presented herein, please contact the office at 657.278.5395 Monday through Thursday 9:00 am to 3:30 pm.

Should you require any additional information for the above referenced project, reference the SCCIC number listed above when making inquiries. Requests made after initial invoicing will result in the preparation of a separate invoice.

Sincerely,  
SCCIC

A handwritten signature in black ink, appearing to read "Michelle Galaz", with a large, stylized flourish at the end.

Michelle Galaz  
Lead Staff Researcher

Enclosures:

(X) Invoice #10409.7270



STATE OF CALIFORNIA

Arnold Schwarzenegger, Governor

**NATIVE AMERICAN HERITAGE  
COMMISSION**915 CAPITOL MALL, ROOM 364  
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Impact Sciences, Inc.  
803 Camarillo Springs Road, Suite A  
Camarillo, CA 93012

march 25, 2010

Sent by Fax: 805-437-1901  
Number of Pages: 4

Re: Proposed Thousand Oaks Boulevard Specific Plan; Ventura County.

Dear Mr. Sharp:

A record search of the sacred lands file has failed to indicate the presence of Native American cultural resources in the immediate project area. The absence of specific site information in the sacred lands file does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Enclosed is a list of Native Americans individuals/organizations who may have knowledge of cultural resources in the project area. The Commission makes no recommendation or preference of a single individual, or group over another. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated, if they cannot supply information, they might recommend others with specific knowledge. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from any of these individuals or groups, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions or need additional information, please contact me at (916) 653-4040.

Sincerely,

A handwritten signature in cursive script that reads "Katy Sanchez".

Katy Sanchez  
Program Analyst



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This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed Thousand Oaks Boulevard Specific Plan; Ventura County.

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This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed Thousand Oaks Boulevard Specific Plan; Ventura County.

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This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed Thousand Oaks Boulevard Specific Plan; Ventura County.

## **APPENDIX 4.7**

---

### **Water Supply Assessment and Water Supply Verification**

**Water Supply Assessment  
and  
Water Supply Verification**

**Proposed**

**Thousand Oaks Boulevard Specific Plan**

**May 2011**

**Water Supply Assessment  
and  
Water Supply Verification**

**Proposed**

**Thousand Oaks Boulevard Specific Plan**

**Prepared for:**

City of Thousand Oaks  
2100 E. Thousand Oaks Boulevard  
Thousand Oaks, California 91362

**Prepared by:**

Impact Sciences, Inc.  
803 Camarillo Springs Road, Suite A  
Camarillo, California 93012

**May 2011**

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## LIST OF ACRONYMS

ac	acre
af	acre-feet, equal to approximately 325,851 gallons
afy	acre-feet per year
ASR	Las Posas Aquifer Storage and Recovery
BMP	Best Management Practice, one of the water conservation methods
BO	Biological Opinion
BOR	Bureau of Reclamation
Cal-Am	California American Water Company
CALFED	CALFED Bay-Delta Program
Cal-Water	California Water Service Company
CCDP	Conejo Creek Diversion Project
CEQA	California Environmental Quality Act
City	Unless otherwise specified means the City of Thousand Oaks
CII	Commercial, Industrial, and Institutional land uses
cfs	Cubic feet per second
CMWD	Calleguas Municipal Water District that wholesales water to the City of Thousand Oaks and receives water from MWD
CRA	Colorado River Aqueduct
CUWCC	California Urban Water Conservation Council
CVP	Central Valley Project
du/ac	dwelling units per acre
DWR	California Department of Water Resources
ESA	Endangered Species Act
gpd	gallons per day
gal/ac	gallons per acre
gal/du	gallons per dwelling unit
gal/du/day	gallons per dwelling unit per day
gal/ksf	gallons per thousand square feet
gpm	gallons per minute
hcf	hundred cubic feet, equal to 748 gallons
HECW	high efficiency clothes washer
HCTP	Hill Canyon Wastewater Treatment Plant

IRP	Integrated Resources Program
ksf	thousand square feet
mg/L	milligrams per liter
mgd	million gallons per day
MWD	Metropolitan Water District of Southern California
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries
OCAP	Bureau of Reclamation Operating Criteria and Procedures
psi	pounds per square inch
PWS	Public Water System
QSA	Quantification Settlement Agreement
RPA	Reasonable and Prudent Alternative
SB	Senate Bill
SCAG	Southern California Association of Governments
SWP	State Water Project
TDS	total dissolved solids
ULFT	ultra low flow toilets
UWMP	Urban Water Management Plan
VCPWA	Ventura County Public Works Agency
WSA	Water Supply Assessment
WSAP	Water Supply Allocation Plan
WSMD	Water Surplus and Drought Management
WSV	Water Supply Verification

## 1.0 INTRODUCTION

### 1.1 Purpose and Acknowledgement

This report addresses the requirements of Section 10910 of the California Water Code (Senate Bills 610 [SB 610] and 221 [SB 221]) for the proposed Thousand Oaks Boulevard Specific Plan (Specific Plan) in the City of Thousand Oaks (City). The Code requires a Water Supply Assessment (WSA) be prepared for any “project” that would consist of one or more of the following:

- A proposed residential development of more than 500 dwelling units
- A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space
- A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space
- A mixed-use project that includes one or more of the projects specified above
- A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project

The proposed Specific Plan is a long-range land use plan that will accommodate a variety of commercial and residential development, as described in more detail in the Project Description section. The quantity of future development that would be allowed within the Specific Plan boundaries (an additional 611,500 square feet commercial space and 375 additional apartments) exceeds the mixed-use project threshold of 250,000 square feet of commercial floor space). Although it does not include specific development projects, it does provide a framework for future development and redevelopment of the area, which will guide and regulate future development projects.

This assessment is based on information provided in the Draft Calleguas Municipal Water District’s 2010 Urban Water Management Plan (UWMP) and the water supply and demand data from the City’s Draft 2010 UWMP.

It is noted that this WSA addresses the overall water supply available to the City to meet the demands of existing customers, Specific Plan development, and other future demands within the Thousand Oaks Specific Plan water service area. The WSA does not address the water delivery system within the City since the focus is on the overall water supply. Adequacy of the delivery system is addressed in the City’s Water Master Plan.

The WSA reviews and makes a finding of reasonable sufficiency of water supplies that either are available or will be available to the City to meet future demands for the period 2011 to 2035. The requirement is a determination for a 20-year period, although the analysis in this WSA extends to 2035 to be consistent with the 2008 Southern California Association of Governments (SCAG) Integrated Growth Forecasts.

## **1.2 Requirements of Water Code – SB 610 and SB 221**

### **1.2.1 Water Supply Assessment**

Requirements for the preparation of a WSA are set forth in SB-610, which was enacted in 2001 and became effective January 1, 2002. SB 610 amended Section 21151.9 of the Public Resources Code. SB 610 also amended Sections 10631, 10656, 10910, 10911, 10912, and 10915, repealed Section 10913, and added and amended Section 10657 of the California Water Code. It requires cities and counties to request specific information on water supplies from the Public Water System (PWS) that would serve any project that is subject to the California Environmental Quality Act (CEQA) and is defined as a "project" in Water Code Section 10912. This information is to be incorporated into environmental documents prepared pursuant to CEQA for the proposed project.

### **1.2.2 Water Supply Verification**

SB 221 was enacted in 2001 and became effective as of January 1, 2002. SB 221 amended Section 11010 of the Business and Professional Code, and Sections 66455.3 and 66473.7 and Section 65867.5 of the Government Code. SB 221 establishes the relationship between the WSA prepared for a project and the project approval under the Subdivision Map Act. Pursuant to California Government Code Section 66473.7, the City of Thousand Oaks, the primary PWS for the project, must provide a written verification of sufficient water supply prior to approval. Although the Specific Plan does not comprise a subdivision, this legislation shows relevant intent to incorporate water supply assessment into the environmental review process.

### 1.3 Proposed Project

#### 1.3.1 Location

**Figure 1, Project Location**, shows the location of the Specific Plan area within the City of Thousand Oaks. As shown, the Specific Plan area extends approximately 3 miles along Thousand Oaks Boulevard, roughly from Moorpark Road in the west to Duesenberg Drive in the east. Regional access to the Specific Plan area is provided by U.S. Highway 101 and State Route (SR) 23. Highway 101 is located adjacent to and roughly parallels Thousand Oaks Boulevard. Access from Highway 101 to the Specific Plan area is provided by interchanges at Moorpark Road, Rancho Road, and Hampshire Road. SR-23 bisects the Specific Plan area and access from SR 23 to the Specific Plan area is provided by an on ramp and off ramp at Hillcrest Drive, which parallels Thousand Oaks Boulevard to the north.

The Specific Plan area presently contains approximately 1.8 million square feet of commercial development, 18 single-family residential dwelling units, 57 senior apartments, and 2 assisted living facilities. The area also contains 0.59 acre of public open space (Zuniga Ridge), 0.14 acre of public park (Heritage Park), and 3.86 acres of private park (Gardens of the World).

#### 1.3.2 Proposed Specific Plan

The proposed Specific Plan would guide development and redevelopment within the 345-acre Specific Plan area. The City has estimated future development pursuant to the Specific Plan as set forth in **Table 1-1 Specific Plan Area Added Development Potential**, below. This includes both development that could be developed within the Specific Plan area pursuant to the current General Plan and zoning designations, as well as additional development over and above the amount that is estimated to be allowable based on the land uses and development standards proposed in the Specific Plan, including an allowance for mixed use residential/commercial development. This WSA analyzes the total Specific Plan increase as shown in **Table 1.1**.

**Table 1-1**  
**Specific Plan Area Added Development Potential**

<b>Land Use Type</b>	<b>Per Current General Plan</b>	<b>Specific Plan Additional</b>	<b>Specific Plan Area Total Future Development</b>
Retail Commercial	371,500 sq. ft.	489,500 sq. ft.	861,000 sq. ft.
Office Commercial	137,000 sq. ft.	122,000 sq. ft.	259,000 sq. ft.
Industrial	88,000 sq. ft.	--	88,000 sq. ft.
Public, Quasi-Public	--	--	--
Apartments	--	375 d. u.	375 d. u.
Institutional	--	--	--

#### **1.4 Climate**

The residents of Thousand Oaks enjoy warm dry summers followed by moist, cool winters. Maximum summer temperatures can exceed 100 degrees Fahrenheit, and winter temperatures occasionally drop below 32 degrees Fahrenheit. Average rainfall ranges from 12 to 14 inches. The majority of this rainfall occurs during the winter months.

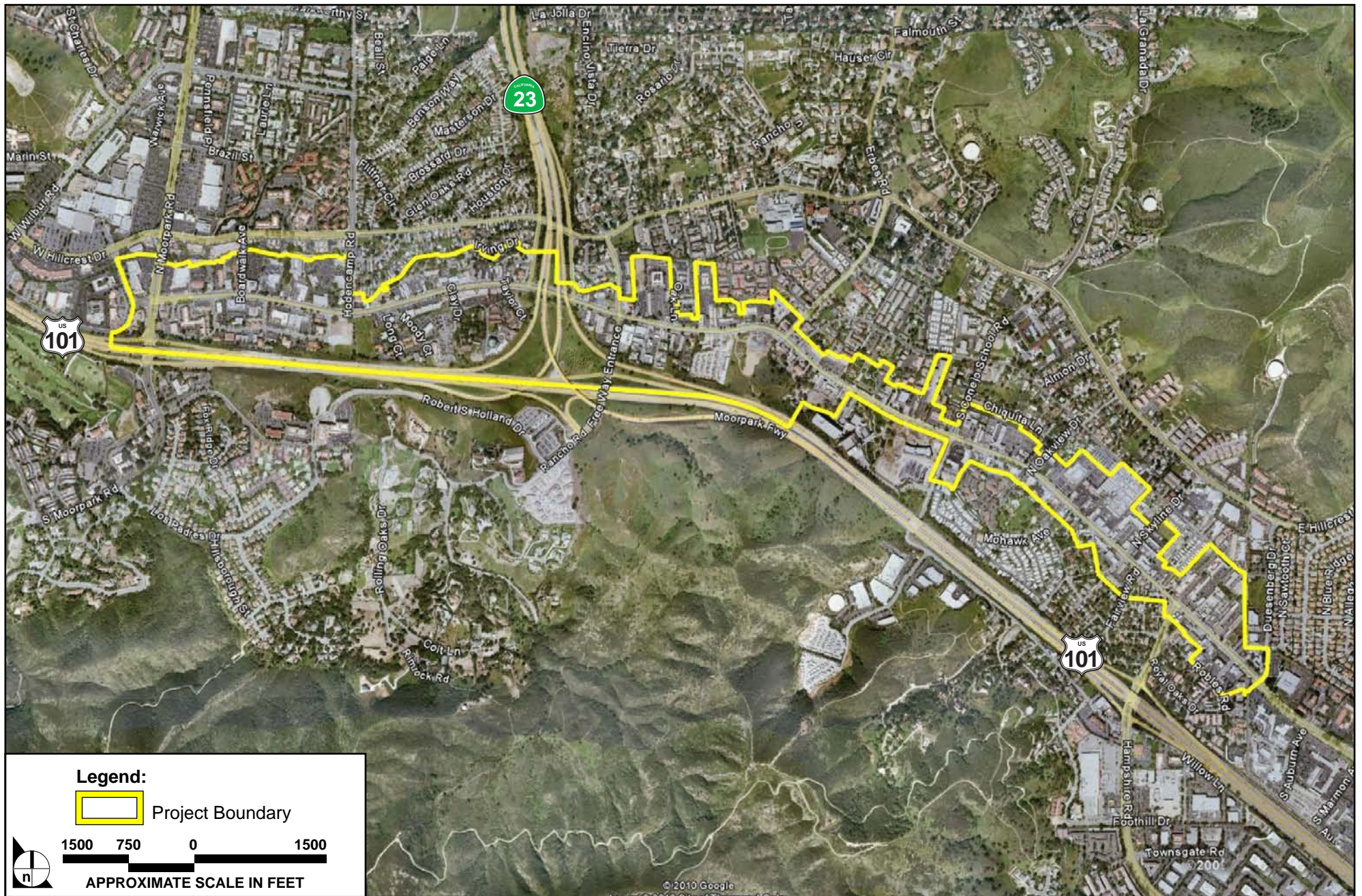
The Calleguas UWMP has developed water supply projections based on imported water and local supplies. Three hydrologic scenarios were projected for water supplies: “average year,” “dry year,” and “multiple dry years.”

- “Average year” is the expected demand under average hydrologic conditions: 1922 through 2008 (86 years).
- “Dry year” is the expected demand under the single driest hydrologic year: 1977.
- “Multiple dry years” is the expected demand during a period of three consecutive dry years: 1990 through 1992.

It should be noted that the State of California recently experienced a multiple dry year (2007 through 2009).<sup>1</sup>

<sup>1</sup> California Department of Water Resources, *California's Drought of 2007-2009*, September 2010.





SOURCE: Google Earth – March 2005, Impact Sciences, Inc. – April 2010

FIGURE 1

Project Location



## 1.5 City of Thousand Oaks 2005 Urban Water Management Plan

Pursuant to the California Urban Water Management Planning Act of 1984 as amended in 1995, the City prepared a UWMP in 2005. All water purveyors/urban water suppliers providing water for municipal purposes to more than 3,000 customers or in excess of 3,000 acre-feet per year (afy) are required to prepare such a plan and to update the plan at least once every 5 years, in years ending in five and zero. The objectives of the plan are similar to SB 610 with these exceptions:

- The UWMP addresses the water purveyor's service area as a whole and not necessarily a specific development project.
- The most significant consequence of not preparing a UWMP is the loss of eligibility for certain state financing programs, whereas the SB 610 WSA report is not a requirement for funding and is, instead, a part of the CEQA environmental process mandated for review of development projects.

The City adopted previous Plans in 1991, 1997, 2000, and most recently in 2005. Currently, the City of Thousand Oaks is in the process of preparing the 2010 UWMP update, which will be available in the spring of 2011.<sup>2</sup>

## 2.0 WATER SUPPLY SOURCES

### 2.1 Overview

The City's current (2010) water supply consists of imported surface water from the Calleguas Municipal Water District (CMWD) and local groundwater from the City wells. The City uses CMWD water for potable use and uses groundwater only as irrigation, due to its lesser water quality. The City of Thousand Oaks comprises of four water retailers: the City of Thousand Oaks, California American Water Company (Cal-Am), California Water Service Company (Cal-Water), and Camrosa Water District.

The City is the water purveyor to approximately 36 percent of the water users within the City. The water service boundaries are shown on **Figure 2, Water Service Boundaries**. The proposed Specific Plan is located almost entirely in the City's Service Area. Of the 345-acre Specific Plan area, 99 percent (340 acres) is within the City's water service area. Two parcels (both developed) are located outside the Specific Plan area. These consist of a 3.6-acre parcel located at the northwest corner of Moorpark Road and Thousand Oaks Boulevard that is with the California American Water Company service area, and a 1.37-acre parcel located at the northwest corner of Duesenberg Drive and Thousand Oaks Boulevard that is within the

---

<sup>2</sup> California Department of Water Resources, "Urban Water Management," <http://www.water.ca.gov/urbanwatermanagement/>, Accessed May 2011.

California Water Service area. Analysis of the City water service area, which provides water to almost the entire Specific Plan area, satisfies WSA requirements per SB 610 and SB 221.

The City water service area is essentially a built-out community comprised primarily of residential areas. Significant commercial areas exist along Thousand Oaks Boulevard, the 101 Freeway, and portions of Avenida de los Arboles and Moorpark Road. The City serves approximately 16,900 accounts with approximately 60 percent of the City's customers within service zones that require additional pumping. The City does not serve any agricultural users. Anticipated changes in land use would primarily occur through redevelopment of existing land uses and small developments on the various vacant parcels scattered throughout the City.

The City water system consists of approximately 317 miles of transmission and distribution pipelines, 10 pump stations, and 16 reservoirs with a total capacity of 35.5 million gallons. Water is delivered to the system through 10 turnouts from the CMWD system. The CMWD delivers imported water to the City. The City uses the treated imported water from CMWD to meet all of its domestic demands.

The California American Water Company service area receives imported water from the Metropolitan Water District of Southern California (MWD) through CMWD. California Water Service Group receives imported water from CMWD.

The City service boundary includes the Conejo Oaks area, which was formerly served by the California-American Water Company (Cal-Am). An agreement between the City and Cal-Am, approved by the California Public Utilities Commission, allowed this area to be transferred to the City water system service area on January 1, 2008.<sup>3</sup>

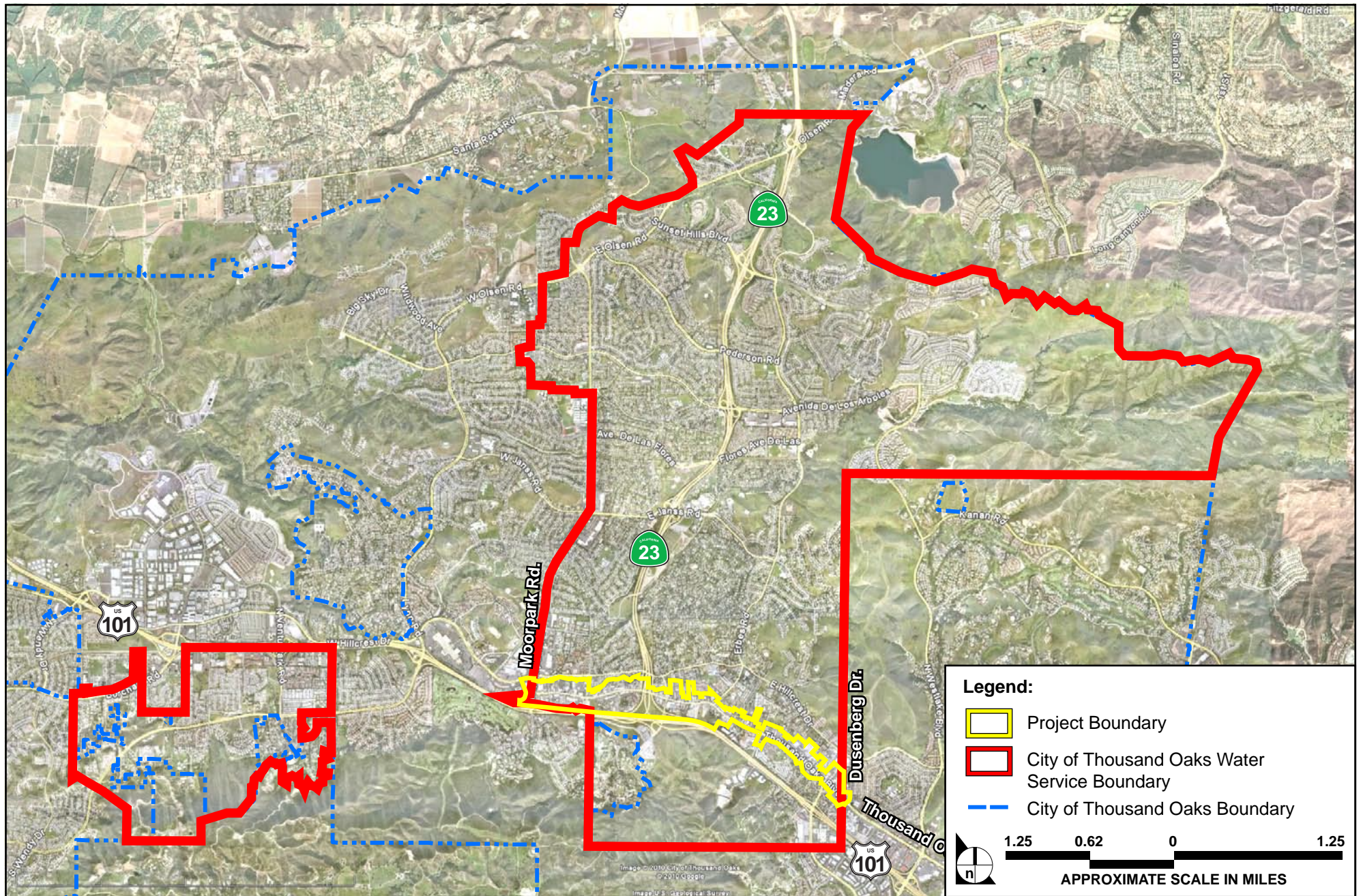
### **Seasonal/Climatic Shortages**

Since water is obtained from CMWD (through The Metropolitan Water District of Southern California (MWD) and the State Water Project), the City's supplies are not subject to local seasonal or climactic shortages.

---

<sup>3</sup> California Public Utilities Commission, Settlement Agreement Between Cal-Am and Thousand Oaks, [http://docs.cpuc.ca.gov/published/comment\\_decision/41398-05.htm](http://docs.cpuc.ca.gov/published/comment_decision/41398-05.htm), 2004.





SOURCE: City of Thousand Oaks, Public Works Department; Impact Sciences, Inc.; Google Earth – May 2010

FIGURE 2

## Water Service Boundaries



## 2.2 Imported Water

### 2.2.1 Calleguas Municipal Water District

The City's current (2010) water supply includes imported surface water from the CMWD, a wholesale water district, which owns and operates a transmission system to convey water to local water retail agencies across an area of approximately 350 square miles.

Effective on January 3, 2003 the City executed a "Purchase Order" with the CMWD (see **Appendix A**). Under the terms of the purchase order, the City agrees to purchase water from Calleguas during the contract term (10 years 2003 through 2013) not less than the purchase order commitment (80,915.4 acre-feet [af]). CMWD water sold to the City in an amount greater than the Tier 1 Annual Maximum shall be sold to the City at the Tier 2 supply rate.

MWD receives water from both the State Water Project and the Colorado River. Water is filtered and disinfected at MWD's Joseph Jensen Filtration Facility in Granada Hills. CMWD receives the treated water from MWD via the MWD West Valley Feeder and feeds most of it directly to its member purveyor's distribution systems. When imported supplies are sufficient, CMWD either delivers the water to retail purveyors through CMWD's transmission system, stores the treated water in Lake Bard to be treated again later, or injects it into the Las Posas Basin Aquifer Storage and Recovery Project. CMWD distributes water on a wholesale basis to 19 local purveyors, which in turn deliver water to area residents, businesses, and agricultural customers.

The MWD is the State Water Project (SWP) contractor for the City's service area. The SWP includes 660 miles of aqueduct and conveyance facilities extending from Lake Oroville in the north to Lake Perris in the south. The SWP has contracts to deliver 4.17 million afy to 29 contracting agencies.<sup>4</sup> MWD's original SWP water right (Table A amount) was 1,911,500 afy.<sup>5</sup> MWD's 2011 approved SWP allocation is 1,529,200 af. The City receives 11.0 percent of the water imported by CMWD from MWD based on average year demands.<sup>6</sup>

After three dry years (2007 to 2009), MWD implemented its Water Supply Allocation Plan in 2009 and 2010 and declared a Level 2 shortage. MWD Member Agencies were limited to 15 percent less than their average Base Year (2004 to 2006) deliveries during Fiscal 2009 to 2010 (July 1<sup>st</sup> to June 30<sup>th</sup> of following

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<sup>4</sup> Department of Water Resources, California State Water Project Analysts Office, *Notice to State Water Project Contractors*, April 20, 2011.

<sup>5</sup> DWR, *Notice to State Water Project Contractors*, April 20, 2011.

<sup>6</sup> Calleguas Municipal Water District, *Draft 2010 Urban Water Management Plan (UWMP)*, Figure 3-1, 2011.

year) and Fiscal 2010 to 2011. In April of 2011, the MWD Board voted to restore full imported water deliveries to the district's 26 member agencies.<sup>7</sup>

### 2.2.2 State Water Project

Since the SWP project became operational, the contracted needs for water from the SWP have increased. As a result, the SWP project is not capable of delivering full contractor entitlement each and every year. The focal point of SWP supplies is the Bay-Delta, the largest estuary on the west coast, through which 60 percent of the freshwater used in the state must pass. In recent years, the Delta smelt, winter-run Chinook salmon, spring-run Chinook salmon, and splittail were added as threatened or endangered species under the federal Endangered Species Act (ESA). These actions taken to protect the ecosystem of the Bay-Delta, along with others, have placed additional restrictions on SWP operations.

With regard to a court ruling affecting SWP, in 2007, federal Judge Wanger ruled that the Bureau of Reclamation Operating Criteria and Procedures (OCAP) for the federal Central Valley Project (CVP) and the Biological Opinion (BO) issued by the US Fish and Wildlife Service were inadequate. The court ordered that a new OCAP and a new BO be prepared. Revised operating criteria and procedures are being required by the court to address CVP operation impacts on the delta smelt, a federally listed species. The revised OCAP and BO were completed in December 2008.<sup>8</sup> The Bureau of Reclamation (BOR) provisionally accepted the Reasonable and Prudent Alternative (RPA) developed included in the final BO and stated that they needed additional time to determine whether implementation of the RPA by the CVP and SWP is reasonable and prudent.<sup>9</sup> Further, the BOR has indicated that the actions in the final BO have the potential to impact other endangered species (salmonids); thus the implementation of the RPA in the final BO need to be coordinated with the National Marine Fisheries (NMFS) through the BOR's ongoing consultation with NMFS regarding the effects of long-term operation operations. Until the BOR completes its review, CVP and SWP pumping will be restricted.

In February 2008, the California Fish and Game Commission accepted the long fin smelt as a candidate species for listing under the California Endangered Species Act (ESA). The longfin smelt is a close relative to the delta smelt that lives in the San Francisco Bay Delta and is believed to be impacted by water

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<sup>7</sup> Metropolitan Water District of Southern California (MWD), *Southland's Improved Water Reserve Conditions Allow Metropolitan's Board to Lift Mandatory Restrictions*, News Release, April 12, 2011.

<sup>8</sup> US Department of Interior, Fish and Wildlife, Formal Endangered Species Act Consultation on the Proposed Coordinated Operations of the Central Valley Project (CVP) and State Water Project (SWP), December 15, 2008.

<sup>9</sup> US Department of Interior, Bureau of Reclamation, memorandum regarding Biological Opinion for Delta Smelt, dated December 15, 2008.

exports from the San Joaquin River Delta.<sup>10</sup> As a result, the Commission adopted regulations meant to protect this species but that may impact the SWP deliveries. Preliminary estimates of the possible impacts of longfin smelt protection on SWP deliveries are between 0 and 400,000 afy.

Recent rulings by Judge Wanger on May 18, 2010 (in regards to salmonids) and May 27, 2010 (in regards to delta smelt) indicated that federal agencies did not comply with environmental law when they imposed actions to protect the salmonids and delta smelt fish species. The environmental document analyzing potential environmental impacts to fish species as a result of water pumping failed to comprehensively and competently evaluate whether the alternatives can be prescribed and did not comply with the National Environmental Policy Act (NEPA). The NEPA document also failed to evaluate the significant detrimental effects on the human environment. Therefore, on May 27, 2010 Judge Wanger ruled that temporary pumping is allowed until June 15, 2010 which could potentially allow up to 5,000 cubic feet per second (cfs) of water to be pumped, or approximately 200,000 af.<sup>11</sup>

On December 14, 2010, Judge Wanger found that because of numerous deficiencies identified in the BO, the BO is arbitrary, capricious, and unlawful, and should be remanded to the US Fish and Wildlife Service (USFWS) to address the deficiencies in the BO.<sup>12</sup> On May 4, 2011, Judge Wanger ruled that the deadline to address concerns in the 2008 BO will be extended to 2013 and in the meantime the ruling on the 2008 BO remains in place.<sup>13</sup>

The California Department of Water Resources (DWR) issues the SWP Delivery Reliability Report every two years, with the 2009 State Water Project Reliability Report being the most recent.<sup>14</sup> The 2009 report accounts for impacts to water delivery reliability associated with climate change and recent federal litigation. Based on information from the 2009 SWP Reliability Report, the average reliability of future SWP Table A deliveries through 2029 is projected to be 60 percent.<sup>15</sup> This percentage of allocations is based on computer modeling of the state's watersheds, past hydrology adjusted for climate change, recent federal litigation, and the condition on the river and reservoir systems.

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<sup>10</sup> The Bay Institute, Center for Biological Diversity, and the Natural Resources Defense Council, "Petition to List the San Francisco Bay-Delta Population of Longfin Smelt as Endangered Under the Endangered Species Act," (August 8, 2007).

<sup>11</sup> 1 cfs = 646,320 gallons per day; 325,851 gallons per af; up to 21 days of pumping.

<sup>12</sup> Environmental Law Network, "Judge Wanger Issues Ruling in the Delta Smelt Consolidated Cases, Remands Biological Opinion to US Fish and Wildlife Service," (December 21, 2010).

<sup>13</sup> John Ellis, "Deadline for smelt protection plan extended," *The Fresno Bee*, May 4, 2011, Local – Crime & Court News – Court civil cases section.

<sup>14</sup> California Department of Water Resources, Bay-Delta Office, *The State Water Project Delivery Reliability Report 2009*, (August 2010).

<sup>15</sup> California Department of Water Resources, Bay-Delta Office, *The State Water Project Delivery Reliability Report 2009*, page 57, Table 7.1 (August 2010).

Water purveyors make annual requests to the DWR for water allocations and DWR makes an initial SWP “Table A” allocation for planning purposes, typically in the last month before the next water delivery year. Throughout the year, as additional information regarding water availability becomes available to DWR, its allocation/delivery estimates are updated. **Table 2-1, Department of Water Resources Table A Water Allocations, 2005–2010**, outlines the historic reliability of SWP deliveries, including their initial and final allocations for the past 6 years.

**Table 2-1**  
**Department of Water Resources Table A Water Allocations, 2005–2011**

Year	Initial Allocation	Final Allocation
2005	40%	90%
2006	55%	100%
2007	60%	60%
2008	25%	35%
2009	15%	40%
2010	5%	50%
2011	25%	80%
<b>Average</b>	<b>32%</b>	<b>65%</b>

*Source:*

*State of California Department of Water Resources, Water Contract Branch within the State Water Project Analysis Office, Notices to State Water Contractors, 2005–2011*

The final DWR SWP allocations for 2011 resulted in statewide average delivery to be 80 percent of the Table A amounts.<sup>16</sup> This final allocation includes recent precipitation, current water supply conditions, SWP operational constraints on the recent BO, and 2011 contractor demands. The initial DWR SWP 2011 Table A allocation for MWD was 477,875 af. The 2011 approved allocation for MWD is 1,529,200 af (Table A and the initial request to DWR SWP allocations was 1,911,500 af).<sup>17</sup>

### 2.2.3 Colorado River Water

MWD also receives water from Colorado River water from the Colorado River Aqueduct (CRA). MWD's original Colorado River water was 1.2 million afy. However, MWD is entitled to 550,000 afy from the CRA through its contract with the federal government.<sup>18</sup> Over time, MWD and the State of California acknowledged that they would obtain less water from the Colorado River in the future than they had in

<sup>16</sup> Department of Water Resources, California State Water Project, Notice to State Water Contractors, 11-06, 2011 State Water Project Increase to 80 Percent, April 20, 2011.

<sup>17</sup> DWR, *Notice to State Water Contractors*, April 20, 2011.

<sup>18</sup> Metropolitan Water District of Southern California, *The Regional UWMP*, 3-2, November 2010.

the past, but the lack of clearly quantified water rights hindered efforts to promote water management projects. The U.S. Secretary of Interior asserted that California's users of Colorado River water had to limit their use to a total of 4.4 million afy, plus any available surplus water.

Under the auspices of the state's Colorado River Board, these users developed a draft approach to the problem, which was known as "California's Colorado River Water Use Plan" or the "California Plan." It characterized how California would develop a combination of programs to allow the state to limit its annual use of Colorado River water to 4.4 million afy, plus any available surplus water. The 2003 Quantification Settlement Agreement (QSA) among Imperial Irrigation District, Coachella Valley Water District, and MWD is the critical component of the California Plan. It establishes the baseline water use for each of the agencies and facilitates the transfer of water from agricultural agencies to urban uses.

After the QSA was executed, a number of lawsuits were filed including, but not limited to, actions seeking validation of the agreements and CEQA challenges. Eleven cases were coordinated in State Superior Court in Sacramento, California before Judge Roland Candee.<sup>19</sup> On February 11, 2010, Judge Candee ruled that the Joint Power Authority (JPA) agreement, one of the QSA agreements, was invalid because it violated an appropriation of the California Constitution.<sup>20</sup> Judge Candee found the other agreements were invalid because the parties would not have entered into those agreements without a valid JPA agreement. The Appellate Court has granted a stay of the Superior Court judgment and an appeal has been filed.<sup>21</sup>

#### 2.2.4 MWD Annual Supply

Beginning in 2007, MWD experienced challenges in delivering water to its member agencies. Critically dry conditions affected all of Metropolitan's main supply sources. In addition, a ruling in the federal courts in August 2007 provided protective measures for the Delta Smelt in the Sacramento-San Joaquin River Delta, which brought uncertainty about the viability of future pumping operations from the State Water Project. This uncertainty, along with the impacts of dry conditions, raised the possibility that Metropolitan would not have access to the supplies necessary to meet total firm demands and would have to allocate shortages in supplies to the member agencies. As a result, MWD, working jointly with its

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<sup>19</sup> Quantification Settlement Agreement Cases, Judicial Council Coordination Proceeding No. 4333, <http://www.saccourt.ca.gov/coordinated-cases/qs/qs.aspx>.

<sup>20</sup> Superior Court of California, County of Sacramento, *Coordination Proceeding Special Title (Rule 15509b)) v. QSA CASES*, Case No. JC4353, Judgment, February 11, 2010.

<sup>21</sup> *Ibid.*, Stay of Proceedings, March 11, 2010.



member agencies, developed a Water Supply Allocation Plan (WSAP).<sup>22</sup> The WSAP takes effect if a regional shortage is declared by the Board of Directors.

The WSAP includes specific formulas for calculating member agency supply allocations and the key implementation elements needed for administering an allocation should a shortage be declared. The MWD's formula seeks to balance the impacts of a shortage at the retail level while maintaining equity on the wholesale level; takes into account growth, local investments, changes in supply conditions, and the demand hardening aspects of non-potable recycled water use; and the implementation of conservation savings programs. The formula is calculated in three steps: (1) base period calculations calculated using data from the three most recent non-shortage years, (2004 to 2006), (2) completing allocation year calculations by adjusting the base period estimates of retail demand for population or economic growth and changes in local supplies, and (3) supply allocation calculations. The allocation period covers 12 consecutive months, from July of a given year through the following June.

MWD staff is responsible for recommending a Regional Shortage Level for the Board of Directors' consideration. The recommendation shall be based on water supply availability, and the implementation of Metropolitan's water management actions as outlined in the Water Surplus and Drought Management (WSMD) Plan. MWD is responsible for determining a Regional Shortage Level each year in April.

Member agency allocations are enforced through a penalty rate structure. The applicable rates are based on MWD's established tiered pricing structure. Penalty rates and charges are only assessed to the extent that an agency's total annual usage exceeds its total annual allocation.

In April 2009, MWD's Board announced a Regional Shortage Level 2 that calls for a 15 percent reduction in wholesale deliveries.<sup>23</sup> As a result, member agencies, including CMWD, established individual allocations for their purveyors. Penalties assessed by MWD for exceeding the allocation are:

- A penalty of double MWD's Tier 2 rate in effect at time (\$811/af) will be applied to deliveries up to 15 percent above an agency's final allocation.
- A penalty of quadruple the Tier 2 rate will be assessed on deliveries above 15 percent.

Calleguas will not assess any additional penalty. On March 30, 2011, Governor Brown announced an end to the state's drought; rescinded Executive Order S-06-08 issued on June 4, 2008; and ended the States of

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<sup>22</sup> Metropolitan Water District of Southern California, Water Supply Plan, revised June 2009.

<sup>23</sup> Memorandum from Don Kendall, General Manager, Calleguas Municipal Water District, to Purveyor Managers, July 13, 2009.

Emergency called on June 12, 2008, and February 27, 2009.<sup>24</sup> On April 12, 2011, the MWD Board approved to lift mandatory restrictions on imported water deliveries to MWD's 26 member agencies.<sup>25</sup>

The City of Thousand Oaks Level 2 Initial Allocation is shown in **Table 2-2, MWD Allocation, City of Thousand Oaks**. The details of the allocation are presented in **Appendix F**.

**Table 2-2**  
**MWD Allocation, City of Thousand Oaks**

<b>Allocation Basis</b>	<b>Allocation (acre-feet)</b>
Base Period Retail Demand	13,712
Allocation Year Retail Demand	14,082
Allocation Year Demand on MWD	14,082
Wholesale Minimum Allocation	11,970
MWD Allocation	12,039

*Source: Memorandum from Don Kendall, General Manager, Calleguas Municipal Water District, to Purveyor Managers, July 13, 2009.*

### 2.2.5 CMWD Supply

The CMWD receives SWP water exclusively under normal MWD operating conditions. MWD has projected imported water supplies for the region under average, dry, and multiple dry year hydrologic conditions. The imported supplies are provided by a mix of water sources including the SWP California Aqueduct and the CRA. Based on the past seven years and shown in **Table 2-1**, the SWP averages 65 percent of final water allocations for the MWD service area. The 2011 SWP allocation for MWD is 1,529,200 af.<sup>26</sup> The CRA entitlements to the MWD include 550,000 af. Therefore, the 2011 water supply for MWD is 2,079,200 af. The projections for all three conditions are summarized in **Table 2-3 Imported Water Supply Projections for MWD Service Area**.

<sup>24</sup> State of California, Office of Governor Jerry Brown, "Governor Brown Ends State's Drought Status, Urges Californians to Continue to Conserve," <http://gov.ca.gov/news.php?id=16959>. March 30, 2011.

<sup>25</sup> MWD, *Southland's Improved Water Reserve Conditions Allow Metropolitan's Board to Lift Mandatory Restrictions*, News Release, April 12, 2011.

<sup>26</sup> DWR, *Notice to State Water Contractors*, April 20, 2011.

**Table 2-3**  
**Imported Water Supply Projections for MWD Service Area**

Hydrologic Condition	Acre-Feet per Year				
	2015	2020	2025	2030	2035
Average Year <sup>1</sup>	3,485,000	3,810,000	4,089,000	3,947,000	3,814,000
Dry Year <sup>2</sup>	2,457,000	2,782,000	2,977,000	2,823,000	2,690,000
Multiple Dry Years <sup>3</sup>	2,248,000	2,417,000	2,520,000	2,459,000	2,415,000
<b>Local Supply Projections<sup>4</sup></b>					
Average Year	2,395,000	2,522,000	2,553,000	2,581,000	2,603,000

Source: Metropolitan Water District of Southern California (MWD), *Regional Urban Water Management plan (RUWMP) Table 2-8, 2-9, 2-10 and 2-11.*

Notes:

<sup>1</sup> Based on historic average year conditions from 1922 through 2004.

<sup>2</sup> Based on conditions experienced in 1997.

<sup>3</sup> Based on conditions experienced from 1990 through 1992.

<sup>4</sup> Local supplies within MWD's Service Area include groundwater, captured surface water, reclaimed water, desalinated water, and imported water from the Los Angeles Aqueduct.

In addition to imported water supplies, regional water demands are also met with local water sources including groundwater, captured surface water, reclaimed water, and desalinated water. Imported water from the Los Angeles Aqueduct is also considered a local water supply because it reduces the total imported demand on MWD, shown in **Table 2-3**.

The quantity of water MWD estimates will be available to CMWD during average, dry, and multiple dry year scenarios as provided in **Table 2-4 MWD's Imported Supply Projections for CMWD's Service Area**. CMWD receives 5.5 percent of MWD's imported water purchase order commitments.<sup>27</sup>

**Tables 2-5 through 2-7** list CMWD's local supply projections by source for each hydrologic condition. CMWD projections were developed in conjunction with the CMWD purveyors and consider the historic yield of existing local supplies and the anticipated yield of future local supplies.

CMWD's sole connection to MWD is the West Valley Feeder No. 2 Pipeline. The West Valley Feeder No. 2 Pipeline is capable of delivering up to 300 cubic feet per second (cfs) of water to the East Portal of the Perliter Tunnel. Lake Bard is utilized to supplement water demand during times when imported

<sup>27</sup> Metropolitan Water District of Southern California, *The Regional UWMP, Table 2-17, 2010.*

supplies are curtailed.<sup>28</sup> Optimizing local supplies can postpone or eliminate the need for new imported water supply facilities.

CMWD is a financial participant in the Conejo Creek Diversion Project (CCDP). The City of Thousand Oaks discharges treated wastewater effluent from the Hill Canyon Wastewater Treatment Plant (HCTP) into Conejo Creek, as discussed below in **Section 2.5**. The CCDP provides the City conservation credits to be used to offset the effects of future water shortages.

**Table 2-4** presents local supply projections estimated by MWD for the CMWD service area. CMWD also develops local supply projections for its service area. Although MWD and CMWD share information related to existing and future local supply projections, the two projections make different assumptions related to local supply reliability and the likelihood of reality of future supplies. Comparing CMWD's local supply projections (refer to **Table 2-5**) to projections for MWD's average year conditions (refer to **Table 2-4**) indicates that CMWD's purveyors expect to utilize more local supply sources than what is projected by MWD. This may be due to differences in what MWD and CMWD consider proposed local supply projects.

**Table 2-4**  
**MWD's Imported Supply Projections for CMWD's Service Area**

Hydrologic Condition	Acre-Feet per Year					
	2010 <sup>2</sup>	2015	2020	2025	2030	2035 <sup>2</sup>
Average Year	118,546	129,004	136,966	140,753	142,365	143,777
Dry Year	121,313	131,876	139,975	143,819	145,534	147,013
Multiple Dry Years	--	131,104	139,985	145,255	148,545	149,548
<b>Local Supply Projections <sup>1,2</sup></b>						
Average Year	50,095	48,640	47,617	47,743	50,256	51,612
Dry Year	49,940	48,457	47,372	47,493	49,973	51,325
Multiple Dry Years	--	49,974	48,649	48,038	48,950	51,093
<b>Total Available Water Supply Projections</b>						
<b>Average Year</b>	<b>168,641</b>	<b>177,644</b>	<b>184,583</b>	<b>188,496</b>	<b>192,621</b>	<b>195,389</b>

Source: Calleguas Municipal Water District, 2010 Draft UWMP, Tables 2-6 and 2-7.

Notes:

<sup>1</sup> MWD does not include future local supply projects in their projections until funding allocations, engineering, environmental approvals and permit requirements are substantially complete.

<sup>2</sup> CMWD local supply projections differ from MWD projections because CMWD purveyors typically include future local supplies in their projections upon completion of feasibility studies.

<sup>28</sup> Calleguas Municipal Water District, *Draft 2010 Urban Water Management Plan*, 2011, 5-5.

**Table 2-5**  
**CMWD's Local Supply Projections for Average Year Conditions<sup>1</sup>**

Source	Volume (Acre-Feet per Year)					
	2010	2015	2020	2025	2030	2035
Potable Groundwater	40,094	33,595	31,365	30,345	31,485	31,495
Desalinated Brackish Groundwater	800	13,499	14,032	14,040	14,048	14,057
Recycled Wastewater <sup>2</sup>	6,947	12,009	17,273	18,457	19,091	19,175
Non-Potable Groundwater	7,068	7,331	7,734	8,132	8,730	9,328
<b>Total</b>	<b>54,909</b>	<b>66,434</b>	<b>70,404</b>	<b>70,974</b>	<b>73,354</b>	<b>74,055</b>

Source: Calleguas Draft 2010 UWMP, Table 2-8.

Notes:

<sup>1</sup> Includes reclaimed wastewater and groundwater pumping associated with the CCDP.

<sup>2</sup> Includes reclaimed wastewater purchased from Triunfo and Simi Valley and delivered for irrigation.

**Table 2-6**  
**CMWD's Local Supply Projections for Dry Year Conditions<sup>1</sup>**

Source	Volume (Acre-Feet per Year)					
	2010	2015	2020	2025	2030	2035
Potable Groundwater	40,084	33,615	31,385	30,365	31,505	31,515
Recovered Groundwater	800	13,515	14,065	14,090	14,116	14,143
Recycled Wastewater <sup>2</sup>	7,212	12,275	17,531	18,716	19,351	19,437
Non-Potable Groundwater	7,615	7,928	8,530	8,925	9,620	10,215
<b>Total</b>	<b>55,711</b>	<b>67,333</b>	<b>71,511</b>	<b>72,096</b>	<b>74,592</b>	<b>75,310</b>

Source: Calleguas Draft 2010 UWMP, Table 2-9.

Notes:

<sup>1</sup> Includes recycled wastewater and groundwater pumping associated with the CCDP.

<sup>2</sup> Recycled wastewater purchased from Triunfo and Simi Valley and delivered for irrigation.

**Table 2-7**  
**CMWD's Local Supply Projections for Multiple Dry Year Conditions<sup>1</sup>**

Source	Volume (Acre-Feet per Year)					
	2010	2015	2020	2025	2030	2035 <sup>1</sup>
Potable Groundwater	38,974	26,920	25,400	25,660	25,880	25,890
Desalinated Brackish Groundwater	800	13,406	14,098	14,142	14,188	14,237
Recycled Wastewater <sup>2</sup>	7,242	12,305	16,720	17,326	17,411	17,497
Non-Potable Groundwater	7,360	7,670	8,270	8,665	9,355	9,950
<b>Total</b>	<b>54,376</b>	<b>60,301</b>	<b>64,489</b>	<b>65,793</b>	<b>66,834</b>	<b>67,574</b>

Source: Calleguas Draft 2010 UWMP, Table 2-10.

Notes:

<sup>1</sup> Includes recycled wastewater and groundwater pumping associated with the CCDP.

<sup>2</sup> Recycled wastewater purchased from Triunfo and Simi Valley and delivered for irrigation.

## 2.3 Water Production

Water production by the City, both for imported water from CMWD and the groundwater, for 2008, 2009, and 2010 are shown in **Table 2-8, City of Thousand Oaks Water Production**. **Table 2-9, Current and Projected Water Supplies**, consists of a summary of the current and projected water supplies at five-year intervals through year 2035.

**Table 2-8**  
**City of Thousand Oaks Water Production (Acre-Feet)**

Source	2008	2009	2010
From CMWD	14,310	12,902	10,977
From City Wells	75	3	46
<b>Total</b>	<b>14,385</b>	<b>12,905</b>	<b>11,023</b>

Source: City of Thousand Oaks Public Works Department and CMWD purchased water (**Appendix B**).

Note:

CMWD = Calleguas Municipal Water District

**Table 2-9**  
**Current and Projected Water Supplies for City of Thousand Oaks Water Service Area**

Water Supply Source	Acre-Feet per Year					
	2010	2015	2020	2025	2030	2035
CMWD	10,977 <sup>1</sup>	13,965	15,360	15,360	15,360	15,360
Local Groundwater <sup>2</sup>	0	0	0	0	0	0
<b>Total Supplies</b>	<b>10,977</b>	<b>13,965</b>	<b>15,360</b>	<b>15,360</b>	<b>15,360</b>	<b>15,360</b>

Source: CMWD Draft 2010 Urban Water Management Plan Appendix C- Normal Year Net Projected Demands for City of Thousand Oaks Service Area for 2015-2035.

<sup>1</sup> Actual water purchased from CMWD. The City's purchased water summary from CMWD shows an average of 13,284 acre-feet (af) for 2005-2010.

<sup>2</sup> Groundwater extraction is used strictly for irrigation purposes for the Los Robles Golf Course and City landscape irrigation. Both wells are located outside the City's Service Area.

Note: CMWD's Draft 2010 UWMP shows a demand of 12,780 af for 2010 which was above the actual demand of 10,977 af per the City's metered data.

## 2.4 Groundwater Basin Description/Supply

The Thousand Oaks Area Groundwater Basin covers approximately 3,110 acres and has an estimated total storage capacity of 130,000 af, according to the Ventura County Public Works Agency (VCPWA) as recorded in 2002.<sup>29</sup> The estimated groundwater in storage in 1999 was estimated at 87 percent, or 113,000 af.<sup>30</sup> The groundwater basin has high iron content and high total dissolved solids (TDS) levels ranging from 1,200 to 2,300 milligrams per liter (mg/L). In 2003, TDS levels average 1,410 mg/L according to the California State Water Resources Control Board.<sup>31</sup> The results of high TDS levels are high alkalinity and hardness, which influence taste and quality characteristics. The groundwater does not meet secondary water quality standards and cannot be used as potable water without treatment. Treatment of groundwater will produce a brine discharge. Currently, there are no facilities to discharge brine in the City. Therefore, the treatment of groundwater is not feasible.

The City owns four groundwater production wells throughout the service area, two of which are currently active. The VCPWA utilizes the two active wells to collect and monitor groundwater levels.<sup>32</sup> The wells are categorized as irrigation wells, meaning the wells are solely intended for pumping

<sup>29</sup> City of Thousand Oaks, Public Works Department, *Draft 2010 Urban Water Management Plan*, 2011.

<sup>30</sup> California Department of Water Resources, *California's Groundwater Bulletin 118, South Coast Hydrologic Region*, Updated 2004.

<sup>31</sup> City of Thousand Oaks, *Draft 2010 Urban Water Management Plan*, 2011.

<sup>32</sup> Telephone communication between Ventura County Public Works Agency, Groundwater Section and Impact Sciences, Inc. on May 17, 2010.

groundwater for irrigation. However, the groundwater is used for irrigation purposes only, due to its poor water quality. Additionally, neither of the neighboring water agencies (Cal-Am nor Cal-Water), uses groundwater as a drinking water supply.

The Hillcrest Drive well pumped approximately 889 hundred cubic feet (hcf),<sup>33</sup> or approximately 2 acre-feet, from May 2009 through April 2010. The Los Robles Golf Course well pumped approximately 341 hcf, or approximately 0.75 af, during the same period above. However, the pump was out of operation for a lengthy period of time. It is currently more expensive for the City to operate the Hillcrest Drive well than it is to use treated potable water. The water usage of the well is minimal and will have an insignificant impact on the water distribution system.

Based on current and future projections of groundwater use as indicated by the City in the Draft 2010 UWMP, it is expected that no additional wells will be built for groundwater extraction before 2035.<sup>34</sup>

## **2.5 Interconnections**

The City does not have any interconnections with other neighboring water agencies that provide water into the City's system.

## **2.6 Recycled Water and Desalinated Water**

Currently, the City does not supply recycled or desalinated water within its service area.

Wastewater generated within most of the City is treated at the Hill Canyon Wastewater Treatment Plant, which is located approximately 3 miles northwest of the Specific Plan area. This existing wastewater treatment plant has a 14 million gallon per day (gpd) capacity and is currently processing 10 million gpd, or 11,200 afy.<sup>35</sup>

The Calleguas Creek Diversion Project was developed and aimed to utilize reclaimed water in the region and reduce overdraft of the groundwater. This project is the result of a long water rights process that has been completed with the approval by the State Water Resources Control Board of the City's appropriative water permit. Now operational, the project diverts reclaimed water discharged from the Hill Canyon

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<sup>33</sup> 1 hundred cubic feet (hcf) = 748 gallons and 325,851 gallons = 1 acre foot.

<sup>34</sup> Confirmed through electronic communication between the City of Thousand Oaks, Public Works Department, and Impact Sciences, Inc., on May 17, 2010.

<sup>35</sup> 1 mgd = 1,120 afy. 10.0 mgd \* 1,120 afy = 11,200 afy.



Wastewater Treatment Plant (HCTP) for agricultural reuse on farmlands in the Santa Rosa Valley and the Oxnard Plain.<sup>36</sup>

Through cooperative agreements with the CMWD, the Camrosa Water District, and the Pleasant Valley Water District, almost all of the treated effluent from the HCTP is currently put to beneficial uses, and a portion of the groundwater placed in storage through an in-lieu process is transferred to CMWD to be recovered as a potable supply.

Through these agreements, the City receives conservation credits to be used to offset the effects of future water shortages. The project delivers approximately 8,000 to 10,000 af of water annually for various beneficial uses along Conejo and Calleguas Creek, in the Santa Rosa Valley and the Oxnard Plain. For each acre-foot not extracted from the Oxnard Plain because of the availability of project-recycled water, the City receives half an acre-foot to be placed in a potable water conservation bank to be used in case of a water supply shortage. Since the project minimum yield is 3,000 afy, this guarantees at least 1,500 af in conservation credits, which is shared with the three principal water retailers: the City, Cal-Am, and California Water Service. Based on existing flows (2010), the HCTP diverts approximately 7,416 afy of reclaimed water for the Conejo Creek Diversion Project.

## 2.7 Proposed Changes to Water Supply

The City expects to take imported surface water from CMWD at up to the Tier 1 allocation of 12,137.3 afy. The City could take additional water from CMWD at the Tier 2 rate. The City will continue to utilize the allotted amount of surface water from CMWD with no changes expected until the current Purchase Agreement is renegotiated prior to the end of the current contract (2013).

## 2.8 Written Contracts or Other Proof of Entitlement

Effective on January 3, 2003 the City executed a “Purchase Order” with the CMWD. In 2010, the City purchased 10,977.6 af of water. Under the terms of the purchase order, the City agrees to purchase water from Calleguas during the contract term (10 years 2003 through 2013) not less than the purchase order commitment (80,915.4 af). CMWD water sold to the City in an amount greater than the Tier 1 Annual Maximum shall be sold to the City at the Tier 2 supply rate. (**Appendix A** includes a copy of the Purchase Order Agreement).

The City has a current Tier 1 entitlement of 12,137.3 afy. Tier 1 water corresponds to the amount “contracted for” by the City equal to 90 percent of the Base Demand (13,485.9 afy). Tier 2 water is

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<sup>36</sup> City of Thousand Oaks, “Wastewater Collection and HCTP,” [http://ci.thousand-oaks.ca.us/government/depts/public\\_works/wastewater/default.asp](http://ci.thousand-oaks.ca.us/government/depts/public_works/wastewater/default.asp). May 2010.

normally available to the City; however, the cost per af is higher. There is less reliability of Tier 2 water in periods of drought. The minimum amount taken by the City (during the 10-year term) without penalty is 80,915.4 af.

### **2.8.1 Groundwater – City of Thousand Oaks**

The City of Thousand Oaks has overlying groundwater rights, which allows the City the right to pump a reasonable and beneficial amount of groundwater.<sup>37</sup>

## **3.0 WATER DEMANDS**

The following section describes the water demands generated by the proposed Thousand Oaks Boulevard Specific Plan project. This includes existing demand, historic demand, unaccounted for water loss, potential increase in unit demand, contingencies, and project demand.

Accurate water demand projections are key to determine water usage within the City's service area. Currently, CMWD and the City are in the process of updating their respective Draft 2010 UWMPs. In order to project water demands it is important to understand the nature of existing customers and then predict what growth will occur over the next 30 years.

### **3.1 Historic Water Demand**

The City's historical trend of the water usage has fluctuated slightly from year to year, but has generally increased 4.5 percent per year from 1993 through 2004 and increased 5.2 percent per year from 2005 to 2007. However, due to a multiple year drought and the implementation of local conservation measures, the water usage demand decreased an average 7.3 percent per year from 2007 through 2010 (actual metered data can be found in **Appendix C**), as shown below in **Table 3-1, Historic Water Demand and Purchased Water**.

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<sup>37</sup> California Water Code Section 1200.

**Table 3-1**  
**Historic Water Demand and Purchased Water**

Land Use	Acre-Feet per Year					
	2005	2006	2007	2008	2009	2010
<b>Historic Demand</b>						
Single family residential	8,848	9,027	9,737	9,665	8,603	7,480
Multiple family residential	901	834	885	869	815	788
Commercial	1,438	1,451	1,584	1,554	1,336	1,248
Irrigation	1,652	1,650	1,956	1,875	1,567	1,351
Construction	0	14	17	8	9	7
<b>Total</b>	<b>12,839</b>	<b>12,976</b>	<b>14,179</b>	<b>13,971</b>	<b>12,330</b>	<b>10,874</b>
<b>Purchased Water History</b>						
From CMWD	13,347	13,579	14,587	14,310	12,902	10,977

Source: City of Thousand Oaks, Public Works Department, March 2011.

Note:

Totals might not add correctly due to rounding.

Past water usage data metered by the City between 2005 and 2010 (shown in **Table 3-1**) shows that an average of 76 percent of metered water was for residential use, 11 percent was for commercial use, and 13 percent for landscape irrigation use.

**Table 3-1** also identifies the amount of water purchased from CMWD. Over the past five years, the City has sold less water than it purchased from CMWD. This water loss is therefore considered as “unaccounted for” water loss.

### 3.2 Future Water Demand

According to the data provided by the City, a total of 173 acres of additional residential land use, 43 acres of additional commercial, industrial, and institutional (CII) land uses and 125 acres of landscape irrigation, are expected within the Service Area between 2011 and buildout. Based on the City’s Draft 2010 UWMP, for planning purposes buildout was forecast to occur by 2035. It should be noted that this assumption is conservative, as actual buildout is likely to occur over a longer period. For purposes of this WSA, constant and uniform buildout of the Service Area pursuant to the City’s current General Plan is projected out to 2035 in five-year increments. While variations may occur, and actual buildout may be even later than that, this assumption provides a conservative planning baseline for estimating water demand and availability.

**Table 3-2, Number of Connections by Customer Type**, shows the projected number of connections over the next 25 years in five-year increments. This table is based on the buildout scenario in the City's Draft 2010 UWMP, which estimates that the total number of connections at buildout will be 18,456. The difference between 2010 and buildout can be reasonably assumed to be the remaining number of connections left to be constructed in the City's Service Area. Based on the remaining number of connections and the water demand for the water use sectors, water demand can be determined for the 2011 to 2035 period.

**Table 3-2**  
**Number of Connections by Customer Type**

Water Use Sectors	2010	2015	2020	2025	2030	2035
Residential	15,890	16,185	16,482	16,777	17,073	17,368
CII	585	596	607	618	629	640
Landscape	410	418	425	433	440	448
<b>Total<sup>1</sup></b>	<b>16,885</b>	<b>17,199</b>	<b>17,514</b>	<b>17,828</b>	<b>18,142</b>	<b>18,456</b>

Note:

Source: City of Thousand Oaks Draft 2010 UWMP, Table III-7.

<sup>1</sup> This total reflects the number of construction connections.

CII = Commercial, Industrial, and Institutional land uses

### 3.3 Demand by Sector

Based on the water demand rates for each water use sector the Specific Plan area (according to the General Plan) would account for 437 afy (as accounted for in the City's Draft 2010 UWMP and shown in **Appendix B**). **Table 3-3 Current and Projected Water Demand**, quantifies current and projected water use among water use sectors in five-year increments to 2035. Current water demand is based on 2010 City metered data and future water demands are based on the Draft 2010 UWMP.

### 3.4 Unit Demand Figures

The analysis from the Water Master Plan indicates values for the unit demands as shown in **Table 3-4, Water Demand Factors**.

**Table 3-3  
Current and Projected Water Demand**

Water Use Sectors	Acre-Feet per Year					
	2010 <sup>1</sup>	2015	2020	2025	2030	2035
Residential	8,268	9,826	9,910	9,995	10,079	10,163
CII <sup>2</sup>	1,255	1,505	1,565	1,625	1,685	1,745
Landscape	1,351	1,770	1,866	1,961	2,056	2,151
<b>Total</b>	<b>10,874</b>	<b>13,102</b>	<b>13,341</b>	<b>13,581</b>	<b>13,820</b>	<b>14,059</b>

Source: Projected information from the City of Thousand Oaks Draft 2010 UWMP, Table III-6 and from the Calleguas Draft 2010 UWMP Data Request for the City of Thousand Oaks, June 2010.

Note:

<sup>1</sup> Demand for 2010 based on actual water usage from the City of Thousand Oaks Draft 2010 UWMP, Table III-3.

<sup>2</sup> CII water also includes water used for construction purposes.

CII = Commercial, Industrial, and Institutional land uses

**Table 3-4  
Water Demand Factors**

Land Use	Density (du/ac)	Demand Factor	Unit
Very Low Density Residential	0–2	440	gal/du/day
High Density Residential	15–30	180	gal/du/day
Commercial/Residential (High Density)	15	200	gal/du/day
Commercial	-	130	gal/ksf/day
Existing Parks, Golf Courses, Open Space	-	3,400	gal/ac/day
Proposed Park and Recreation Areas	-	3,400	gal/ac/day

Source: City of Thousand Oaks, 2005 Water Master Plan, Table III-1, 2005.

Note:

Du/ac = dwelling unit per acre; gal/du/day = gallons per dwelling unit per day; gal/ksf/day = gallons per thousand square feet per day

### 3.5 Unaccounted-For Water

In addition to the traditional demand sources, there is another component that impacts the City's water resources known as "Unaccounted-For Water." This component is typically defined as the difference between water production and water sales. These water losses can come from authorized, unmetered

sources such as firefighting, or unauthorized sources such as leakage, illegal connections, and inaccurate flow meters.

Based on the City's Draft 2010 UWMP, the amount of "unaccounted-for water" was determined to be approximately 562 afy at buildout. This would account for 4 percent of water demand within the water service boundaries.

### 3.6 Population Projections

**Table 3-5, Population Projections for City Water Service**, provides current and projected service area population in five-year increments from 2015 to 2035. Projections were based on the growth rates associated with anticipated future developments within the City's water service area. The City estimates a total of 930 additional residential units (including units currently under construction) to buildout.

**Table 3-5**  
**Population Projections for City Water Service**

	2010	2015	2020	2025	2030	2035
City of Thousand Oaks	130,209	131,896	131,898	131,901	131,903	131,904
Service Area Population <sup>1</sup>	51,392	52,027	52,298	52,452	52,607	52,761

Source: City of Thousand Oaks population determined from the 2008 Southern California Association of Governments Regional Transportation Plan, Integrated Growth Forecast.

Note:

<sup>1</sup> Determined from data provided by City of Thousand Oaks Community Development Department.

### 3.7 Specific Plan Demand

The most current source of information regarding the future demands is contained in the City's Water Master Plan and the Draft 2010 UWMP. **Table 3-6, Demand Estimate for Specific Plan Development**, presents an estimate of the additional demand from development allowed under the Specific Plan.

**Table 3-6**  
**Demand Estimate for Specific Plan Development**

<b>Land Use</b>	<b>Density</b>	<b>Demand Factor (per day)</b>	<b>Water Demand (afy)</b>
Very Low Density Residential	18 du	440 gal/du	0 <sup>1</sup>
High Density Residential	341 senior units	180 gal/du	0 <sup>1</sup>
Commercial/Residential (High Density)	375 apartments (new)*	200 gal/du	84.0
Commercial	2,920 ksf (611.5 new ksf)*	130 gal/ksf	89.0
Industrial	88 ksf	60 gal/ksf	0 <sup>1</sup>
Landscape Irrigation	4.6 ac	3,400 gal/ac	0 <sup>1</sup>
<b>Total Anticipated Demand<sup>2</sup></b>			<b>173.0</b>

*Du = dwelling units; ksf = thousand square feet; ac = acres; gal/du = gallons per dwelling unit;  
gal/ksf = gallons per thousand square feet; gal/ac = gallons per acre; afy = acre-feet per year.*

*\* The proposed Specific Plan is going to add an additional 611,500 thousand commercial square feet (an additional 89.0 afy) and up to 375 mixed-use apartments (an additional 84.0 afy) for an additional 173.0 afy.*

*<sup>1</sup> According to the Draft 2010 UWMP, the existing Specific Plan area has already been accounted in the future growth of the City's water service area (437.2 afy). Therefore, the existing conditions are not accounted for in the proposed Specific Plan project.*

*<sup>2</sup> The water demand estimate for the Specific Plan Development was calculated using the City's 2005 Water Master Plan water demand rates. The calculation does not include the recent SB X7 7 legislation requiring a 20 percent water reduction in per capita use by 2020. See **Appendix B** for calculations.*

The total anticipated demand of approximately 173.0 afy for Specific Plan development can be compared to the current (2010) demand of approximately 10,977 afy and the projected 2035 demand of approximately 14,622 afy for the City's total service area.

### 3.8 Demand Summary

The following calculations are instrumental in determining water availability and water reliability as the City's Service Area builds out:

- 2010 Water Demand (2010) – approximately 10,977 afy
- Projected Water Demand (2035) – approximately 14,622 afy
- Projected Anticipated Demand – Specific Plan – approximately 173.0 afy
- Projected Anticipated Water Demand (2035) with Specific Plan Development – approximately 14,795 afy
- Percentage of 2035 Demand for Specific Plan Development – approximately 1.2 percent

#### 4.0 WATER DEMAND MANAGEMENT AND CONSERVATION MEASURES

The City of Thousand Oaks is committed to implementing water conservation programs. Due to the volatile nature of water supply and demand, due in large part to the Bay Delta legislation and the prolonged period of drought, the MWD has implemented a penalty if the water deliveries of CMWD exceed 85 percent for the water allocation base period. Therefore in June 2009, the Thousand Oaks City Council adopted new mandatory water conservation measures in order to meet reduced water supplies. A base period was determined for future water usage reductions. The base period is the average of usage in 2004, 2005, and 2006. As a result of the mandatory water conservation measures, the City has reduced its usage from the base period by 15 percent since 2009.

##### 4.1 City Water Conservation Regulations

In June 2009, the City Council of Thousand Oaks adopted mandatory water conservation measures.<sup>38</sup> Permanent requirements include limited watering hours, limited watering duration, no washing down of hard surfaces, and obligations to fix leaks. The water conservation ordinance has been divided into three levels: Level 1 Water Supply Shortage, Level 2 Water Supply Shortage, and Level 3 Water Supply Shortage. Each level is described below:

- Level 1: Includes the permanent requirements plus limits on watering days (three days per week through the months of April/October; two days per week through November/March).
- Level 2: Includes the permanent requirements plus limiting watering to two days per week (April/October) and one day per week (November/March) plus prohibiting the refilling of pools greater than 1 foot and initial filling.
- Level 3: This level is an emergency condition and prohibits watering or irrigating; prohibits new potable water service; limit on the issuance of building permits; and discontinuation of service if there is a failure to comply.

The City Council may also adopt additional conservation measures in the form of water supply shortages (e.g., Level 1 Water Supply Shortage). In July 2009, the City Council declared a Level 1 Water Supply Shortage. After CMWD terminated its member purvey Supply Allocations on May 4, 2011, the City Council rescinded the Level 1 Water Supply Shortage declaration, effective May 10, 2011. The complete water conservation measure is located in **Appendix D**. The City has also worked with the three private retailers within the City of Thousand Oaks City limits to enforce similar conservation measures.

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<sup>38</sup> City of Thousand Oaks, Municipal Code, Article 11, Water Conservation, Section 10-2.1101, "Conservation Measures Established."



#### 4.2 City Landscape/Irrigation Regulations

The Thousand Oaks City Council adopted revised "Guidelines and Standards for Landscape Planting and Irrigation Plans" on October 23, 2007 (Resolution 2007-116). Resolution 2007-116 adopted standards that require drought tolerant plant materials and low water use principles be provided in all new and remodeled projects that require a development permit, major modification, or other entitlement pursuant to Title 9 of the Municipal Code, as shown in **Appendix D**.

#### 4.3 Other City Conservation Efforts

The City is a signatory to the Memorandum of Understanding regarding Urban Water Conservation in California dated September 1991 (and amended thereafter), and is therefore a member of the California Urban Water Conservation Council (CUWCC). Signatories must submit biennial reports to the CUWCC outlining progress towards implementing Best Management Practices (BMPs). The City's 2007/2008 reports, which satisfy portions of the Urban Water Management Planning Act, are included as **Appendix E**.

Descriptions of the City's water conservation programs are below.

##### **BMP 1: Water Survey Programs for Single-Family and Multi-Family Residential Customers**

In September 2009, the City implemented a new water survey program for single-family and multi-family residential customers. The water conservation surveys are conducted by a City Field Inspector. Fifty percent of the Field Inspector's time is dedicated to the water conservation program.

Essential parts of the survey program include:

- A review of the customer's consumption history and consumption patterns
- Evaluation of water fixtures and appliances
- Provide low flow showerheads and faucet aerators
- Guidance for leak detection and adjustment of sprinkler controllers
- Helpful information and tips on using water more wisely

The survey program is promoted through the use of billing inserts, newspaper advertisements, and the City's website. In addition, usage data from customers equipped with "smart meters" (AMR) is utilized for leak detection purposed. If a "smart meter" customer has usage detected every hour throughout a 24-hour period, it is quite possible that the customer has a water leak. When this situation occurs, customers are sent letters notifying them of a potential leak and informing them about the availability of the water conservation survey program.

In 2009 and 2010, 189 residential surveys were conducted. Leaks were found on 72 properties. It is not possible to quantify water savings from this program at the present time.

## **BMP 2: Residential Plumbing Retrofit**

The Thousand Oaks City Council adopted Ordinance 1069-NS on May 8, 1990, adding Section 902.1 and modifying the Uniform Plumbing Code requiring that Ultra Low Flow toilets (ULFT) and other water saving devices be installed in all new construction.

The Low Flow Showerhead Kit distribution program was implemented in June 1991. The City has distributed more than 5,500 low flow showerheads during the past 15 years. Showerheads, toilet displacement bags, and faucet aerators are distributed to customers upon request.

In July 2008, MWD began to offer rebates for residential weather-based irrigation controllers and rotating sprinkler nozzles through its regional rebate program. As of December 2010, rebates for 353 rotating sprinkler nozzles and three weather-based irrigation controllers were issued through the regional program resulting in a savings of 1.7 acre-feet of water per year.

## **BMP 3: Distribution System Water Audits, Leak Detection and Repair**

Annual water purchases are compared to water sales to audit the distribution system for unaccounted for water losses. The City's unaccounted for water losses are minimal (2.2 percent in fiscal Year 2009/2010).

In 2010, the City engaged the services of a consultant to prepare a Water Loss Audit Report for the western portion of the City's water service area. American Water Works Association (AWWA) Manual M36, *Water Loss Audits and Loss Control Programs* software was utilized to prepare the system audit.

The City routinely conducts leak detection on all streets scheduled for repair prior to the commencement of street overlay or slurry seal projects. In addition, areas of the City that have poly service lines are annually checked for leaks, and lines found to be leaking are replaced with copper service lines. Water meters that are 10 years old and older are identified and replaced to prevent loss to leaks and to improve the accuracy of water billing. In addition, City water division staff routinely test 25 to 50 large (2 inches and larger) meters per year to determine accuracy. Water meters are read bimonthly and any leaks found by the meter reader in the field are reported and corrected. Customers are notified when leaks are found on the customer's side of the meter.

Leak detection is a continuing activity whether part of a formal program such as the American Water Works Association (AWWA) Manual 36 water audit project, or whether detected and repaired on a routine basis.

#### **BMP 4: Metering With Commodity Rates for all New Connections and Retrofit of Existing Connections**

Metered account statistics for the City water system are as follows:

Number of metered accounts:	16,886 (100%)
Number of accounts read:	16,886 (100%)
Number of metered accounts billed by volume of use:	16,886 (100%)
Frequency of billing:	Bimonthly (98%), monthly (2%)
Number of unmetered accounts:	0

All new and existing water services within the City of Thousand Oaks water system are metered. The City's water meter change-out program involves removing 10-year-old standard 0.75-inch water meters and replacing them with new meters. New meters generally increase water bills to their proper level and customers with recorded water usage will tend to conserve water. Water main pressures, capacities, and sizes are designed for maximum potential population or land use of the area. Water mains are designed to provide for service pressures between 45 and 150 pounds per square inch (psi). Pressures between 45 and 80 psi are desired and, for pressures over 80 psi, pressure regulators are required. Reservoirs or storage tanks are designed to work in conjunction with the pipelines and pumping stations to supply water for both domestic and firefighting purposes. During peak demands, such as firefighting, reservoirs supply the highest anticipated fire flow within a particular zone.

Many studies have shown that customers use less water when they have their own meter and must pay their own bill. The City's requirement of separate meters for all single-family detached residences, condominiums and businesses where separate ownership is involved, accomplishes a most significant water conservation objective.

The City has a long-term plan for installing automated meter reading for all accounts. To date, approximately 4,000 accounts have been switched to AMR.

Pursuant to State Assembly Bill No. 1881 (AB 1881), as of January 1, 2008, all new non-single-family residential project that contain more than 5,000 square feet (sf) of irrigated landscape require a fully separate water meter for irrigation and landscaping. The City has made this requirement a condition of the development permit for applicable projects.

The City has identified disincentives or barriers to retrofitting mixed-use commercial accounts with dedicated landscape meters. These disincentives are primarily financial: Customers would need to pay an additional "Plant Investment Fee" (connection fee) for an additional meter, on-site plumbing would need to be rerouted (at the customer's expense), and the City would be required to routinely read additional meters and bill additional accounts. In addition, many of the smaller mixed-use projects would see little to no conservation benefit from the installation of a dedicated landscape meter since the projects have minimal landscaping and the landscaping has been designed to use water efficiently.

**BMP 5: Large Landscape Conservation Programs and Incentives**

As a result of an increased emphasis on conservation, City irrigation customers significantly reduced demands over a two-year period, as shown below:

Calendar Year	Water Use (acre-feet per year)	Percent Reduction from Prior Year
2008	1875	NA
2009	1514	-24%
2010	1351	-12%
Cumulative (irrigation)		-39% (from 2008 through 2010)

The City has identified and periodically reviews all accounts with dedicated landscape meters. The largest irrigation users in the City's water service area are the Conejo Recreation and Park District (parks playgrounds, sports fields), the Conejo Valley Unified School District (playgrounds and sports fields) and the City itself (public landscape irrigation). Water usage for these accounts is closely monitored by City water conservation program staff. For the last three years, City staff has worked with the large irrigation users to implement water savings programs. As a result, the Conejo Recreation and Park District has reduced water usage by 24 percent, the Conejo Valley Unified School District has reduced usage by 20 percent, and the City has reduced irrigation usage by 25 percent. Both the City and the Conejo Recreation and Park District have active programs to install weather based irrigation controllers. In addition, all Home Owners Associations with irrigation meters have been contacted by mail and advised to review their usage and conserve water.

The Thousand Oaks City Council adopted the most recent revisions to the City's "Guidelines and Standards for Landscape Planting and Irrigation Plans" in 2007. The standards require that drought tolerant plant materials and low water use principles be provided in all projects. Use of water conservation principles must be provided through the use of low gallonage sprinkler heads, drip irrigation systems, soil moisture sensing devices, rain sensing override devices, etc. Reclaimed water irrigation systems (dual distribution systems) are required where reclaimed water is available or will be available in the foreseeable future.

The City's Community Development Department reviewed the DWR's Model Water Efficient Landscape Ordinance in 2009 and determined that the City's existing landscape standards were "at least as effective" as the model ordinance requirements. As such, the City continues to utilize the 2007 "Guidelines and Standards for Landscape Planting and Irrigation Plans."

In 2009, all landscaping and landscape maintenance companies doing business in Thousand Oaks were sent letters advising them of the City's water conservation regulations. A bilingual flyer was enclosed with the correspondence.

City irrigation customers may participate in the rebate program offered by Metropolitan Water District of Southern California (MWDSC). Rebates are available for Weather-Based Irrigation Controllers and Central Computer Irrigation Controllers, rotating nozzles for pop-up spray head retrofits and large rotary nozzles. In addition, MWDSC offers “California Friendly Landscape Training for Professionals” classes that cover:

- Irrigation Principles & Adjustments and Repair
- Irrigation System Troubleshooting
- Controller Programming
- Irrigation Scheduling

MWD also offers “California Friendly Landscape Training Plant Class,” which is designed to give landscape professionals information in plant identification, characteristics, and water use requirement guidelines for over 40 common landscape plant species.

#### **BMP 6: High-Efficiency Washing Machine (HECW) Rebate Program**

The City began offering a high efficiency washing machine rebate program in 2002. The Calleguas Municipal Water District and the Metropolitan Water District of Southern California reimbursed the City in the amount of \$200 per rebate while the City absorbed the administrative cost of running the program. Between 2002 and July 2008, the City issued 308 HECW rebates to water customers. In July 2008, MWD began to offer HECW rebates through its regional rebate program. As of December 2010, 442 residential customers have received HECW rebates through the regional program resulting in a savings of 13.8 acre-feet of water per year.

#### **BMP 7: Public Information Programs**

The City promotes water conservation and other resource efficiencies in coordination with CMWD and MWD. MWD maintains a robust public information program consisting of a website, print ads, internet ads, and radio and TV media campaigns.

The City expanded its water conservation public information program in 2008. The program consists of the following elements:

##### **Outreach**

- Billing inserts on a variety of conservation topics
- Water bills carry conservation tips, hotline information and free survey information
- Direct mailings to AMR customers when possible leak is detected
- Hotline for residents to report observations of inefficient usage
- Door tags left at homes/businesses with inefficient usage

- Brochures distributed at City Hall, libraries, Senior Center and at public events
- Quarterly City newsletter contains water conservation message
- Annual water quality report to customers contains water conservation message
- Large message display at the regional shopping center
- Articles in the local papers (resulting from City press releases)
- “Slow the Flow” magnetic signs on all City vehicles
- Civic Arts Plaza marquee carries the message “Save Water, Thank You”
- Transit buses display water conservation placards

#### **Information**

- City website – conservation regulations, survey program, helpful tips, links
- 12-month graph of water usage on each bill
- Water conservation demonstration garden at City Hall
- Water conservation survey program
- Local government channel (TOTV) airs programs on water conservation
- City public service announcements are aired on TOTV and available for viewing on the City’s website
- Mann Theater screens aired 15-second public service announcements (PSAs) before show time
- Presentations to business groups and homeowners associations

#### **Coordination with Other Agencies**

- City staff coordinates outreach activities with the area’s two major private water purveyors
- City staff worked with CMWD and MWD to obtain educational materials and rebate information

#### **BMP 8: School Education Program**

CMWD, in conjunction with the MWD, offers a variety of school education programs within the City’s service area. The primary focus of the program is to educate children on water resource issues including available water sources, water use, and conservation.

The programs include elementary, secondary, and post-secondary education curricula, supplemental materials, assemblies, and in-class presentations for K–12 teachers and students. Programs and materials are free to teachers in the City’s service area. Each of the programs has been field-tested and correlates to the current California state content standards, particularly in the areas of science and history/social science.

City sponsored education projects include four 1-hour conservation presentations given at the two City libraries as part of their summer program, *Making a Splash with Reading*. Two presentations were for teens and two for young children. In addition, the City sponsored a high school PSA video contest with the theme “Water – It’s Not for Wasting.” The winner’s school received a \$1,000 prize.

#### **BMP 9: Conservation Programs for Commercial, Industrial and Institutional Accounts**

There are no industrial accounts within the City’s water service area. As a result of an increased emphasis on conservation, City commercial and Institutional customers significantly reduced water demand over a two-year period, as shown below:

<b>Calendar Year</b>	<b>Water Use (acre-feet per year)</b>	<b>Percent Reduction from Prior Year</b>
2008	1554	NA
2009	1405	-11%
2010	1247	-12%
Cumulative (commercial)		-25% (from 2008 through 2010)

The City has identified and ranked large commercial, industrial, and institutional (CII) customers. The “top-25” commercial and institutional water users were contacted and shown an analysis of their water consumption. Methods of reducing consumption were discussed with each customer. Letters were sent to every full-service restaurant owner or manager requesting that they serve water only upon request. Correspondence was sent to each lodging establishment customer requesting that they offer reduced linen and towel service to their guests.

Through the MWD’s “Save A Buck” program, City CII customers are eligible for rebates for high efficiency toilets, ultra-low-water urinals and zero-water urinals, high efficiency clothes washing machines, cooling tower conductivity and pH controllers, pressurized water brooms, connectionless food steamers, air-cooled ice making machines, dry vacuum pumps, weather-based and central computer irrigation controllers, rotating irrigation nozzles for pop-up spray head retrofits and large rotary nozzles.

All car washes in the City service area utilize recycling systems for wastewater. Per the City’s water conservation regulations, new car wash facilities will be required to use recycling systems as a condition of approval.

#### **BMP 10: Wholesale Agency Assistance Programs**

This BMP is applicable to wholesale water agencies. The City of Thousand Oaks is a retail purveyor.

**BMP 11: Conservation Pricing**

Conservation pricing provides an economic incentive (price signal) to customers to use water efficiently.

In 2009, the City changed the single-family residential (SFR) water rate structure from a uniform volume rate to a tiered rate in which the volumetric rate increases as the quantity used increases. Tiers established for the single-family residential rate structure are shown below.

	<b>hcf/month</b>	<b>Cost per hcf (\$)</b>
Tier 1	0 – 15	2.74
Tier 2	16 – 35	3.42
Tier 3	Over 35	4.33

*Note:*

*hcf = hundred cubic feet*

Commercial, multi-family residential and irrigation customers are charged a uniform volume rate at a cost per hcf that is slightly higher than the SFR Tier 2 rate. All customers are charged a monthly “base rate” that varies with meter size. This charge recovers a portion of the system’s fixed operating costs. In addition, customers that reside in the higher-pressure zones are charged a “lift charge” (\$0.17/hcf/lift) when water must be pumped (lifted) to their residence or business. The lift charge recovers the cost of operating and maintaining the system’s pump stations.

The CUWCC deems a retail agency’s rates to be consistent with the definition of “conservation pricing” when 70 percent or more of operating revenue (as defined by CUWCC) is derived from volumetric rates. In Fiscal Year 2009/2010, the City Water Operating Fund derived 80 percent of operating revenue (as defined) through volumetric rates. As such, the City’s water rate structure is consistent with CUWCC’s definition of “conservation pricing.”

The City requires meters for construction water used for development and capital projects. This requirement encourages conservation by requiring contractors to pay for the water they use.

The City provides wastewater service to approximately 90 percent of Thousand Oaks. The majority of properties in the City’s wastewater service area are served by private water purveyors. The City cannot develop a volumetric rate for residential wastewater service since it does not have water usage information for over half of its customers. Wastewater services are not metered, except for certain industries that discharge large volumes of wastewater. Residential wastewater customers are charged a flat rate. Commercial customers are charged based on the number and types of fixtures that they have in their buildings (volumetric rate). Industrial customers are charged based on the flow and strength of their wastewater discharge (volumetric rate).

**BMP 12: Conservation Coordinator**

The Public Works Department’s Resource Division Manager manages the City’s Water Conservation Program. The Division Manager provides overall program coordination of staff members assigned to public information, program planning, implementation, and reporting.



### **BMP 13: Water Waste Prohibition**

In April 2009, the Thousand Oaks City Council adopted a new water conservation ordinance. The ordinance is essentially a four-tiered system of increasingly stringent water conservation standards. The first tier includes permanent water conservation requirements and is followed by Level 1 through Level 3 requirements that would be imposed based upon City Council action.

The permanent water conservation requirements recognize that Southern California always needs to responsibly conserve water and include limits on watering hours and duration, prohibits excessive runoff and hosing down of hard surfaces, and provides that eating and drinking establishments serve water only upon request and lodging establishments provide guests the option to decline daily linen service, as well as other requirements.

Level 1 water conservation measures limit irrigation to three days per week, and only two days per week from November through March. Level 1 also obligates users to repair leaks or breaks within 72 hours.

Level 2 water conservation measures further restrict usage by limiting irrigation to two days per week and only one day per week from November through March. Level 2 obligates users to repair breaks or leaks within 48 hours. Level 2 further restricts the filling or refilling of more than 1 foot of pools or spas.

Level 3 water conservation measures are restrictions that would be put in place during an emergency condition. The likely event for such an emergency condition is not anticipated to be drought but a major pipeline break or other disruption to the water supply system.

During a Level 3 event no irrigation is permitted, all leaks and breaks in plumbing systems must be repaired within 24 hours, and no new potable water service connections will be provided.

### **BMP 14: Residential Ultra Low Flow Toilet (ULFT) Replacement Program**

The City's first ULFT rebate program was implemented in January 1992, making \$100 rebates available to individually metered residential households. Because of the staff time invested in this program for accounting and auditing, the rebate program was temporarily discontinued.

In January 1998, the City began offering a \$60 ULFT rebate to all single-family and multi-family residential customers. The rebates were funded by CMWD and the City funded program administration. Under this program, City staff issued more than 1,900 rebate vouchers. When the program ended in July 2008, over 1,200 customers had returned the completed voucher forms and received rebates totaling over \$72,000; 140 of the rebates were issued to multi-family residential apartment complexes.

In July 2008, MWD launched its regional "SoCal Water\$mart" residential rebate program. The program offers rebates to customers that purchase High Efficiency Toilets (HETs). As of December 2010, 87 customers received rebates for 132 HETs, resulting in a savings of 5.6 acre-feet of water per year.

#### **4.4 Recent Water Legislation**

In November 2009, the California legislature passed the comprehensive 2009 Delta/Water Legislation. The package consists of five bills, whose content reflects the inextricable linkages between the health of the California Delta and California's statewide water supply management practices and policies. The bills descend directly from those goals set out in the blue-ribbon Delta Vision Strategic Plan, a December 2008 document with findings and recommendations for managing the Delta as a crucial component of California's water supply system.

The 2009 Delta/Water Legislation—in codifying policies such as a 20 percent per capita urban use reduction target, mandatory monitoring of groundwater levels, new measuring requirements for agriculture, enhanced penalties for improper diversion, alongside establishing a new governance structure for the Delta—directly implements some of the Delta Vision Strategic Plan's most important recommendations.

Of the five bills identified in the 2009 Delta/Water Legislation package, the Urban and Agricultural Water Conservation bill (SBX7 7) would have the greatest influence on the City of Thousand Oaks, CMWD, and MWD. This bill establishes a statewide urban water conservation target of 10 percent by 2015 and 20 percent by 2020. This target is consistent with the Governor's February 2008 proposal and is part of the legislation recommended by the Delta Vision Strategic Plan. SBX7 7 also provides options for how water agencies can achieve higher levels of water conservation but requires those options to meet a per capita reduction in water use. It should be noted that the City of Thousand Oaks has met a reduction of 15 percent of water use from the 2004 through 2006 base period.

### **5.0 WATER SUPPLY ANALYSIS**

This section compares supplies and demands under several scenarios for the period 2011 through 2035 and then presents recommendations with respect to the future supplies for the City. In order to provide a conservative analysis for the Specific Plan water demand, it was assumed that 20 percent of the Specific Plan area would be developed every five years. For purpose of analysis, the 5 acres located outside of the City's service area will be included within the Specific Plan area.

#### **5.1 Average and Dry Year Demand**

As described in the CMWD Draft 2010 UWMP, the average year is the expected demand under average hydrologic conditions (based on historic average year conditions from 1922 through 2004). The dry year is the expected demand under the single driest hydrologic year (based on conditions experienced in 1977),

and the multiple dry year is the expected demand during a period of three consecutive dry years (based on conditions experienced from 1990 through 1992).

Dry water year demands were assumed to require an increase by 10 percent over the average water year. This assumption was based on the percentage increase assigned by CMWD to the Thousand Oaks service area in its Draft 2010 UWMP. Demands between years 2011 and 2035 also experience a gradual increase due to growth and development, as shown below in **Section 5.4**. The water demands were based on the difference in the number of residential and CII connections (**Table 3-2**) from the year 2010 and buildout (2035). The buildout year was determined using population information from SCAG projections (**Table 3-5**) and assumed straight-line growth and development of additional future land uses to 2035.

## **5.2 Water Shortage Contingency Plan**

The City has developed and implemented a Water Shortage Contingency Plan, as shown in the Appendix E of the City's Draft 2010 UWMP. It describes "Stages of Action" that would occur in the event of a water shortage from five to more than 25 percent. Programs include voluntary and mandatory demand reduction, depending on the amount of the shortage. In the event of a 50 percent reduction, Phase IV reductions and programs (as shown in the Contingency Plan) would go into effect. This plan also sets use priorities, with public health and safety (including interior residential use and firefighting) receiving the highest priority, followed by commercial, industrial and governmental use, existing landscaping, and finally, new demand (projects without construction permits).

The plan also lists mandatory prohibitions, consumption limits, penalties and charges for excessive use and an analysis of revenue and expenditure impacts, including rate increases that might be necessary if supply reductions as great as 50 percent were to occur. The plan also provides monitoring procedures.

Furthermore, Level 3 of the water conservation ordinance exists when the City Council declares a critical water shortage emergency. This shall include Level 1 and Level 2 Water Supply Shortage conditions, prohibit watering and irrigation of landscapes with potable water, and limit or withhold the issuance of building permits.

**Table 5-1**  
**Water Supply Triggering Levels**

<b>MWD's Percent Shortage</b>	<b>Implementation Phase</b>	<b>Water Supply (afy)<sup>1</sup></b>
5 % But less than 10 %	I	13,163 to 12,470
10 % But less than 20 %	II	12,470 to 11,085
20 % But less than 25 %	III	11,085 to 10,392
25 % to 50 %	IV	10,392 to 6,928

*Source: City of Thousand Oaks, Draft 2010 UWMP, Table VI-3.*

<sup>1</sup> Values are based on the water usage for year 2010 = 13,856

*Note: afy = acre-feet per year.*

### **5.3 Combined Resources Reliability**

This section addresses the overall issue of "adequacy" as required by SB 610/SB 221 and the California Water Code. The objective of the legislation is that development projects of a certain size (over 500 units for residential and equivalents for other developments) not proceed unless there is a finding of adequacy for the succeeding 20-year period.

First, it should be stated that adequacy in this context must be interpreted as there being a reasonably assured water supply for the projected development project. Few, if any, water systems have all capital facilities in place sufficient to meet demands for the next 20 years, particularly when considering the wholesale water purveyors where imported water supplies are needed. However, there can be a finding of adequacy based on the published documents that demonstrate an understanding of the needs as well as the ability of the water purveyor(s) to implement the improvements. The ability to implement is dependent on being able to receive permit(s) and other regulatory approvals as well as having a financing plan to fund the improvements.

As stated previously, the California Department of Water Resources (DWR) delivers water to the MWD of Southern California using SWP facilities, which in turn provides water to CMWD, and CMWD eventually acts as the purveyor for the City of Thousand Oaks. Hence, the reliability of meeting the City's water demands are dependent upon CMWD, MWD, and DWR delivery ability. Thousand Oaks' strategy for meeting these water demands in its service area, both in normal and dry years, includes the implementation of regional and local supply augmentation and demand management programs. This section evaluates the supply reliability of all the agencies involved in supplying drinking water to the residents of Thousand Oaks Service Area, and discusses the programs implemented by the City, in conjunction with the water purveyors mentioned herein.

### 5.3.1 Imported Water Reliability

#### Department of Water Resources/State Water Project

Due to the increased environmental and water management problems of the SWP facilities in past years, a cooperative effort among state and federal agencies and environmental, urban and agricultural communities was initiated in 1995, known as the CALFED Bay-Delta Program (CALFED). The CALFED program goals, which include restoring ecological health, improving water quality and water supply reliability for beneficial uses, as well as developing new groundwater and surface water storage projects, will maximize the supply from SWP to the receiving agencies and reduce the possibilities of any cutbacks occurring in water delivery.

Imported water provided by MWD via CMWD accounts for 100 percent of the City's water supply. Both MWD and CMWD have completed, or are currently developing, storage projects that will insulate agency members from water shortages due to drought or catastrophic interruption. These projects include MWD's Diamond Valley Lake, which provides an additional 800,000 acre-feet of storage capacity and CMWD's Las Posas ASR, which will provide 300,000 acre-feet of storage capacity. Together these storage facilities will provide a reliable water supply during periods of multi-year drought. These storage facilities will increase the reliability of MWD's and CMWD's water source during periods of drought, or in the event of other catastrophic interruption of water supply, through the Year 2035.<sup>39</sup>

More recently, environmental concerns due to supposed over-pumping combined with the recent statewide three-year drought reduced the storage reserves in Southern California SWP reservoirs to unprecedented levels. This resulted in supply cutbacks to as low as 15 percent of original entitlements. As the state emerges from this three-year drought, DWR has increased this delivery allocation to 80 percent as of April 2011.

#### MWD of Southern California

In the MWD Integrated Resources Plan (IRP) 2010 Update<sup>40</sup>, MWD identified a resource mix of local water resources, imported supply and conservation measures. MWD also utilizes storage strategies to increase both SWP and Colorado River reliability. Such strategies include utilizing Diamond Valley Lake and shared portions of Lake Perris and Castaic Lake, and developing off-stream storage facilities along the SWP California Aqueduct and the Colorado River Aqueduct. The IRP was last updated in MWD's 2010 Integrated Water Resources Plan (IWRP), which identified changing conditions affecting water

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<sup>39</sup> Calleguas Municipal Water District, *Draft 2010 UWMP, Chapter 5, Section B, Catastrophe Planning*.

<sup>40</sup> Metropolitan Water District of Southern California, *Integrated Water Resources Plan 2010 Update*, October 2010.

resource development. Among other things, the 2010 IWRP outlined emerging trends related to climate change, energy use and greenhouse gas emissions, endangered species protection and conveyance needs in the Sacramento-San Joaquin River Delta system.

In 2007, MWD began to update their plans for addressing the water shortage conditions. The impetus for this was ongoing dry conditions that began the recent three-year drought and a series of reduced deliveries from the SWP. In 2009, MWD's Water Supply Allocation Plan<sup>41</sup> was adopted as an extension of their Water Surplus and Drought Management Plan. Shortage Stage 7, the most severe shortage stage in their plan, authorizes the strict implementation of their Water Supply Allocation Plan.

As a result of the Water Supply Allocation Plan, and investments made in conservation and the mandatory water use reductions imposed by the Water Conservation Act of 2009, as well as water recycling and aquifer storage and recovery, MWD has greatly enhanced its reliability to its member agencies and their retail customers in the last five years.

### **Calleguas Municipal Water District**

CMWD has focused its planning efforts on more efficient use of existing supplies and maximization of local resources. As indicated in City's Draft 2010 UWMP and Water Master Plan and the CMWD Draft 2010 Urban Water Management Plan, CMWD has implemented a capital improvement program aimed at reducing the region's demand for imported water. The focus of their capital improvement program is to expand on recycled water systems and conjunctive-use facilities. Some of the major CMWD water projects in place or proposed to improve water reliability to the region include the following:

- **Las Posas Basin Aquifer Storage and Recovery Project** – The Las Posas Basin ASR Project will allow for the delivery and storage of large volumes of state water to the CMWD service area during periods of availability. The stored water will later be recovered to meet seasonal, drought and emergency demands. CMWD can inject and store up to 300,000 af of storage in the Las Posas Basin to be injected and recovered in two well fields. The project will greatly enhance water reliability in the region. The CMWD Draft 2010 Urban Water Management Plan indicates the Basin has an extraction capacity of approximately 70 cubic feet per second (cfs).
- **Simi Valley Regional Recycled Water System** – The purpose of this project is to develop approximately 2,000 afy of recycled wastewater to be used by major water users within the CMWD's service area.
- **The Lake Bard Water Treatment Plant** has a treatment capacity of 100 cfs. The lake has a water storage capacity of approximately 8,000 af, which may be used during emergencies and peak demand.

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<sup>41</sup> MWD, *Water Supply Allocation Plan*, Revised June 2009.

- **The Regional Salinity Management Program** will provide reverse osmosis brine concentrate disposal to an ocean outfall, or to downstream beneficial users. It will facilitate the recovery of local groundwater and the recycling of wastewater while reducing salt in the Calleguas watershed over time. As treatment facilities are built along the pipeline, significant additional potable and recycled water will become available to the Calleguas service area.

These additional supplies and savings will be shared with CMWD's wholesale customers, including the City of Thousand Oaks. Additional information on these projects is available from CMWD's Draft 2010 Urban Water Management Plan.

#### 5.4 Water Supply and Demand Summary

**Table 5-2, Current and Projected Water Demand and Supply**, provides a summary of the City's projected water supplies and demands. The data for the past six years, 2005 through 2010, was based on metered data supplied by the City. The decrease in water demand over this period can be attributed to the implementation of the water conservation ordinance and the landscape ordinance. (As previously stated, the City has reduced its water demand and usage by 15 percent from the base period since 2009.) The demand data calculated below for the projected period 2011 through 2035 is based on a gradual increase in growth and development.<sup>42</sup> However, the purchase order agreement between City of Thousand Oaks and CMWD, which provides a purchase order commitment of a minimum of 80,915 af of imported water over the 10-year contract period, or a base demand of 13,485 afy, sunsets January 1, 2013.

Consequently, available water supply projections after 2013 have not been secured. However, according to both the City's and CMWD's Draft 2010 UWMPs, there would be an increase in water supply projections for the years after 2010. The increase in water supply projections is attributed to the 10 percent average additional supply of imported water from MWD.

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<sup>42</sup> As described in **Section 5.1**, the increase in growth and development was determined using the difference between buildout connections and existing (2010) connections.

**Table 5-2**  
**Current and Projected Water Demand and Supply**

Water Use Sectors	Acre-Feet per Year					
	2010	2015	2020	2025	2030	2035
<b>Total Demand</b>	13,376 <sup>1</sup>	13,626	13,875	14,124	14,373	14,622
<b>Total Supply<sup>2</sup></b>	<b>13,600<sup>3</sup></b>	<b>13,965</b>	<b>15,360</b>	<b>15,360</b>	<b>15,360</b>	<b>15,360</b>
<b>Difference</b>	<b>224</b>	<b>339</b>	<b>1,485</b>	<b>1,236</b>	<b>987</b>	<b>738</b>

Source: Projected information from the City of Thousand Oaks Draft 2010 UWMP, Table VI-1.

Notes:

afy = acre-feet per year; CII = Commercial, Industrial, and Institutional land uses.

<sup>1</sup> City of Thousand Oaks Draft 2010 UWMP demand projection based on the average annual water usage from 2005-2010. Actual water usage was 10,977 afy. Lower usage was due to implementation of water conservation measures and cooler than normal weather in 2010.

<sup>2</sup> Imported water for the years 2015 to 2035 are projected for the City and based on Appendix C of the CMWD Draft 2010 UWMP.

<sup>3</sup> CMWD supply allocation for Thousand Oaks between 2005 and 2010 ranged from 13,600 afy to 15,000 afy.

## 5.5 Average and Dry Year Water Supply and Demand

### 5.5.1 Average Water Year

As shown in the CMWD Draft 2010 UWMP and **Table 5-3, CMWD Supply versus Demand for Average Year Conditions**, sufficient supplies are available for an average year hydrologic condition. On average, there is projected to be a water supply surplus each year of approximately 8 percent.<sup>43</sup> To determine the water demand of the additional Specific Plan land uses, a conservative assumption of 20 percent development for each 5-year period is expected to occur.

**Table 5-4, Average Year Supply and Demand Assessment**, compares average water year supply and demand in five-year intervals for the City's Service Area. This is based on no deficit, and includes miscellaneous water demands and expected losses in imported water supply, which combined are estimated to have an average of 7.0 percent experienced by the City over the past year. It is unlikely that minor deficits would force the City to implement any of the water shortage actions listed in the adopted mandatory water conservation measure (refer to **Appendix D**). As this shows, it is expected that the CMWD's typical average year surplus, and the expected surplus of the City, will be sufficient to counter the water losses experienced by the City and implementation of the proposed Specific Plan. Therefore, an increase in demand from the proposed Specific Plan during average year conditions is proposed to be met by the expected water surplus from the City and CMWD.

<sup>43</sup> Calleguas MWD, Draft 2010 UWMP, Table 5-1, 2011.



**Table 5-3**  
**CMWD Supply versus Demand for Average Year Conditions<sup>1</sup>**

Parameter	2010	2015	Acre-Feet per Year			
			2020	2025	2030	2035
Average Year Demand	171,776	179,818	188,687	192,121	198,164	202,160
Average Year Local Supply	54,909	66,434	70,404	70,974	73,354	74,055
Imported Demand on MWD	116,867	113,384	118,283	121,147	124,810	128,105
MWD Available Supplies	118,546	129,004	136,966	140,753	142,365	143,777
<b>Surplus/(Deficit)</b>	<b>1</b>	<b>14</b>	<b>16</b>	<b>16</b>	<b>14</b>	<b>12</b>

Note:

<sup>1</sup> Source: Calleguas Municipal Water District (CMWD) Draft 2010 Urban Water Management Plan, Table 5-1.

**Table 5-4**  
**Average Year Supply and Demand Assessment**

	2010	2015	Acre-Feet per Year			
			2020	2025	2030	2035
Demand w/o Specific Plan	13,376 <sup>1</sup>	13,626	13,875	14,124	14,373	14,622
Specific Plan Additional Demand <sup>2</sup>	--	35	69	104	138	173
Total Demand	13,376	13,661	13,944	14,228	14,511	14,795
Supply from CMWD <sup>3</sup>	13,600 <sup>4</sup>	13,965	15,360	15,360	15,360	15,360
Local Groundwater	0	0	0	0	0	0
Surplus (Deficit)	224 = 2 %	304 = 2%	1,416 = 9 %	1,132 = 7 %	849 = 6 %	565 = 4 %

Source: City of Thousand Oaks Draft 2010 UWMP, Table VI-1.

Note:

<sup>1</sup> City of Thousand Oaks Draft 2010 UWMP demand projection based on the average annual water usage from 2005-2010. Actual water usage was 10,977 afy. Lower usage was due to implementation of water conservation measures and cooler than normal weather in 2010.

<sup>2</sup> Buildout of the Specific Plan area was assumed at 20 percent for each five-year increment (straight-line buildout).

<sup>3</sup> Imported water for the years 2015 to 2035 are projected for the City and based on Appendix C of the CMWD Draft 2010 UWMP.

<sup>4</sup> CMWD supply allocation for Thousand Oaks between 2005 and 2010 ranged from 13,600 afy to 15,000 afy.

## 5.6.2 Dry Water Years

Tables 5-5 through 5-10, **Dry Water Years Supply and Demand Assessments**, provide a comparison of the water supply and demands for single dry and multiple dry water years for the period from 2010 to 2038. Dry water year demands were assumed to require an increase by 10 percent over the average water

year. This assumption was based on the percentage increase assigned by CMWD to the Thousand Oaks service area in its Draft 2010 UWMP.<sup>44</sup> As described in CMWD's Draft 2010 UWMP, the average surplus of water during dry year conditions from 2011 to 2035 is expected to be 9 percent. According to the City's Draft 2010 UWMP, dry and multiple dry water years would vary from zero water surplus up to 20 percent water surplus for City water demand. The City's projected dry water years 2011, 2021, 2026, 2031, and 2036 could be supplemented with surplus water from CMWD reserves. As previously described, the City is allocated 11 percent of CMWD's imported water supplies. These estimates do not include any further reductions in demand from SBX7 7, and are therefore conservative estimates.

CMWD has made many investments in projects designed to drought-proof purveyors. Key elements include the Las Posas Aquifer Storage Project and the expansion of the Lake Bard Treatment Plant. It is expected that the City, as a retail customer of Calleguas, would receive some additional supplies in a drought lasting up to three years to meet any foreseeable deficit. According to CMWD Draft 2010 UWMP, CMWD and MWD have banked a significant amount of water in the Las Posas groundwater basin.<sup>45</sup> This water can be extracted during times when imported supplies are curtailed.

If extreme multi-year shortages occurred beyond what MWD and CMWD could provide, the City would invoke various water conservation ordinances and activities, provided in the appendices attached to this report.

**Table 5-5** demonstrates that the City's service area would be expected to utilize a portion of MWD/CMWD reserves to ensure adequate supplies of imported water to meet the demands during dry and multiple dry year scenarios for the period 2010 to 2013. The City could receive 634 af of water for the 2011 dry and multiple dry year to meet projected water demand. As mentioned above, CMWD is expected to have a 9 percent deficit (15,437 af for 2011) for the 2011 multiple dry year.<sup>46</sup> The City's additional 634 af of water demand would account for 4 percent of CMWD's projected water supply deficit. Therefore, the City could utilize 4 percent of CMWD surplus of supplies during single dry years, which is less than the City's allocated share of CMWD supplies. It is expected that the surplus CMWD typically has for dry years, coupled with the ability to draw from CMWD or MWD reserves, will be sufficient to counter the water losses experienced by the City. As shown in **Table 5-5**, the City is projected to have a water surplus of 5 percent and 15 percent for the second and third years (2012 and 2013).

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<sup>44</sup> CMWD, *Draft 2010 UWMP, Appendix C*, 2011.

<sup>45</sup> CMWD, *Draft 2010 UWMP*, 5-4.

<sup>46</sup> It should be noted that this assumes that Bay-Delta issues and current drought persists through 2013, resulting in similar MWD import allocations as those in 2009. MWD's projected 2010 dry-year allocation for CMWD in a non-shortage condition was 121,313 af. Actual allocation for 2010 was 112,042 af due to ongoing drought conditions and Bay-Delta issues. (CMWD Draft 2010 UWMP, Table 6-3)

It is unlikely that minor deficits would force the City to implement any of the water shortage actions listed in the Water Shortage Contingency Plan. The Water Shortage Contingency Plan requires a voluntary Phase 1 reduction program if shortages reach 5 percent (shown in **Table 5-1**).

**Table 5-6** illustrates dry year water supply and demand for the City's service area with the incorporation of the Specific Plan for years 2015 through 2018. The table demonstrates a surplus of at least 2 percent of water demand during the period of 2015 to 2018. Therefore, there would be adequate water with implementation of the additional Specific Plan area.

**Table 5-7** assumes that the Specific Plan area is built out to 40 percent, resulting in a water demand of 69 afy for the years 2020 through 2023. As indicated in **Table 5-7**, there would be a deficit of 3 af water supplied to the City's service area for dry and multiple dry water year 2021. The addition of the Specific Plan demand would be expected to result in a deficit of 72 af, or less than 1 percent demand for water year 2021. The CMWD Draft 2010 UWMP expects a 5 percent surplus of water supply for CMWD's service area. As indicated above, the City could utilize CMWD water surplus for 2021 to offset the less than 1 percent of additional City water demand. Therefore, adequate water is expected to be supplied to the City's service area for the year 2021. As indicated in **Table 5-7**, with the addition of the proposed Specific Plan development the City is expected to have a surplus of 9 and 18 percent for years 2022 and 2023, respectively. As a result, there would be adequate water for the additional Specific Plan development.

**Table 5-8** assumes that the Specific Plan area is built out to 60 percent, with an additional water demand of 104 afy, for the years 2025 through 2028. **Table 5-8** demonstrates that the City, with incorporation of the Specific Plan area, would have a 7 and 16 percent surplus of imported water supplies for years 2027 and 2028. As illustrated in **Table 5-8**, the City would result in a water deficit of 276 af for the dry and multiple dry year 2026 scenario. The addition of the Specific Plan demand would result in a water supply deficit of 380 af for 2026. The water supply deficit equates to 3.2 percent of the 6 percent CMWD water surplus for the year 2026.<sup>47</sup> The water supply deficit of 380 af would equate to 2 percent of the City's projected water supply for year 2026. As indicated above CMWD could supplement member agency supply allocations with Las Posas groundwater reserves or Lake Bard reserves in the event that the surplus water is unavailable. Furthermore, the City could invoke water conservation measures to reduce water demand. Therefore, adequate water would be expected to be supplied to the City's service area for the year 2026.

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<sup>47</sup>  $380 \text{ af} / (211,706 \text{ af} - 199,869 \text{ af}) = 0.032 * 100 = 3.2 \text{ percent of CMWD water surplus for Multiple Dry Year 2026.}$

**Table 5-9** assumes that the proposed Specific Plan area is 80 percent built out with an additional water demand of 138 afy during the 2030 to 2035 scenario. **Table 5-9** demonstrates that the City, with development of the Specific Plan area, would have a 5 and 14 percent surplus of imported water supplies for years 2032 and 2033, respectively. The City would result in a water supply deficit of 550 af for the 2031 single dry and multiple dry year.<sup>48</sup> With implementation of the proposed Specific Plan, the City would result in a deficit of 688 af for the 2031 scenario. The water supply deficit would equate to 7.5 percent of the 4 percent CMWD water surplus for the year 2031.<sup>49</sup> The water supply deficit of 688 af would equate to 4 percent of the City's projected water supply for year 2031. CMWD could supplement member agency supply allocations with Las Posas groundwater reserves or Lake Bard reserves in the event that the surplus water is unavailable. Therefore, adequate water would be expected to be supplied to the City's service area for the year 2031.

As determined in **Table 3-6** above, complete buildout of the proposed Specific Plan area would result in a water demand of 173 afy. **Table 5-10** demonstrates that the City, with the additional Specific Plan area, would have a 3 and 13 percent surplus of imported water supplies for years 2037 and 2038, respectively. The City would result in a water supply deficit of 824 af for the 2036 single dry and multiple dry year scenario.<sup>50</sup> The combined water demand for the City and the additional Specific Plan development would result in a water supply deficit of 997 af for 2036. The water supply deficit would equate to 14 percent of the 5 percent CMWD water surplus for the year 2035 (as year 2036 is not projected in the CMWD Draft 2010 UWMP).<sup>51</sup> The water supply deficit of 997 af would equate to 6 percent of the City's projected water supply for year 2036. As the water supply deficit is greater than 5 percent, a voluntary Phase I reduction program would be required per the City's Water Shortage Contingency Plan. In addition, the CMWD could supplement member agency supply allocations with Las Posas groundwater reserves or Lake Bard reserves in the event that the surplus water is unavailable. Therefore, adequate water would be expected to be supplied to the City's service area for the year 2036.

**Tables 5-5 through 5-10** show that with the existing water system and the addition of facilities and programs there will be adequacy of supply for the projected 20-year period required for this WSA.

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<sup>48</sup> City of Thousand Oaks, *Draft 2010 UWMP*, Table VI-2E.

<sup>49</sup>  $688 \text{ af} / (215,580 \text{ af} - 206,485 \text{ af}) = 0.075 * 100 = 7.5$  percent of CMWD water surplus for Multiple Dry Year 2031.

<sup>50</sup> City of Thousand Oaks, *Draft 2010 UWMP*, Table VI-2F.

<sup>51</sup>  $997 \text{ af} / (149,548 \text{ af} - 142,631 \text{ af}) = 0.14 * 100 = 14$  percent of CMWD water surplus for Multiple Dry Year 2035.

**Table 5-5**  
**Dry Water Year Supply and Demand Assessment – 2010 to 2013**

		Average Water Year 2010	Single Dry Water Year 2011	Multiple Dry Water Years		
				2011	2012	2013
Total Demand		13,376 <sup>2</sup>	14,714	14,714	13,376	12,038
Surface water from CMWD	Normal <sup>1</sup>	13,600 <sup>3</sup>	14,080	14,080	14,080	14,080
	Reserves <sup>4</sup>	0	634	634	0	0
Local Groundwater		0	0	0	0	0
<b>Surplus (Deficit)</b>		<b>224</b>	<b>0</b>	<b>0</b>	<b>704</b>	<b>2,042</b>
Percent		2%	0%	0%	5%	15%

Source: City of Thousand Oaks, Draft 2010 UWMP, Table VI-2A.

Notes:

<sup>1</sup> CMWD Draft 2010 UWMP – Normal Year “Imported Water Demand,” except as noted otherwise.

<sup>2</sup> City of Thousand Oaks Draft 2010 UWMP demand projection based on the average annual water usage from 2005-2010. Actual water usage was 10,977 afy. Lower usage was due to implementation of water conservation measures and cooler than normal weather in 2010.

<sup>3</sup> CMWD supply allocation for Thousand Oaks between 2005 and 2010 ranged from 13,600 afy to 15,000 afy.

<sup>4</sup> According to CMWD Draft 2010 UWMP, CMWD could supplement member agency supply allocations with Las Posas groundwater reserves or Lake Bard reserves.

**Table 5-6**  
**Dry Water Year Supply and Demand Assessment – 2015 to 2018**

		Average Water Year 2015	Single Dry Water Year 2016	Multiple Dry Water Years <sup>1</sup>		
				2016	2017	2018
Demand w/o Project		13,626	14,989	14,989	13,626	12,263
Specific Plan Additional Demand		35	35	35	35	35
<b>Total Demand<sup>1</sup></b>		<b>13,661</b>	<b>15,024</b>	<b>15,024</b>	<b>13,661</b>	<b>12,298</b>
Surface water from CMWD	Normal	13,965	15,264	15,264	15,263	15,262
	Reserves <sup>2</sup>	0	0	0	0	0
Local Groundwater		0	0	0	0	0
<b>Surplus (Deficit)</b>		<b>304</b>	<b>240</b>	<b>240</b>	<b>1,602</b>	<b>2,964</b>
Percent		2%	2%	2%	10%	19%

Source: City of Thousand Oaks, Draft 2010 UWMP, Table VI-2B.

Notes:

<sup>1</sup> Assumes a 10 percent increase for first year of dry conditions and a 10 percent decrease for 3<sup>rd</sup> year of dry conditions.

<sup>2</sup> According to CMWD Draft 2010 UWMP, CMWD could supplement member agency supply allocations with Las Posas groundwater reserves or Lake Bard reserves.

**Table 5-7**  
**Dry Water Year Supply and Demand Assessment – 2020 to 2023**

		Average Water Year 2020	Single Dry Water Year 2021	Multiple Dry Water Years		
				2021	2022	2023
Demand w/o Project		13,875	15,263	15,263	13,875	12,488
Specific Plan Additional Demand		69	69	69	69	69
<b>Total Demand<sup>1</sup></b>		<b>13,944</b>	<b>15,332</b>	<b>15,332</b>	<b>13,944</b>	<b>12,557</b>
Surface water from CMWD	Normal	15,360	15,260	15,260	15,260	15,260
	Reserves <sup>2</sup>	0	72	72	0	0
Local Groundwater		0	0	0	0	0
<b>Surplus (Deficit)</b>		<b>1,416</b>	<b>(0)</b>	<b>(0)</b>	<b>1,316</b>	<b>2,703</b>
Percent		9%	0%	0%	9%	18%

Source: City of Thousand Oaks, Draft 2010 UWMP, Table VI-2C.

Notes:

<sup>1</sup> Assumes a 10 percent increase for first year of dry conditions and a 10 percent decrease for 3<sup>rd</sup> year of dry conditions.

<sup>2</sup> According to CMWD Draft 2010 UWMP, CMWD could supplement member agency supply allocations with Las Posas groundwater reserves or Lake Bard reserves.

**Table 5-8**  
**Dry Water Year Supply and Demand Assessment – 2025 to 2028**

		Average Water Year 2025	Single Dry Water Year 2026	Multiple Dry Water Years		
				2026	2027	2028
Demand w/o Project		14,124	15,536	15,536	14,124	12,712
Specific Plan Additional Demand		104	104	104	104	104
<b>Total Demand<sup>1</sup></b>		<b>14,228</b>	<b>15,640</b>	<b>15,640</b>	<b>14,228</b>	<b>12,816</b>
Surface water from CMWD	Normal	15,360	15,260	15,260	15,260	15,260
	Reserves <sup>2</sup>	0	380	380	0	0
Local Groundwater		0	0	0	0	0
<b>Surplus (Deficit)</b>		<b>1,132</b>	<b>(0)</b>	<b>(0)</b>	<b>1,032</b>	<b>2,444</b>
Percent		7%	0%	0%	7%	16%

Source: City of Thousand Oaks, Draft 2010 UWMP, Table VI-2D.

Notes:

<sup>1</sup> Assumes a 10 percent increase for first year of dry conditions and a 10 percent decrease for 3<sup>rd</sup> year of dry conditions.

<sup>2</sup> According to CMWD Draft 2010 UWMP, CMWD could supplement member agency supply allocations with Las Posas groundwater reserves or Lake Bard reserves.

**Table 5-9**  
**Dry Water Year Supply and Demand Assessment – 2030 to 2033**

		Average Water Year 2030	Single Dry Water Year 2031	Multiple Dry Water Years		
				2031	2032	2033
Demand w/o Project		14,373	15,810	15,810	14,373	12,936
Specific Plan Additional Demand		138	138	138	138	138
<b>Total Demand<sup>1</sup></b>		<b>14,511</b>	<b>15,948</b>	<b>15,948</b>	<b>14,511</b>	<b>13,074</b>
Surface water from	Normal	15,360	15,260	15,260	15,260	15,260
CMWD	Reserves <sup>2</sup>	0	688	688	0	0
Local Groundwater		0	0	0	0	0
<b>Surplus (Deficit)</b>		<b>849</b>	<b>(0)</b>	<b>(0)</b>	<b>749</b>	<b>2,186</b>
Percent		6%	0%	0%	5%	14%

Source: City of Thousand Oaks, Draft 2010 UWMP, Table VI-2E.

Notes:

<sup>1</sup> Assumes a 10 percent increase for first year of dry conditions and a 10 percent decrease for 3<sup>rd</sup> year of dry conditions.

<sup>2</sup> According to CMWD Draft 2010 UWMP, CMWD could supplement member agency supply allocations with Las Posas groundwater reserves or Lake Bard reserves.

**Table 5-10**  
**Dry Water Year Supply and Demand Assessment – 2035 to 2038**

		Average Water Year 2035	Single Dry Water Year 2036	Multiple Dry Water Years		
				2036	2037	2038
Demand w/o Project		14,622	16,084	16,084	14,622	13,160
Specific Plan Additional Demand		173	173	173	173	173
<b>Total Demand<sup>1</sup></b>		<b>14,795</b>	<b>16,257</b>	<b>16,257</b>	<b>14,795</b>	<b>13,333</b>
Surface water from CMWD	Normal	15,360	15,260	15,260	15,260	15,260
	Reserves <sup>2</sup>	0	997	997	0	0
Local Groundwater		0	0	0	0	0
<b>Surplus (Deficit)</b>		<b>565</b>	<b>(0)</b>	<b>(0)</b>	<b>465</b>	<b>1,927</b>
Percent		4%	0%	0%	3%	13%

Source: City of Thousand Oaks, Draft 2010 UWMP, Table VI-2F.

Notes:

<sup>1</sup> Assumes a 10 percent increase for first year of dry conditions and a 10 percent decrease for 3<sup>rd</sup> year of dry conditions.

<sup>2</sup> According to CMWD draft 2010 UWMP, CMWD could supplement member agency supply allocations with Las Posas groundwater reserves or Lake Bard reserves.

## 6.0 MITIGATION

The following mitigation measures will be implemented:

- The Thousand Oaks Boulevard Specific Plan shall require the use of water conservation measures to reduce water demand. These shall include the use of high-efficiency clothes-washing machines, ultra-low-flow or High Efficiency toilets, low-flow showerheads, and evapotranspiration sensor based irrigation controllers, and other such devices to reduce domestic water consumption.

## 7.0 SUMMARY

Sufficient water supplies exist to support the proposed Thousand Oaks Boulevard Specific Plan development based on the following facts:

- The City of Thousand Oaks has been identified as the primary public water supplier for the Thousand Oaks Boulevard Specific Plan project.
- A portion of the estimated water demand for the Thousand Oaks Boulevard Specific Plan project was included in the City of Thousand Oaks' Draft 2010 UWMP.
- The City of Thousand Oaks receives almost all of its water supplies as imported surface water from Calleguas Municipal Water District, which receives its water from the Metropolitan Water District of Southern California. Less than 1 percent of the City's water is groundwater, which is only used for irrigation.
- The total estimated water demand for the Thousand Oaks Boulevard Specific Plan project at buildout is 173.0 afy (see **Table 3-6**).
- The Thousand Oaks Boulevard Specific Plan project is required to install water conservation measures and to follow the City's landscape irrigation ordinance.
- The Thousand Oaks Boulevard Specific Plan will complete a water-use study and monitoring program to determine actual water use.
- The total water supply, including existing and potential supply sources, is estimated to be between 13,600 afy in 2010 and 15,360 afy in 2035 (see **Table 5-2**).
- The Water Shortage Contingency Plan requires a voluntary Phase 1 reduction program if shortages reach five percent. The combined Specific Plan and City demand would result in a 6 percent water supply deficit for the 2036 single dry and multiple dry year scenario. As a result, the City would be required to implement water shortage actions listed in the Water Shortage Contingency Plan to minimize water consumption. All other scenarios would result in either a water supply surplus or a water supply deficit of less than 4 percent.
- It is expected that the City, as a retail customer of Calleguas, would receive some additional supplies in a drought lasting up to three years to meet any foreseeable deficit.
- Conclusions in the WSA are based on the results of the City's Draft 2010 UWMP, DWR's Bulletin 118 (2003 Update), and CMWD's Draft 2010 UWMP.



- Existing water supply sources include groundwater from the Thousand Oaks Basin and a purchase order agreement with CMWD for imported surface water.
- The DWR's Bulletin 118 (2003 Update) indicates that Thousand Oaks Basin is not in overdraft and can only be used for non-potable uses.
- MWD projects an increase in water demand from its users; however, the SWP and CRA have averaged 63 percent of reliability and allotments for the past years. Court decisions that restrict pumping in the Bay Delta and the recent multiple drought year (2007 to 2010) has reduced the allotments requested by each SWP contractor.
- The City of Thousand Oaks has reduced its water demand by 15 percent since 2009 pursuant to a request from CMWD through MWD as a result of the unreliability of SWP water.
- New legislation (Senate Bill X7 7) requires water retailers and water suppliers to reduce per-capita water use by 20 percent by the year 2020. The 20 percent reduction is determined from the base year, or base period, chosen by the water retailer/supplier.

## **8.0 VERIFICATION**

This document verifies the water supply for the project as required by California Government Code 66473.7 is available.

Overall, the findings of this WSA (SB 610) and Water Supply Verification (SB 221) are that:

1. The WSA has considered water demands of the Thousand Oaks Boulevard Specific Plan project for the period 2010 to 2035.
2. Water supplies as identified herein from the CMWD and the MWD were used from the Draft 2010 UWMPs developed by the City and CMWD. Both are required to have updated UWMPs by the end of June 2011 (as a result of an extension by DWR).
3. The City is currently meeting the MWD's allocation 15 percent reduction of water usage from the base period.
4. The City can expect reliability of imported water from CMWD for the period of 2010 through 2035. However, in the event that there is a multiple year drought, the City shall enact the Level 2 Water Supply Shortage of the water conservation ordinance. In addition, if the City is still short of water and CMWD cannot provide additional surface water supplies, the City shall utilize groundwater credits to offset the effects of water shortages through the Conejo Creek Diversion Project. The groundwater credits would provide a minimum of 1,500 af per year of potable groundwater from the Las Posas Aquifer.
5. Based upon the analysis set forth within this Water Supply Assessment, the City verifies that there will be sufficient water supplies for the Thousand Oaks Boulevard Specific Plan during all hydrologic conditions, including normal, single dry and multiple dry years, for more than 20 years into the future.

This Water Supply Assessment has been prepared by City of Thousand Oaks and its representative as of the date below. The undersigned hereby represents that he or she has the authority on behalf of City of Thousand Oaks to execute and make effective this Verification.

**City of Thousand Oaks**

by:

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Signature

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Name and Title

---

Date

## **9.0 ORGANIZATIONS AND PERSONS CONSULTED**

### **Impact Sciences, Inc.**

Joe Gibson, Principal

Chris Hampson, Project Planner

### **City of Thousand Oaks**

JoAnne Kelly, Resource Division Manager, Department of Public Works

Brad Bussell, Associate Civil Engineer

Mark Towne, Deputy Community Development Director

Jeffrey Specter, Senior Planner, Department of Planning

### **Calleguas Municipal Water District**

Eric Bergh, Manager of Resources

Cy Johnson, Development Programs Administrator

## 10.0 REFERENCES

- California Public Utilities Commission, Settlement Agreement Between Cal-Am and Thousand Oaks, [http://docs.cpuc.ca.gov/published/comment\\_decision/41398-05.htm](http://docs.cpuc.ca.gov/published/comment_decision/41398-05.htm), 2004.
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The Bay Institute, Center for Biological Diversity, and the Natural Resources Defense Council, "Petition to List the San Francisco Bay-Delta Population of Longfin Smelt as Endangered Under the Endangered Species Act," (August 8, 2007).

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## **APPENDIX A**

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### **Purchase Order Agreement**

**PURCHASE ORDER FOR IMPORTED WATER SUPPLY TO BE PROVIDED BY  
CALLEGUAS MUNICIPAL WATER DISTRICT**

<b>PURCHASER:</b> City of Thousand Oaks	<b>TERM</b> 10 years
<b>INITIAL BASE DEMAND:</b> 13,485.9 acre-feet	<b>EFFECTIVE DATE:</b> January 1, 2003
<b>INITIAL TIER 1 ANNUAL MAXIMUM:</b> 12,137.3 acre-feet	
<b>PURCHASE ORDER COMMITMENT:</b> 80,915.4 acre-feet	

Definitions of capitalized terms used in this Purchase Order are provided in Attachment 1. Terms used in this Purchase Order and not defined in Attachment 1 are defined in Metropolitan's Administrative Code.

**COMMITMENT TO PURCHASE**

In consideration of Purchaser's commitment to purchase System Water pursuant to this Purchase Order, Calleguas agrees to sell such System Water to Purchaser at the Tier 1 Supply Rate each year in an amount up to the Tier 1 Annual Maximum. System Water sold to Purchaser (excluding deliveries of System Water made under the Interim Agricultural Water Program and Long-term Seasonal Storage Service) in an amount greater than the Tier 1 Annual Maximum shall be sold to the Purchaser at the Tier 2 Supply Rate. In connection with the receipt of System Water, the Purchaser also agrees to pay all other applicable rates and charges, as established by Calleguas from time to time. The rates and charges applicable to System Water as of the Effective Date are shown in Attachment 2.

Purchaser agrees to purchase System Water from Calleguas during the Term in an amount (excluding deliveries of System Water, made under the Interim Agricultural Water Program and Long-term Seasonal Storage Service) not less than the Purchase Order Commitment.

Purchaser recognizes and agrees that Calleguas has relied and will, during the term of this Purchase Order, rely on this commitment by Purchaser in setting its rates and charges, planning and providing its capital facilities and developing its water supply, management and reliability programs. If Purchaser's applicable System Water purchases during the Term are less than the Purchase Order Commitment, Purchaser agrees to pay Calleguas an amount equal to the difference between the Purchase Order Commitment and Purchaser's applicable System Water purchases during the Term times the average of the Tier 1 Supply Rate in effect during the Term. The Purchaser agrees to pay such amount to Calleguas within the next regular billing cycle following the reconciliation of all certifications for special programs that the Purchaser may participate in (e.g. Interim Agricultural Water Program, Long-term Seasonal Storage Service). The Purchaser may elect to pay such amount in twelve equal monthly payments over the course of the next twelve months beginning with the first regular billing cycle following the reconciliation of all outstanding certifications for special programs. If the

This Purchase Order will apply to and bind the successors and assigns of the Purchaser and Calleguas.

No assignment or transfer of the rights of the Purchaser under this Purchase Order will be valid and effective against Calleguas or the Purchaser without the prior written consent of Calleguas and the Purchaser. In the event that a Calleguas purveyor is acquired by another Calleguas purveyor, the Purchase Order commitment of the acquirer will transfer to the acquirer.

If at any time during the Term, by reason of error in computation or other causes, there is an overpayment or underpayment to Calleguas by the Purchaser of the charges provided for under this Purchase Order, which overpayment or underpayment is not accounted for and corrected in the annual re-determination or reconciliation of said charges, the amount of such overpayment or underpayment shall be credited or debited, as the case may be, to the Purchaser. Calleguas will notify the Purchaser in writing regarding the amount of such credit or debit, as the case may be. In no case will credits or debits for charges provided for under this Purchase Order be administered beyond the limit for billing adjustments as specified in Metropolitan's Administrative Code.

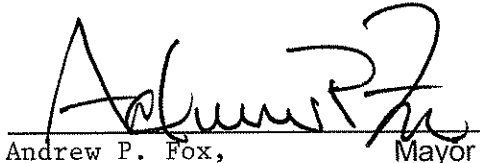
IN WITNESS WHEREOF, this Purchase Order is executed by the duly authorized officers of the Calleguas Municipal Water District and the City of Thousand Oaks, Purchaser, to be effective January 1, 2003.

CALLEGUAS MUNICIPAL WATER DISTRICT



By: Donald R. Kendall  
Title: General Manager

CITY OF THOUSAND OAKS



Andrew P. Fox, Mayor

APPROVED AS TO FORM ~~AND CONTENT~~:



General Counsel

ATTEST:



Nancy A. Dillon, City Clerk

APPROVED AS TO FORM:



Mark G. Sellers, City Attorney

APPROVED AS TO ADMINISTRATION:



Mary Jane V. Lazz, City Manager



**Attachment 1**  
**Purchase Order for Imported Water Supplies**  
**DEFINITIONS**

**"Base Demand"** means the greater of (i) the Initial Base Demand or (ii) the ten-year rolling average of the Purchaser's Firm Demand, measured on a fiscal year basis.

**"Calleguas"** means Calleguas Municipal Water District.

**"Effective Date"** means the effective date of this Purchase Order as specified above.

**"Firm Demand"** means the Purchaser's purchases of non-surplus System Water supplies, including full-service and seasonal shift deliveries.

**"Initial Base Demand"** means the Purchaser's highest annual Firm Demand on Calleguas in any fiscal year during the period from fiscal year 1989/90 through fiscal year 2001/02.

**"Metropolitan"** means The Metropolitan Water District of Southern California.

**"Purchase Order Commitment"** means 60% of the initial Base Demand times 10. Deliveries of System Water made under the Agricultural Water Program and Long-term Seasonal Storage Service, will not count toward the Purchase Order Commitment.

**"Purchase Order"** means this Purchase Order.

**"Purchaser"** means the retail purveyor specified above, a duly organized [city/water district/county water authority] of the State of California.

**"System"** means the properties, works and facilities of Calleguas necessary for the supply, development, storage, conveyance, distribution, treatment or sale of water.

**"System Water"** means water supplies developed by Calleguas and delivered to the Purchaser through the System or other means (e.g. conjunctive use storage).

**"Term"** means the term of this Purchase Order as specified above.

**"Tier 1 Annual Maximum"** means an amount equal to 90% of the Base Demand.

**"Tier 1 Supply Rate"** means Metropolitan's per-acre-foot Tier 1 Supply Rate, as determined from time to time by Metropolitan's Board of Directors. The initial Tier 1 Rate is \$73/AF.

**"Tier 2 Supply Rate"** means Metropolitan's per-acre-foot Tier 2 Supply Rate, as determined from time to time by Metropolitan's Board of Directors. The initial Tier 2 Rate is \$154/AF.

# CALLEGUAS MUNICIPAL WATER DISTRICT

## RATES AND CHARGES

Effective January 1, 2003

RATES	MWD Rates \$/AF	CMWD Rates \$/AF	TOTAL RATE \$/AF
TIER 1 RATE	\$ 408	\$ 74	\$ 482
TIER 2 RATE	\$ 489	\$ 74	\$ 563
LONG-TERM SEASONAL RATE	\$ 290	\$ 74	\$ 364
INTERIM AGRICULTURAL PROGRAM	\$ 294	\$ 74	\$ 368

CHARGES	
READINESS-TO-SERVE (Detail by Purveyor on attached Exhibit A)	\$ 2,748,490
CAPACITY RESERVATION CHARGE (\$/cfs) (cfs to be provided by purveyor)	\$ 19,500

## **APPENDIX B**

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### **WSA Calculations**

## Previous 5 Years of City Metered Data

### Thousand Oaks Water Service Area Summary

	2005	2006	2007	2008	2009		1 HCF =	748 gallons
<b>Single Family Residential</b>							1 AF =	325,851 gallons
Connections	15,245	15,272	15,288	15,592	15,633	15,638		
<u>total use</u>	<u>3,863,141</u>	<u>3,940,342</u>	<u>4,252,302</u>	<u>4,220,302</u>	<u>3,756,942</u>	<u>3,258,578</u>	8,624	
HCF per connection	253.4	258.0	278.1	270.7	240.3	<b>5 year average</b>		
AFY	<b>8,867.9</b>	<b>9,045.2</b>	<b>9,761.3</b>	<b>9,687.8</b>	<b>8,624.2</b>	<b>260.1</b>	HCF/conne	<b>194,562.8</b> gallons/connection
						<b>7,480.2</b>		<b>0.60</b> AFY
<b>Multi Family Residential</b>								
Connections	239	239	238	238	238	252		
<u>total use</u>	<u>361,896</u>	<u>336,031</u>	<u>353,519</u>	<u>348,778</u>	<u>327,607</u>	<u>343,424</u>	752.03095	
HCF per connection	1,514.2	1,406.0	1,485.4	1,465.5	1,376.5			
AFY	<b>830.7</b>	<b>771.4</b>	<b>811.5</b>	<b>800.6</b>	<b>752.0</b>	<b>1,449.5</b>	HCF	<b>1,084,229.6</b> gallons/connection
						<b>788.3</b>		<b>3.33</b> AFY
<b>Commercial</b>								
Connections	554	561	565	568	570	563		
<u>total use</u>	<u>647,969</u>	<u>650,909</u>	<u>711,266</u>	<u>696,843</u>	<u>599,477</u>	<u>543,577</u>	1376.1161	
HCF per connection	1,169.6	1,160.3	1,258.9	1,226.8	1,051.7	965.5		
AFY	<b>1,487.4</b>	<b>1,494.2</b>	<b>1,632.7</b>	<b>1,599.6</b>	<b>1,376.1</b>	<b>1,173.5</b>	HCF	<b>877,750.0</b> gallons/connection
								<b>2.69</b> AFY
<b>Irrigation</b>								
Connections	396	395	401	405	407	410		
<u>total use</u>	<u>719,661</u>	<u>718,896</u>	<u>852,256</u>	<u>816,548</u>	<u>682,677</u>	<u>588,470</u>	1567.104	
HCF per connection	1,817.3	1,820.0	2,125.3	2,016.2	1,677.3			
AFY	<b>1,652.0</b>	<b>1,650.2</b>	<b>1,956.4</b>	<b>1,874.4</b>	<b>1,567.1</b>	<b>1,891.2</b>	HCF	<b>1,414,639.9</b> gallons/connection
						<b>1,350.8</b>		<b>4.34</b> AFY

## Previous 5 Years of City Metered Data

### Construction

hcf	215.0	6,140.0	7,199.0	3,321.0	3,996.0	3,395.0
Gallons	<u>160,820.0</u>	<u>4,592,720.0</u>	<u>5,384,852.0</u>	<u>2,484,108.0</u>	<u>2,989,008.0</u>	<u>2,539,460.0</u>
AF	0.5	14.1	16.5	7.6	9.2	7.8
ave					9.6	9.3

Total water use (AF) based on connections	12,838.1	12,961.0	14,161.9	13,962.5	12,319.4	12,319
Total water use (AF) including construction water	12,838.6	12,975.1	14,178.4	13,970.1	<b>12,328.6</b>	<b>11.0 AFY</b>

	2005	2006	2007	2008	2009	
<b>Percentage of Water Service</b>						
Total						
Connections	16,434.0	16,467.0	16,492.0	16,803.0	16,848.0	16,886.0
Res	94.2	94.2	94.1	94.2	94.2	94.1
Commercial	3.4	3.4	3.4	3.4	3.4	3.3
Irrigation	2.4	2.4	2.4	2.4	2.4	2.4
2004-05 13536	100.0	100.0	100.0	100.0	100.0	99.9

### Percent Change by Year

2004-05	2005-06	2006-07	2007-08	2008-09
-5.155717537	1.0	9.3	-1.4	-11.8

12,800

## Existing Water Demands

	Existing conditions				AFY
<b>Commercial</b>	1,800,000.0 sf commercial	130 gal/ksf/day	water demand =	85,410,000 gal/year or	262.1
<b>Residential</b>	18.0 SFR	440 gal/du/day	water demand =	2,890,800 gal/year or	8.9
<b>Industrial</b>	39,000.0 sf industrial	60 gal/ksf/day	water demand =	854,100 gal/year or	2.6
<b>Senior Units</b>	341.0 senior units	180 gal/du/day	water demand =	22,403,700 gal/year or	68.8
<b><u>Irrigation</u></b>	<u>4.6 acres</u>	<u>3,400 gal/ac/day</u>	<u>water demand =</u>	<u>5,708,600 gal/year or</u>	<u>17.5</u>
		<b>total project demand</b>		<b>117,267,200.0</b>	<b>359.9</b>

### Open Space/Public Parks

Zuniga Ridge	0.59 acres
Heritage Park	0.14 acres
Gardens of the World	3.86 acres
	4.59 acres

Note: The City is already meeting a 15 percent reduction in water usage from the base years of 1995 to 2005. However, the water demand rates utilized to calculate existing water demand were obtained from the City's 2005 Water Master Plan which does not take into account the latest legislation (SB X7-7).

## Proposed Water Demands

Proposed Conditions (GP Buildout)					AFY
<b>Commercial</b>	2,308,500.0 sf commercial	130 gal/ksf/day	water demand =	109,538,325 gal/year or	336.2
<b>Residential</b>	18.0 SFR	440 gal/du/day	water demand =	2,890,800 gal/year or	8.9
<b>Industrial</b>	88,000.0 sf industrial	60 gal/ksf/day	water demand =	1,927,200 gal/year or	5.9
<b>Senior Units</b>	341.0 senior units	180 gal/du/day	water demand =	22,403,700 gal/year or	68.8
<b><u>Irrigation</u></b>	<u>4.6 acres</u>	<u>3,400 gal/ac/day</u>	<u>water demand =</u>	<u>5,708,600 gal/year or</u>	<u>17.5</u>
<b>total SP area demand</b>					<b>437.2</b>
Existing Conditions					359.9
Increase					77.3

Proposed Conditions (SP plus GP Buildout)					AFY	SB X7
<b>Commercial</b>	2,920,000.0 sf commercial	130 gal/ksf/day	water demand =	138,554,000 gal/year or	425.2	21.3
<b>Residential</b>	18.0 SFR	440 gal/du/day	water demand =	2,890,800 gal/year or	8.9	0.4
<b>Residential</b>	375.0 MFR	200 gal/du/day	water demand =	27,375,000 gal/year or	84.0	4.2
<b>Industrial</b>	88,000.0 sf industrial	60 gal/ksf/day	water demand =	1,927,200 gal/year or	5.9	
<b>Senior Units</b>	341.0 senior units	180 gal/du/day	water demand =	22,403,700 gal/year or	68.8	0.3
<b><u>Irrigation</u></b>	<u>4.6 acres</u>	<u>3,400 gal/ac/day</u>	<u>water demand =</u>	<u>5,708,600 gal/year or</u>	<u>17.5</u>	<u>0.9</u>
<b>total SP area demand</b>					<b>610.3</b>	575.7
Existing Conditions					<u>359.9</u>	<u>359.9</u>
Increase					<b>250.4</b>	215.8

**Specific Plan Demand**  
**173.1**

Water Demand rates Source: City of Thousand Oaks, Water Master Plan, Table III-1, 2005.

To reach 20 % by 2020  
34.6

## Dry Year Calculations

Table 5-5 2010-2013

		Average	Single Dry	Multiple	2012	2013
		Water Year 2005-2010	Water Year 2011	Dry Year 2011		
Total Demand		13,376	14,714	14,714	13,376	12,038
Supply from CMWD	Normal	13,600	14,080	14,080	14,080	14,080
	Reserve	0	634	634	0	0
Local Groundwater		0	0	0	0	0
Surplus (Deficit)		224	0	0	704	2,042
Percent of Supply		2	0	0	5	15

Percent Increase 2010 to 2015

46,876.0

47,485.0 1.3

Note: The current purchase order between the City and CMWD goes through January 1, 2013. Therefore, for years up to this point the City could purchase additional water to meet demands.. Furthermore, the growth rate for the City's service area for the five year period is 1.3 percent which has been used for demand and supply for the multiple dry year

Table 5-6 2015 to 2018

		Average	Single Dry	Multiple	2017	2018
		Water Year 2015	Water Year 2016	Dry Year 2016		
Total Demand w/o Project		13,626	14,989	14,989	13,626	12,263
Specific Plan Demand		35	35	35	35	35
Supply from CMWD	Normal	13,965	15,264	15,264	15,263	15,262
	Reserve	0	0	0	0	0
Local Groundwater		0	0	0	0	0
Surplus (Deficit)		304	240	240	1,602	2,964
Percent of Supply		2	2	2	10	19

Furthermore, the growth rate for the City's service area for the five year period is 1.3 percent which has been used for demand and supply for the multiple dry year

total demand w/ project	13,661	15,024	15,024	13,661	12,298
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## Dry Year Calculations

Table 5-7      2020 to 2023

		Average Water Year	Single Dry Water Year	Multiple Dry Year		
		2020	2021	2021	2022	2023
Total Demand w/o Project		13,875	15,263	15,263	13,875	12,488
Specific Plan Demand		69	69	69	69	69
Supply from CMWD	Normal	15,360	15,260	15,260	15,260	15,260
	Reserve	0	72	72	0	0
Local Groundwater		0	0	0	0	0
Surplus (Deficit)		1,416	0	0	1,316	2,703
Percent of Supply		9	0	0	9	18
total demand w/ project		13,944	15,332	15,332	13,944	12,557

Table 5-8      2025 to 2028

		Average Water Year	Single Dry Water Year	Multiple Dry Year		
		2025	2026	2026	2027	2028
Total Demand w/o Project		14,124	15,536	15,536	14,124	12,712
Specific Plan Demand		104	104	104	104	104
Supply from CMWD	Normal	15,360	15,260	15,260	15,260	15,260
	Reserve	0	380	380	0	0
Local Groundwater		0	0	0	0	0
Surplus (Deficit)		1,132	0	0	1,032	2,444
Percent of Supply		7	0	0	7	16
total demand w/ project		14,228	15,640	15,640	14,228	12,816

## Dry Year Calculations

Table 5-9      2030 to 2033

		Average	Single Dry	Multiple	2032	2033
		Water Year	Water Year			
		2030	2031	2031		
Total Demand w/o Project		14,373	15,810	15,810	14,373	12,936
Specific Plan Demand		138	138	138	138	138
Supply from CMWD	Normal	15,360	15,260	15,260	15,260	15,260
	Reserve	0	688	688	0	0
Local Groundwater		0	0	0	0	0
Surplus (Deficit)		849	0	0	749	2,186
Percent of Supply		6	0	0	5	14
total demand w/ project		14,511	15,948	15,948	14,511	13,074

Table 5-10      2035 to 2038

		Average	Single Dry	Multiple	2037	2038
		Water Year	Water Year			
		2035	2035	2036		
Total Demand w/o Project		14,622	16,084	16,084	14,622	13,160
Specific Plan Demand		173	173	173	173	173
Supply from CMWD	Normal	15,360	15,260	15,260	15,260	15,260
	Reserve	0	997	997	0	0
Local Groundwater		0	0	0	0	0
Surplus (Deficit)		565	0	0	465	1,927
Percent of Supply		4	0	0	3	13
total demand w/ project		14,795	16,257	16,257	14,795	13,333

## Purchased Water from Calleguas

City purchased from Calleguas (AF)

Year	January	February	March	April	May	June	July	August	September	October	November	December	Total
2010	697.6	499.8	729.5	797.4	1,141.4	1,157.2	1,216.8	1,455.9	1,090.6	826.8	768.4	596.2	<b>10,977.6</b>
2009	888.5	612.6	938.2	1,221.8	1,338.9	1,149.6	1,398.3	1,350.2	1,290.5	1,010.0	1,074.3	728.9	<b>13,001.8</b>
2008	712.7	698.5	1097.5	1105.4	1469	1536.5	1,586.2	1,540.7	1,408.4	1,362.9	1,083.9	707.9	<b>14,309.6</b>
2007	984	725.7	1032.7	1158	1369.4	1370.5	1,653.6	1,605.8	1,471.8	1,232.3	1,138.0	844.7	<b>14,586.5</b>
2006	871.7	881.3	647.6	687	1033.7	1342.3	1684.8	1558.1	1475.6	1283.6	1159	954.6	<b>13,579.3</b>
2005	623.7	589.5	643.4	1,061.7	1,312.4	1,376.4	1624.1	1525.3	1405.3	1174.3	1032.8	977.8	<b>13,346.7</b>

## City of Thousand Oaks

## PURCHASED WATER SUMMARY FROM CMWD (ACRE FEET)

Year	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Totals
69/70	474.6	511.7	433.5	432.5	306.5	288.1	225.5	209.7	271.7	390.4	519.5	491.1	4,554.8
70/71	568.3	556.2	498.5	382.3	293.1	195.9	230.0	231.1	320.1	348.0	400.1	479.5	4,503.1
71/72	579.5	600.5	475.8	443.6	304.0	241.7	249.4	290.4	370.6	419.2	484.3	498.2	4,957.2
72/73	592.9	570.9	450.4	365.4	277.8	260.3	232.2	189.2	215.4	373.8	450.8	569.7	4,548.8
73/74	615.8	568.5	478.1	444.3	317.0	276.0	220.3	295.3	263.9	412.1	518.2	622.8	5,032.3
74/75	656.2	617.4	558.5	412.1	399.5	313.3	369.2	260.3	285.7	332.4	538.3	588.0	5,330.9
75/76	710.2	702.2	632.8	531.4	516.9	440.8	517.8	341.9	436.7	464.0	663.3	785.4	6,743.4
76/77	771.4	792.7	492.2	557.9	529.8	530.5	351.7	428.5	367.8	505.3	431.3	584.3	6,343.4
77/78	725.7	612.5	552.7	538.0	503.1	385.4	271.1	271.5	289.4	315.1	666.2	751.6	5,882.3
78/79	817.2	755.5	652.1	618.1	423.7	321.6	313.2	275.5	321.1	469.7	630.9	792.0	6,390.6
79/80	803.8	792.2	798.8	562.1	495.0	544.1	392.0	383.5	394.8	593.1	611.2	868.0	7,238.6
80/81	1,103.8	986.1	744.2	744.4	639.0	592.7	561.4	476.0	486.5	623.2	809.3	1,079.2	8,845.8
81/82	1,110.8	1,063.1	891.9	659.7	592.1	463.3	387.5	441.9	448.1	524.0	734.1	767.8	8,084.3
82/83	1,017.6	1,073.0	848.3	834.2	556.5	441.2	503.5	355.5	355.8	503.7	727.1	798.8	8,015.2
83/84	991.2	884.8	833.6	596.0	459.6	401.3	558.6	616.0	758.7	790.1	979.1	955.1	8,824.1
84/85	1,126.1	1,061.3	978.4	807.2	513.7	430.7	501.1	494.3	551.1	733.7	848.1	962.0	9,007.7
85/86	1,160.2	1,131.6	941.3	822.7	615.6	548.3	601.2	406.0	500.0	612.4	844.9	1,071.9	9,256.1
86/87	1,217.4	1,163.5	922.5	945.1	857.7	792.1	703.3	634.4	695.2	1,015.7	1,030.4	1,100.2	11,077.5
87/88	1,152.4	1,206.1	1,078.2	831.7	599.8	543.4	529.6	669.1	805.8	781.7	1,043.6	1,137.4	10,378.8
88/89	1,185.3	1,187.3	1,042.6	940.5	666.0	650.2	595.0	514.9	701.6	907.7	1,033.4	1,064.5	10,489.0
89/90	1,243.8	1,197.6	1,099.6	1,037.5	898.7	916.8	684.8	550.0	786.6	770.7	996.2	1,087.8	11,270.1
90/91	1,191.3	1,163.9	1,080.0	999.6	829.8	776.7	637.2	600.1	350.7	543.6	733.5	771.7	9,678.1
91/92	830.2	839.7	782.8	735.2	686.7	584.7	495.9	406.9	403.8	621.7	818.4	925.1	8,131.1
92/93	1,032.9	1,105.7	982.0	793.2	724.9	516.1	404.0	384.2	555.7	730.2	915.5	976.8	9,121.2
93/94	1,040.8	1,029.5	968.5	835.2	733.3	590.9	665.9	463.7	590.2	687.9	762.7	1,026.4	9,395.0
94/95	1,105.5	1,191.5	1,032.0	860.9	697.9	676.5	433.5	513.1	464.4	753.3	795.6	916.9	9,441.1
95/96	1,135.8	1,210.4	1,101.0	1,023.8	784.2	665.5	645.3	482.0	599.2	830.0	1,121.8	1,222.6	10,821.6
96/97	1,258.1	1,269.2	1,185.7	1,034.7	731.7	582.5	461.2	576.8	929.1	1,005.8	1,156.4	1,222.4	11,413.6
97/98	1,293.3	1,317.3	1,230.5	1,169.1	771.5	548.6	540.2	393.6	578.2	662.0	827.2	1,021.9	10,353.4
98/99	1,327.1	1,400.4	1,123.0	1,054.6	889.3	751.4	817.5	615.3	661.1	764.5	1,099.8	1,123.9	11,627.9
99/00	1,334.0	1,445.0	1,220.8	1,345.0	929.2	1,037.5	841.3	541.0	686.2	974.1	1,155.7	1,338.7	12,848.5
00/01	1,417.3	1,506.8	1,258.0	1,098.4	957.5	958.5	734.6	568.8	641.1	898.4	1,169.7	1,257.1	12,466.2
01/02	1,491.6	1,467.0	1,360.5	1,200.0	789.1	760.9	753.7	859.4	1,070.5	1,037.5	1,251.3	1,434.5	13,476.0
02/03	1,487.8	1,487.7	1,423.0	1,190.3	903.4	707.3	924.2	703.3	803.5	959.0	1,031.4	1,225.7	12,846.6
03/04	1,529.9	1,590.7	1,464.6	1,351.7	991.1	854.8	871.4	803.3	975.8	1,204.3	1,517.1	1,379.2	14,533.9
04/05	1,529.1	1,645.1	1,504.1	1,044.4	878.1	858.6	623.7	589.5	643.4	1,061.7	1,312.4	1,376.4	13,066.5
05/06	1,624.1	1,525.3	1,405.3	1,174.3	1,032.8	977.8	871.7	881.3	647.6	687.0	1,033.7	1,342.3	13,203.2
06/07	1,684.8	1,558.1	1,475.6	1,283.6	1,159.0	954.6	984.0	725.7	1,032.7	1,158.0	1,369.4	1,370.5	14,756.0
07/08	1,653.6	1,605.8	1,471.8	1,232.3	1,138.0	844.7	712.7	698.5	1,097.5	1,105.4	1,469.0	1,536.5	14,565.8
08/09	1,586.2	1,540.7	1,408.4	1,362.9	1,083.9	707.9	888.5	612.6	938.2	1,121.8	1,338.9	1,149.6	13,739.6
09/10	1,398.3	1,350.2	1,290.5	1,010.0	1,074.3	728.9	697.6	499.8	729.5	797.4	1,141.4	1,157.2	11,875.1
10/11	1,216.8	1,455.9	1,090.6	826.8	768.4	596.2	702.7	613.7					7,271.1

## **APPENDIX C**

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### **City Metered Data, 1969 to 2011**

2005

4/23/10  
UTR067

UTIL BILLING: WATER USE STATISTICS: METER SIZE  
 PERIOD COVERED: 01/05 THROUGH 12/05  
 CONSTRUCTION WATER (CW) IS INCLUDED IN THIS REPORT

METER SIZE	CUST. TOTAL	***** RESIDENTIAL *****			***** COMMERCIAL *****			***** IRRIGATION *****			***** CONSTRUCTION *****			***** COMM MULTI FAMILY *****		
		AVERAGE USE		TOTAL USE	AVERAGE USE		TOTAL USE	AVERAGE USE		TOTAL USE	AVERAGE USE		TOTAL USE	AVERAGE USE		TOTAL USE
		NO. CUST	HCF/ CUST.		NO. CUST	HCF/ CUST.		NO. CUST	HCF/ CUST.		NO. CUST	HCF/ CUST.		NO. CUST	HCF/ CUST.	
UNKNOWN	66	64	227	14,519	1	87	87	0	0	0	0	0	0	1	129	129
1 INCH	697	474	444	210,582	136	591	80,363	63	619	39,000	0	0	0	24	452	10,857
1.5 INCH	316	9	848	7,633	122	1,076	131,234	125	1,799	224,830	0	0	0	60	1,009	60,540
2 INCH	303	1	2,196	2,196	96	2,039	195,747	132	2,174	286,939	0	0	0	74	1,708	126,414
3 INCH	35	0	0	0	14	4,655	65,175	7	7,119	49,834	2	108	215	12	5,137	61,642
3/4 INCH	145	140	256	35,893	0	0	0	5	354	1,768	0	0	0	0	0	0
4 INCH	19	0	0	0	11	7,694	84,637	3	27,469	82,407	0	0	0	5	5,892	29,462
5/8 INCH	297	291	235	68,521	5	222	1,111	1	195	195	0	0	0	0	0	0
5/8 X 3/4 INCH	14,550	14,266	247	3,523,797	167	231	38,539	59	333	19,651	0	0	0	58	269	15,602
6 INCH	8	0	0	0	2	25,538	51,076	1	15,037	15,037	0	0	0	5	11,450	57,250
TOTAL	16,436	15,245		3,863,141	554		647,969	396		719,661	2		215	239		361,896
TOTAL WATER USE	5,592,882															

Total Customers  
 residential  
 commercial  
 irrigation meters  
 construction water (hydrant meters)  
 multi family residential

2006

PAGE 1

UTIL BILLING: WATER USE STATISTICS: METER SIZE  
PERIOD COVERED: 01/06 THROUGH 12/06  
CONSTRUCTION WATER (CW) IS INCLUDED IN THIS REPORT

[illegible]

UTIL BILLING: WATER USE STATISTICS: METER SIZE  
PERIOD COVERED: 01/07 THROUGH 12/07  
CONSTRUCTION WATER (CW) IS INCLUDED IN THIS REPORT

[illegible]



UTIL BILLING: WATER USE STATISTICS: METER SIZE  
PERIOD COVERED: 01/08 THROUGH 12/08  
CONSTRUCTION WATER (CW) IS INCLUDED IN THIS REPORT

[illegible]

## CITY OF THOUSAND OAKS

4/23/10  
UTR067UTIL BILLING: WATER USE STATISTICS: METER SIZE  
PERIOD COVERED: 01/09 THROUGH 12/09  
CONSTRUCTION WATER (CW) IS INCLUDED IN THIS REPORT

2009

PAGE 1

METER SIZE	CUST. TOTAL	***** RESIDENTIAL *****			***** COMMERCIAL *****			***** IRRIGATION *****			***** CONSTRUCTION *****			***** COMM MULTI FAMILY *****		
		AVERAGE USE		TOTAL USE	AVERAGE USE		TOTAL USE	AVERAGE USE		TOTAL USE	AVERAGE USE		TOTAL USE	AVERAGE USE		TOTAL USE
		NO. CUST	HCF/ CUST.		NO. CUST	HCF/ CUST.		NO. CUST	HCF/ CUST.		NO. CUST	HCF/ CUST.		NO. CUST	HCF/ CUST.	
UNKNOWN	98	96	176	16,885	2	651	1,301	0	0	0	0	0	0	0	0	0
1 INCH	968	734	466	342,095	141	495	69,781	69	629	43,398	0	0	0	24	421	10,100
1.5 INCH	330	13	726	9,441	130	946	123,008	127	1,521	193,120	0	0	0	60	915	54,913
2 INCH	308	1	2,234	2,234	101	2,005	202,520	132	1,932	255,030	0	0	0	74	1,536	113,680
3 INCH	56	0	0	0	14	5,111	71,552	10	4,963	49,631	20	200	3,996	12	5,885	70,620
3/4 INCH	90	86	292	25,146	0	0	0	4	348	1,390	0	0	0	0	0	0
4 INCH	21	0	0	0	12	7,016	84,187	4	23,736	94,944	0	0	0	5	4,784	23,919
5/8 INCH	177	174	253	44,087	2	355	710	1	138	138	0	0	0	0	0	0
5/8 X 3/4 INCH	14,812	14,529	228	3,317,054	166	217	35,942	59	337	19,860	0	0	0	58	263	15,236
6 INCH	8	0	0	0	2	5,238	10,476	1	25,166	25,166	0	0	0	5	7,828	39,139
TOTAL	16,868	15,633		3,756,942	570		599,477	407		682,677	20		3,996	238		327,607
TOTAL WATER USE	5,370,699															

2010

UTIL BILLING: WATER USE STATISTICS: METER SIZE  
PERIOD COVERED: 01/10 THROUGH 12/10  
CONSTRUCTION WATER (CW) IS INCLUDED IN THIS REPORT

PAGE 1

[illegible]

## **APPENDIX D**

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### **Ordinances and Resolutions**



## **Article 11. Water Conservation**

### **Findings (Uncodified)**

The City Council of Thousand Oaks finds:

- (a) A reliable minimum supply of potable water is essential to the public health, safety and welfare of the people and economy of the southern California region; and
- (b) Southern California is a semi-arid region and is largely dependent upon imported water supplies. A growing population, environmental concerns, and other factors in other parts of the State and western United States, make the region highly susceptible to water supply reliability issues; and
- (c) Careful water management that includes active water conservation measures not only in times of drought, but at all times, is essential to ensure a reliable minimum supply of water to meet current and future water supply needs; and
- (d) Article X, Section 2 of the California Constitution declares that the general welfare requires that water resources be put to beneficial use, waste or unreasonable use or unreasonable method of use of water be prevented, and conservation of water be fully exercised with a view to the reasonable and beneficial use thereof; and
- (e) Article XI, Section 7 of the California Constitution declares that a city or county may make and enforce within its limits all local, police, sanitary, and other ordinances and regulations not in conflict with general laws; and
- (f) California Water Code section 375 authorizes water suppliers to adopt and enforce a comprehensive water conservation program to reduce water consumption and conserve supplies; and
- (g) The adoption and enforcement of a water conservation and supply shortage program is necessary to manage the City's potable water supply in the short and long-term and to avoid or minimize the effects of drought and shortage within the City. Such program is essential to ensure a reliable and sustainable minimum supply of water for the public health, safety and welfare.

Now therefore the City Council of Thousand Oaks does ordain as follows:

### **Sec. 10-2.1101. Conservation Measures Established**

Mandatory water conservation measures are hereby established as set forth in this article.

### **Sec. 10-2.1102. Application**

(a) To the extent authorized by law, this article shall apply to all customers and property within the City and the City's water service area, with no distinction as to whether service is provided by the City or a private water purveyor of potable water that operates water service systems within the City.

(b) The provisions of this article do not apply to uses of water necessary to protect public health and safety or for essential health care or government services such as police, fire and other similar emergency services.

### **Sec. 10-2.1103. General Prohibition: Enforcement, Penalties**

(a) No customer of the City water system or of a water purveyor serving customers within the City shall make, cause, use, or permit the use of potable water in a manner contrary to any provision of this article. Any violation of the use restrictions set forth in this article shall be reported to the City by the water purveyor. Each customer shall be guilty of a separate offense for each day during which such unauthorized use occurred, continued or was permitted.

(b) Any violation of the water use restrictions set forth in this article shall be subject to prosecution and fines and penalties as set forth in Title 1, Chapter 2, Articles 1 and 2 of this code. Furthermore, any violation of the water use restrictions set forth in this article is a public nuisance under TOMC Section 1-6.01 et seq.

(c) Water Flow Restrictors: In addition to any fines or penalties, the City may install a water flow restrictor device for willful violations of mandatory water use restrictions set forth in this article.

(d) Disconnecting Service: In addition to any fines and the installation of a water flow restrictor, the City may disconnect a customer's water service for continued willful violations of mandatory water use restrictions set forth in this article.

(e) Cost of Flow Restrictor and Disconnecting Service: A person or entity that violates this ordinance is responsible for payment of charges for installing and/or removing any flow restricting device and for disconnecting and/or reconnecting service per the City's schedule of charges then in effect. Such charges must be paid to the City before the flow restricting device is removed or the water service is reconnected. Nonpayment will be subject to the same remedies as nonpayment of basic water rates.

**Sec. 10-2.1104. Permanent Water Conservation Requirements: Prohibition Against Waste**

The following water conservation requirements are effective at all times and are permanent. Violations of this section shall be considered waste and an unreasonable use of water.

(a) Limits on Watering Hours: Watering or irrigating of lawn, landscape or other vegetated area with potable water is prohibited between the hours of 9:00 a.m. and 5:00 p.m. on any day, except by use of a hand-held bucket or similar container, a hand-held hose equipped with a positive self-closing water shut-off nozzle or device, or for short periods of time for the express purpose of adjusting or repairing an irrigation system.

(b) Limit on Watering Duration: Watering or irrigating of lawn, landscape or other vegetated area with potable water using a landscape irrigation system or a watering device that is not continuously attended is limited to no more than fifteen (15) minutes watering per day per station. This subsection does not apply to landscape irrigation systems that use highly efficient components such as low volume drip type irrigation, stream rotator sprinklers and/or soil moisture-based or weather-based controllers.

(c) No Excessive Water Flow or Runoff: Watering or irrigating of any lawn, landscape or other vegetated area in a manner that causes or allows excessive water flow or runoff onto an adjoining sidewalk, driveway, street, alley, gutter or ditch is prohibited.

(d) No Washing Down Hard or Paved Surfaces: Washing down hard or paved surfaces, including but not limited to sidewalks, walkways, driveways, parking areas, tennis courts, patios or alleys, is prohibited except when necessary for safety or sanitary purposes, and then only by use of a hand-held bucket or similar container, a hand-held hose equipped with a positive self-closing water shut-off device, a low-volume, high-pressure cleaning machine equipped to recycle any water used, or a low-volume high-pressure water broom. The discharge of pollutants to the storm drain system is prohibited pursuant to section 7-8.201 of this code.

(e) Obligation to Fix Leaks, Breaks or Malfunctions: Excessive use, loss or release of water through breaks, leaks or other malfunctions in the water user's plumbing or distribution system for any period of time after such release of water should have reasonably been discovered and corrected and, in no event more than seven (7) days of receiving notice from the City, is prohibited.

(f) Re-circulating Water Required for Decorative Water Fountains and Features: Operating a water fountain or other decorative water feature that does not use re-circulated water is prohibited.



(g) Limits on Washing Vehicles: Using water to wash or clean a vehicle, including but not limited to any automobile, truck, van, bus, motorcycle, boat or trailer, whether motorized or not is prohibited, except by use of a hand-held bucket or similar container or a hand-held hose equipped with a positive self-closing water shut-off nozzle or device. This subsection does not apply to any commercial car washing facility.

(h) Drinking Water Served Upon Request Only: Eating or drinking establishments, including but not limited to a restaurant, hotel, cafe, cafeteria, bar, or other public place where food or drinks are sold, served, or offered for sale, shall only provide drinking water to any person upon request.

(i) Commercial Lodging Establishments Must Provide Guests Option to Decline Daily Linen Services: Hotels, motels and other commercial lodging establishments must provide customers the option of not having towels and linen laundered daily. Commercial lodging establishments must prominently display notice of this option in each bathroom using clear and easily understood language.

(j) No Installation of Single Pass Cooling Systems: Installation of single pass cooling systems is prohibited in buildings requesting new water service.

(k) No Installation of Non-recirculating Commercial Car Wash and Laundry Systems: Installation of non-recirculating water systems is prohibited in new commercial car wash and new industrial laundry systems.

(l) Restaurants Required to Use Water Conserving Dish Wash Spray Valves: Effective on January 1, 2010, food preparation establishments such as restaurants must use water conserving dish wash spray valves.

(m) Commercial Car Wash Systems: Effective on January 1, 2010, all commercial conveyor car wash systems must have installed operational re-circulating water systems, or must have secured a waiver of this requirement from the City.

#### **Sec. 10-2.1105. Level 1 Water Conservation Measures**

(a) A Level 1 Water Supply Shortage exists when the City Council determines, that due to drought or other water supply conditions, a moderate water supply shortage or threatened shortage exists and a consumer demand reduction is necessary to make more efficient use of water and appropriately respond to existing water conditions. Upon the declaration by the City Council of a Level 1 Water Supply Shortage condition, the City will implement mandatory Level 1 conservation measures identified in this section.

(b) Additional Water Conservation Measures: In addition to the prohibited uses of water identified in Section 10-2.1104, the following water conservation requirements apply during a declared Level 1 Water Supply Shortage:

(1) Limits on Watering Days: Watering or irrigating of lawn, landscape or other vegetated area with potable water is limited to three days per week. During November through March, watering or irrigating of lawn, landscape or other vegetated area with potable water is limited to no more than two days per week. This provision does not apply to landscape irrigation zones that exclusively use very low flow drip type irrigation systems when no emitter produces more than two (2) gallons of water per hour. This provision also does not apply to watering or irrigating by use of a hand-held bucket or similar container, a hand-held hose equipped with a positive self-closing water shut-off nozzle or device, or for short periods of time for the express purpose of adjusting or repairing an irrigation system.

(2) Obligation to Fix Leaks, Breaks or Malfunctions: All leaks, breaks, or other malfunctions in the water user's plumbing or distribution system must be repaired within seventy-two (72) hours of notification by the City unless other arrangements are made with the City.

#### **Sec. 10-2.1106. Level 2 Water Conservation Measures**

(a) A Level 2 Water Supply Shortage exists when the City Council determines, that due to drought or other water supply conditions, a severe water supply shortage or threatened shortage exists and a consumer demand reduction is necessary to make more efficient use of water and appropriately respond to existing water conditions. Upon the declaration by the City Council of a Level 2 Water Supply Shortage condition, the City will implement mandatory Level 2 conservation measures identified in this section.

(b) Additional Conservation Measures: In addition to the prohibited uses of water identified in Sections 10-2.1104 and 10-2.1105, the following additional water conservation requirements apply during a declared Level 2 Water Supply Shortage:

(1) Limits on Watering Days: Watering or irrigating of lawn, landscape or other vegetated area with potable water is limited to two days per week. During November through March, watering or irrigating of lawn, landscape or other vegetated area with potable water is limited to no more than one day per week. This provision does not apply to landscape irrigation zones that exclusively use very low flow drip type irrigation systems when no emitter produces more than two (2) gallons of water per hour. This provision also does not apply to watering or irrigating by use of a hand-held bucket or similar container, a hand-held hose equipped with a positive self-closing water shut-off nozzle or device, or for short periods of time for the express purpose of adjusting or repairing an irrigation system.

(2) Obligation to Fix Leaks, Breaks or Malfunctions: All leaks, breaks, or other malfunctions in the water user's plumbing or distribution system must be repaired within forty-eight (48) hours of notification by the City unless other arrangements are made with the City.

(3) Limits on Filling Ornamental Lakes or Ponds: Filling or re-filling ornamental lakes or ponds with potable water is prohibited, except to the extent needed to sustain aquatic life, provided that such animals are of significant value and have been actively managed within the water feature prior to declaration of a supply shortage level under this article.

(4) Limits on Filling Residential Swimming Pools & Spas: Re-filling of more than one foot and initial filling of residential swimming pools or outdoor spas with potable water is prohibited.

### **Sec. 10-2.1107. Level 3 Water Conservation Measures**

(a) A Level 3 Water Supply Shortage condition is also referred to as an "Emergency" condition. A Level 3 condition exists when the City Council declares a critical water shortage emergency and notifies its residents and businesses that a significant reduction in consumer demand is necessary to maintain sufficient water supplies for public health and safety. Upon the declaration of a Level 3 Water Supply Shortage condition, the City will implement mandatory Level 3 conservation measures identified in this section.

(b) Additional Conservation Measures: In addition to the prohibited uses of water identified in Sections 10-2.1104, 10-2.1105, and 10-2.1106, the following water conservation requirements apply during a declared Level 3 Water Supply Shortage Emergency:

(1) No Watering or Irrigating: Watering or irrigating of lawn, landscape or other vegetated area with potable water is prohibited. This restriction does not apply to the following categories of use:

(i) Maintenance of trees and shrubs, that are watered using a hand-held bucket or similar container, hand-held hose equipped with a positive self-closing water shut-off nozzle or device;

(ii) Maintenance of existing landscape necessary for fire protection;

(iii) Maintenance of existing landscape for soil erosion control;

(iv) Maintenance of plant materials identified to be rare or essential to the well-being of protected species;

(v) Maintenance of landscape within active public parks and playing fields, day care centers, golf course greens, and school grounds, provided that such irrigation does not exceed two days per week in accordance with the time restrictions in Section 10.2-1104;

(vi) Actively irrigated environmental mitigation projects.

(vii) Maintenance of landscaping installed for the purpose of mitigating the effects of stormwater pollution.

(2) Obligation to Fix Leaks, Breaks or Malfunctions: All leaks, breaks, or other malfunctions in the water user's plumbing or distribution system must be repaired within twenty four (24) hours of notification by the City unless other arrangements are made with the City.

(3) No New Potable Water Service: Except for the resetting or turn-on of meters to provide continuation of water service or the restoration of service that has been interrupted for a period of one year or less, no new potable water service will be provided, no new temporary meters or permanent meters will be provided, and no statements of immediate ability to serve or provide potable water service (such as, will-serve letters, certificates, or letters of availability) will be issued, except under the following circumstances:

(i) A valid, unexpired building permit has been issued for the project; or

(ii) The project is necessary to protect the public health, safety, and welfare; or

(iii) The applicant provides substantial evidence of an enforceable commitment that water demands for the project will be offset prior to the provision of a new water meter(s) to the satisfaction of the City.

(4) Limits on Building Permits: The City will limit or withhold the issuance of building permits which require new or expanded water service, except to protect the public health, safety and welfare, or in cases which meet the City's adopted conservation offset requirements.

(5) Discontinue Service: The City may discontinue service to consumers who willfully violate provisions of this section.

#### **Sec. 10-2.1108. Procedures for Determination: Notification of Water Supply Shortage**

Declaration and Notification of Water Supply Shortage: The existence of Level 1, Level 2 or Level 3 Water Supply Shortage conditions shall be declared by resolution of the City Council adopted at a regular or special public meeting held in accordance with State law.

#### **Sec. 10-2.1109 Hardship Waiver**

(a) Undue and Disproportionate Hardship: If, due to unique circumstances, a specific requirement of this chapter would result in undue hardship to a person using water or to property upon which water is used, that is disproportionate to the impacts to

water users generally or to similar property or classes of water users, then the person may apply for a waiver to the requirements as provided in this section.

(b) Written Finding: The waiver may be granted or conditionally granted only upon a written finding of the existence of facts demonstrating an undue hardship to a person using water or to property upon which water is used, that is disproportionate to the impacts to water users generally or to similar property or classes of water use due to specific and unique circumstances of the user or the user's property.

(1) Application: Application for a waiver must be on a form prescribed by the City and accompanied by a non-refundable processing fee in an amount set by City Council resolution.

(2) Supporting Documentation: The application should include photographs, maps, drawings, and other information, including a written statement of the applicant.

(3) Required Findings for Waiver: An application for a waiver will be denied unless the City finds, based on the information provided in the application, supporting documents, or such additional information as may be requested, and on water use information for the property as shown by water use records, all of the following:

(i) That the waiver does not constitute a grant of special privilege inconsistent with the limitations upon other residents and businesses;

(ii) That because of special circumstances applicable to the property or its use, the strict application of this chapter would have a disproportionate impact on the property or use that exceeds the impacts to residents and businesses generally;

(iii) That the authorizing of such waiver will not be of substantial detriment to adjacent properties, and will not materially affect the ability of the City to effectuate the purpose of this chapter and will not be detrimental to the public interest; and

(4) Approval Authority: The Public Works Director must act upon any completed application no later than fourteen (14) days after submittal and may approve, conditionally approve, or deny the waiver. The applicant requesting the waiver must be promptly notified in writing of any action taken. Unless specified otherwise at the time a waiver is approved, the waiver will apply to the subject property during the period of the mandatory water supply shortage condition.

#### **Sec. 10-2.1110. Additional Water Conservation Measures**

The City Council upon adoption of a resolution may implement additional water conservation measures in addition to the prohibited uses of water identified in Sections 10-2.1104, 10-2.1105, 10-2.1106 and 10-2.1107.



RESOLUTION NO. 2007-116

A RESOLUTION OF THE CITY COUNCIL OF THE  
CITY OF THOUSAND OAKS ADOPTING REVISED  
GUIDELINES AND STANDARDS FOR LANDSCAPE  
PLANTING AND IRRIGATION PLANS AND  
RESCINDING RESOLUTION NO. 93-74

WHEREAS, the City of Thousand Oaks seeks to improve the physical, social, economic and aesthetic environment by proper design and construction of landscape appurtenant to residential, commercial, industrial, and institutional development; and

WHEREAS, landscaping, to be fully appropriate, effective, and have long-term viability, must be designed into the project from the beginning of the design effort; and

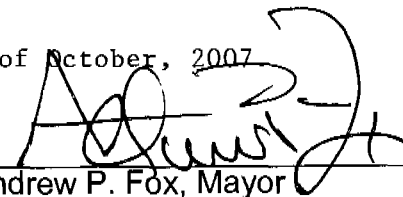
WHEREAS, appropriate designed landscaping contributes to the beauty and well-being in the City and said landscaping (xeriscape) should be designed with the need to conserve water within the community; and

NOW, THEREFORE, the City Council of the City of Thousand Oaks does resolve as follows:

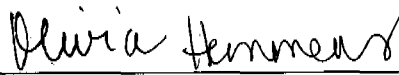
1. Council Resolution No. 93-74 is hereby rescinded and superseded by this resolution.
2. The attached "Guidelines and Standards for Landscape Planting and Irrigation Plans" (Attachment A) are hereby adopted.
3. All new and remodeled developments which require a development permit, major modification, or other entitlement pursuant to Title 9 of the Municipal Code, shall be landscaped to include planting, irrigation system and maintenance of said landscaping improvements in accordance with the attached "Guidelines and Standards for Landscape Planting and Irrigation Plans".

\*\*\*\*\*

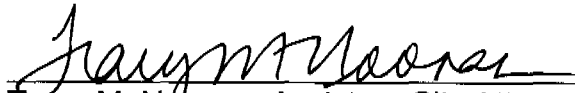
PASSED AND ADOPTED THIS 23rd day of October, 2007

  
\_\_\_\_\_  
Andrew P. Fox, Mayor  
City of Thousand Oaks, California

ATTEST:

  
\_\_\_\_\_  
for Linda D. Lawrence, City Clerk

APPROVED AS TO FORM:  
Office of City Attorney

  
Tracy M. Noonan, Assistant City Attorney

APPROVED AS TO ADMINISTRATION:

  
Scott Mitnick, City Manager

#### CERTIFICATION

STATE OF CALIFORNIA       )  
COUNTY OF VENTURA       ) SS.  
CITY OF THOUSAND OAKS    )

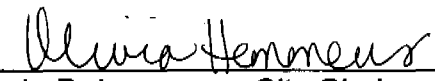
I, LINDA D. LAWRENCE, City Clerk of the City of Thousand Oaks, DO  
HEREBY CERTIFY that the foregoing is a full, true, and correct copy of Resolution  
No. 2007-116, which was duly and regularly passed and adopted by said City  
Council at a regular meeting held October 23 2007, by the following vote:

AYES:     Councilmembers Gillette, Bill-de la Peña, Glancy, Irwin and Mayor Fox

NOES:     None

ABSENT: None

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the  
official seal of the City of Thousand Oaks, California.

  
for Linda D. Lawrence, City Clerk  
City of Thousand Oaks, California



## **ATTACHMENT A**

### **GUIDELINES AND STANDARDS FOR LANDSCAPE PLANTING AND IRRIGATION PLANS**

These Guidelines and Standards govern the submittal and review of landscape and irrigation plans for development projects approved by the City of Thousand Oaks.

#### **A. LANDSCAPE PLAN SUBMITTAL PACKAGE - APPLICATION REQUIREMENTS**

1. The landscape plan submittal package shall be submitted to the Community Development Department for review prior to the release of the Building Permit. The plans are required for commercial, industrial, institutional and residential developments per specific conditions of project approval. Plans are to be prepared by a California Registered Landscape Architect (or other state licensed design professional working within the usual and customary scope of their license as approved by the Director of Community Development). Installation of the approved planting and irrigation systems shall be completed prior to issuance of the Certificate of Occupancy.
2. A preliminary design meeting with the Departments of Community Development and Public Works is recommended prior to plan submittal to familiarize the applicant and/or their landscape architect with the City's Landscape Plan Review Process (Exhibit "A") and to review specific conditions of project approval, grading concept, parking lot lighting concept, schematic planting design concept and specific requirements of public maintained areas and maintenance districts. The applicant should prepare a schematic planting plan and irrigation concept statement for discussion at this meeting.
3. Each landscape plan submittal package shall include the following:
  - a. Filing Fee and Deposit with Executed Copy of Agreement for Payment (attached).
  - b. Planting and Irrigation Plans, Details and Written Specifications - Four (4) copies
  - c. Approved Site Plan with Vicinity Map, Grading Plan, Architectural Elevation Plans, Parking Lot Lighting Concept (one copy each), Oak Tree Report (if required).

- d. City Document (Resolution or Approval Letter) of Project Approval, with the Conditions of Approval (one copy each)
4. Plan sets must be folded individually to a maximum size of 8-1/2" by 13". The Community Development Department will route plans and coordinate review comments from the Department of Public Works and the Ventura County Environmental Health Division to review plans for backflow protection.
5. All drawings shall be accurately and clearly drawn at a scale appropriate with the size and scope of the project. Plans shall be drawn on sheets no larger than 30" x 42" and at a scale no smaller than 1" = 20 feet, unless waived by the Director of Community Development.
6. The plans shall include the name, address and telephone number of both the project applicant and firm or individual who prepared the plan. Also, the project's entitlement identification number shall be included (i.e., DP-\_\_\_\_\_, SUP-\_\_\_\_\_, RPD-\_\_\_\_\_, Tract \_\_\_\_\_, OTP-\_\_\_\_\_).
7. Plans shall include graphic scale, north arrow, utilities (i.e., electrical transformer boxes, domestic water backflow units, irrigation controller boxes, etc.), property lines, street names, walls, fences, gates, recirculating water features, street/outdoor furniture, buildings and structures, fire hydrants, top and toe of slopes, walkways, disabled path of travel, bike paths, paved areas, easements, existing vegetation and its disposition, street lighting, parking lot lighting, and the parking layout including striping and curbs. Immediately adjacent building outlines including roof overhangs and major plantings on adjacent properties shall also be shown.
8. After final approval has been made, the applicant will submit to the Community Development Department one set of the approved plans on a reproducible 24" x 36" mylar transparency for the City files to complete the plan approval process. (Plans may be photo-reduced from original 30" x 42" size).
9. Specific recommendations of an independent agricultural (soil) fertility laboratory shall be incorporated into the plan notes and specifications.
10. The Landscape Architect of record will be required to provide to the City, prior to issuance of a Certificate of Occupancy for the project buildings, a Landscape Certification in the form set forth in attached Exhibit "B", stating that the entire installation was made in conformance with the approved plans and that the irrigation system has been tested. Prior to the submittal of the Landscape Certification, a walkthrough inspection with the Landscape Architect of record and City inspector will be conducted and a

punch list, if necessary, generated. The City's landscape consultant and the Public Works Department inspector will review any comments included in the Landscape certification and verify compliance of the landscape installation with City requirements. Any proposed changes to the planting or irrigation during landscape installation must be reported in writing for approval to the Community Development Department by the Landscape Architect of record at least two (2) working days prior to implementation.

## B. PLANTING PLANS

1. Landscape planting is required for erosion control, security screening for barrier purposes, fire clearance zones, screening, solar control, etc., as well as for design continuity and aesthetic enhancement of the individual site and its surrounding area.
2. Drought tolerant plant materials and low water use principles (xeriscape) shall be provided in all projects. Information regarding low water usage plants is available from the City of Thousand Oaks Community Development and Public Works Departments. Plant factors as referenced in the WULCOLS Project (Water Use Classification of Landscape Species), University of California Cooperative Extension shall be used.
3. Plants having similar water use shall be grouped together in distinct hydrozones. "Hydrozones" means a portion of the landscape area having plants with similar water needs that are served by one irrigation valve or a set of valves. The plants in each hydrozone shall have "plant factors" ranging within one water use category. For purposes of this resolution, the average plant factor of very low water using plants is less than 0.1, for low water using plants the range is from 0.1 to 0.3, for moderate water using plants the range is 0.4 to 0.6 and for high water using plants the range is 0.7 to 0.9 as referenced in the WULCOLS Project. The design goal is for the overall site to average a plant factor of 0.5.
4. Plant materials shall be capable of healthy growth in their specific location and capable of producing the desired effect at maturity without causing maintenance problems (i.e., damage to structures, garden walls, curbs, sidewalks, etc.). Small trees (under 20 feet) and narrow-upright trees shall be used where space is limited. Medium trees (20 to 40 feet) and large trees (over 40 feet) shall be used where space is unrestricted. Plant selection must provide adaptable, wind tolerant, frost-hardy and heat resistant species with the ability to survive winter frost conditions (recorded lows of below 15° F) and summer high temperatures (100° F plus) within the Conejo Valley. The average Evapotranspiration rate (ET<sub>o</sub>) in Thousand Oaks is 51 inches per year.

The following chart indicates the normal monthly ETo rates for Thousand Oaks:

Month	ETo	%	Month	ETo	%
January	2.2	4%	July	6.7	13%
February	2.7	5%	August	6.4	12%
March	3.5	7%	September	5.4	11%
April	4.5	9%	October	3.9	8%
May	5.4	10%	November	2.6	5%
June	5.9	12%	December	2.0	4%

5. Planting symbols shall be clearly drawn and individual plant locations shown by full botanic name and optional common name. Abbreviations (3 letter minimum) may be used, but a plant legend must be included on each sheet. Numeric or graphic definition alone is not acceptable. Container size and quantities shall be clearly indicated for each group of plants, and each plant shall be located individually per example. Masses of the same variety of shrubs used as ground covers may be shown without individual locations, but an accurate graphic representation of the mature growth of the plant must be depicted. Sizes of plants at planting time should be appropriate to meet specific conditions of approval and should consider scale of the project.

EXAMPLE:

	QUERCUS AGRIFOLIA COAST LIVE OAK	3 24" BOX
	RAPHIOLEPIS INDICA INDIAN HAWTHORN	13 5 GAL.
	AGAPANTHUS AFRICANUS NILE LILY	25 1 GAL. (24"O.C.)

6. Planting plans may include design elements such as boulders, mounds, signs, sculpture, etc. All items shall be indicated as to the size (at half maturity in case of trees) and in scale with the proposed project. Street trees, including those off-site which overhang the subject property, shall be shown to the satisfaction of the Public Works Department.
7. All trees on site that are required by the project entitlement to be preserved, and all off-site trees within one hundred feet of construction

that are healthy and vigorous specimens of trees protected by City regulations (including Resolution 70-45, and Chapters 14 (Oak Trees) and 24 (Landmark Trees) of Title 5 of the Municipal Code) shall be shown on both planting and irrigation plans with their base elevation, trunk diameter, and dripline noted accurately. Additional trees may be required to be protected as directed by the specific project conditions. Additional information including sections may be required for review prior to final approval. The area within the dripline and protected zone of these trees shall remain undisturbed by grading, ornamental plantings, irrigation and/or trenching unless specifically noted on the approved landscape plans. Any existing oak trees (*Quercus* varieties) where grading and/or construction have been authorized within the protected zone shall require a separate report and/or oak tree encroachment permit in accordance with the Municipal Code Section 5-14.01 et. seq.

8. Fuel modification zones (brush clearance areas) between structures and natural hillside areas shall be planted and irrigated appropriately to create a fire zone "greenbelt". The preservation of native specimen plants to minimize the visual impact of brush clearance in fuel modification zones is required. Contact the Community Development Department for information regarding Fire Zones and for fire clearance condition requirements.
9. Details shall be provided for all facets of the planting plan (i.e., planting pits, tree staking and guying, container on slopes).
10. Temporary graded pads shall have soil binder and/or temporary planting and irrigation applied and maintained until development occurs as required by the project conditions of approval.

#### C. IRRIGATION PLANS

1. The irrigation design shall provide optimum coverage and sufficient water required for the continued healthy growth of all proposed plantings in each hydrozone with a minimum of waste or overspray on adjoining areas. Use of water conservation principles shall be provided through the use of low gallonage sprinkler heads, drip irrigation systems, soil moisture sensing devices, rain sensing override devices, multiple scheduling controllers with repeat cycles, etc. Information about the efficient use of landscape watering may be obtained from the City of Thousand Oaks Community Development and Public Works Departments.
2. Irrigation plans shall be drawn in a legible manner, separate from, but at the same scale as the planting plan. Plans shall be accurate, including, but not limited to the following:

- a. Design operating pressure (psi) as well as static pressure (contact water purveyor). Hydraulic calculations may be required for perceived water pressure problem areas.
  - b. Point of connection - point of supply including location and size of water meter. A landscape water monitor is recommended for the project if a separate water meter is not provided for the landscape irrigation system.
  - c. Backflow protection (as approved by Ventura County Environmental Health Division and the City) - high point in the system shall be noted unless a reduced pressure backflow device is utilized.
  - d. Flow rates (gallons per minute) for each valve station on the plan.
  - e. Location, type and size of all components of the irrigation system, including automatic controllers, main and lateral lines, valves, irrigation heads, tensiometers, rain sensing devices, quick couplers and backflow devices. Mow strips or other separation of lawn and ground cover areas, top and toe of all slopes and trunk locations of existing plant material shall also be noted on the irrigation plan.
3. All equipment shall be designed for installation per manufacturer's recommendations, Uniform Plumbing Codes and all local regulations for approval of the Community Development Department. A plumbing permit shall be obtained from the Building Division of the Community Development Department prior to installation.
  4. The legend shall include symbol manufacturer, type irrigation equipment, model number, radius/diameter coverage, pounds per square inch (P.S.I.) demand, gallons per minute (G.P.M.) demand, installation detail reference and any remarks or special notes.

**EXAMPLE:**

Symbol	Manufacturer	Radius/		#	Diameter	PSI	GPM	Detail
		Type	Model					
v	Rainspray	Shrub	192-S		10'	20	1.5	B
☼	Femco	Valve	RC-77					C

5. Landscape materials which require different watering needs shall be irrigated by separate control valves (i.e. sun/full shade, level areas/sloped areas, street trees, hydrozones such as ground cover and lawn areas, etc.). Proper irrigation equipment and schedules, including features such

as repeat cycles, shall be used to closely match application rates to soil infiltration rates therefore minimizing runoff. Separate control valves shall be used for top and toe of slopes and contour alignments.

6. Sprinklers shall not throw water off of the property or onto public areas and non-planted areas. Anti-drain (check) valves shall be installed in strategic points to minimize or prevent low-head drainage. Heads and emitters shall have consistent application rates within each control valve circuit. Sprinkler heads shall be selected for proper area coverage, application rate, operating pressure, adjustment capability and ease of maintenance.
7. An automatic irrigation system and low water use principles must be provided for all landscape areas including an overhead spray system in fuel modification zones (brush clearance areas) except where otherwise allowed by the Grading Ordinance (Municipal Code Section 7-3.24(c)).
8. Details shall be provided for the installation of all equipment on the irrigation plan.
9. All plastic (PVC) mainline piping (pressure line) requires placement not less than eighteen inches (18") below final grade, with lateral lines (non-pressure) requiring twelve inches (12"). Galvanized or ultra-violet resistant lines on slopes areas may be installed above grade per manufacturer's recommendation and approval of the Community Development Department. Mainline pipe above grade must be galvanized. Plastic (PVC) pipe shall be installed below grade on all City maintained slopes. Drip irrigation pipe shall be installed underground in level areas with distribution lines at grade.
10. Reclaimed water irrigation systems (dual distribution systems) shall be required where reclaimed water is available or will be available in the foreseeable future. The reclaimed water irrigation system shall be designed and operated in accordance with all local, county and state codes. Groundwater may be utilized, where available, when approved by the authorizing agency. The distribution system(s) for reclaimed water or groundwater shall be separate from the domestic water system. Where groundwater and domestic water may both be used for landscape irrigation, the domestic system must be adequately protected with cross connection control devices.

#### D. LANDSCAPE STANDARDS

1. Proposed plant materials, landscape features and elements shall be generally reflective of and compatible with the natural setting and scenic beauty of the City of Thousand Oaks. Plant material should relate to

architectural design elements of the structures on the site and should be compatible with the character of the existing landscape planting on adjacent sites. Minimum landscape standards including site landscape coverage, planter widths and required setback perimeter planting shall be in accordance with the conditions of project approval, and applicable standards of the Zoning Ordinance (Chapter 4 of Title 9 of the Thousand Oaks Municipal Code).

2. Water conservation through the use of appropriate horticultural practices shall be provided for in all landscape designs. Lawn areas shall be minimized and in no case exceed fifteen percent (15%) of the landscape area, unless approved for a specific recreational area use (i.e. sports fields, picnic areas, etc.). A drought tolerant and low water usage variety of grass must be specified. Lawn area shall not exceed a 4:1 slope and shall be separated from ground cover areas. A special condition of project approval for model homes requires the distribution of low water usage landscaping literature within the model home and interpretative signage in the model home yards to explain the design, installation and maintenance of low water usage landscaping and irrigation practices. If landscaping of production homes is provided by the developer, low water usage is required.
3. Landscaping, including rooted cutting ground cover, hydromulch, 1, 5 and 15 gallon shrubs and 15-gallon, 24-inch and 36-inch box trees shall be required in landscape planters throughout the project and located to soften the visual impact of the buildings, parking areas and graded slopes. Relative quantities of plant sizes may change according to variables (i.e., space, location, and shape etc.) but a reasonable mixture of one-third (1/3) 1 gallon shrubs and two-third (2/3) 5 and 15 gallon shrubs and two-third (2/3) 15 gallon trees and one-third (1/3) box containers for specimen trees shall be provided, subject to the approval of the Community Development Department.
4. Manufactured slopes and disturbed areas shall be permanently irrigated and landscaped with drought tolerant plant materials in accordance with the Grading Ordinance (Municipal Code section 7-3.24). All slope areas shall be planted with rooted cutting ground cover or hydromulch, shrubs and trees. Relative quantities of these plants may change according to variables (i.e. space, location and slope, etc.) but a reasonable mixture of two-third (2/3) 1-gallon shrubs and one-third (1/3) 5-gallon shrubs and two-third (2/3) 5-gallon trees and one-third (1/3) 15-gallon trees shall be provided subject to the approval of the Community Development Department or specific conditions of project approval. There shall be a minimum of one (1) tree for every 500 square feet of slope area. If rooted cuttings are utilized as ground cover, there shall be one (1) shrub for every 300 square feet of slope area. If permanent ground cover is applied as a



hydromulch, there shall be a minimum of one (1) shrub for every 125 square feet of slope area and one (1) tree for every 300 square feet of slope area.

5. All manufactured slopes and fuel modification zones adjacent to open space areas shall be landscaped primarily with drought tolerant, "native compatible" plant materials including tree clusters, shrubs, ground cover or hydromulch in accordance with the Grading Ordinance (Municipal Code Section 7-3.24) and the requirements of the Ventura County Fire Protection District in order to provide an acceptable transition between residential, commercial and industrial plantings and existing natural vegetation patterns.
6. Evergreen trees shall be used to frame building elevations or other structural elements that serve to visually interrupt expansive facades. Specific conditions of project approval require the installation of evergreen trees for the screening of project components including but not limited to alley ways, loading zones, parking areas and exposed grading slopes that may result in adverse visual impacts and objectionable views into the project from adjacent properties and public streets. A majority of trees shall be broadleaf evergreen varieties and no more than forty percent (40%) of any tree planting scheme may be deciduous varieties unless previously approved by the Community Development Department.
7. Deciduous trees shall be used to veil building elevations and be interspersed with evergreen trees for solar control in summer and winter, fall color, seasonal flower color and other desirable accent effects. Solar control shall be achieved through the strategic location of deciduous plant material for shading of structures and paved areas for temperature reduction during summer months, maximum sun penetration for structures during the winter season and maximum sun exposure for solar panels in accordance with the applicable California law.
8. Street trees shall be determined and spaced in accordance with the City of Thousand Oaks Forestry Master Plan but not less than one (1) tree per residential lot and two (2) trees per corner residential lot with a spacing not to exceed forty feet (40'). Installation of street trees shall include a root barrier for root control and be planted in accordance with the applicable standards for street tree planting in the Road Design and Construction Standards of the Department of Public Works. Trees shall not be planted closer than five feet (5') from any water meter, public sidewalk or walkway, except where tree wells or parkways are provided in the sidewalk area. Trees shall not be located closer than ten feet (10') from any driveway, wastewater lateral, utility pole or fire hydrant and twenty feet (20') from street light standards and curb returns at street intersections.

9. Street medians and parkways within public right-of-ways including scenic highways, as defined and adopted in the Scenic Highways Element of the General Plan shall provide landscape planting and other landscape architectural features in accordance with the Thousand Oaks Forestry Master Plan and Article 9 of Chapter 7 of the Thousand Oaks Municipal Code (Landscaping Provisions in Public Rights-of-Way). Street signage shall be identified in street medians in accordance with requirements of the Department of Public Works through the incorporation of a standard streetscape theme to include the installation of one (1) oak tree (*Quercus agrifolia*) with a minimum thirty-six (36") box size in a location ten feet (10') to the rear of each street monument sign. Planting design of all major streets shall seek to create spaces where oak trees (*Quercus agrifolia* and *Quercus lobata*) can be used as a major thematic tree.
10. Landscape areas adjacent to public and private streets in commercial and industrial areas shall provide a minimum of one (1) tree for each three hundred (300) square feet of required landscape area and a minimum grouping of three (3) trees for each required front yard and corner side yard setback area. Tree species within required front yard and corner side yard landscape areas must complement and achieve design continuity (i.e., form, size, texture, etc.) with the existing native Broadleaf Forest and Woodland (Coast Live Oak and Valley Oaks) and street tree species as identified in the City of Thousand Oaks Forestry Master Plan.
11. Parking lot landscaping shall provide one (1) tree for each landscape finger planter in single loading parking bays and two (2) trees for each landscape finger planter in double loaded parking bays. A minimum of one (1) tree shall be installed within a tree well or planter area of the parking lot for every ten (10) single or double row parking spaces.

For roof parking lots, container planters shall be provided as required by Section 9-4.2505.5 of the Municipal Code (Parking structures: General design guidelines). Tree wells shall be a minimum of four (4) square feet (excluding curbs). Additional trees shall be installed in parking lot planter areas to achieve an ultimate minimum tree canopy shadow coverage of fifty (50%) percent for solar control of paved areas within fifteen (15) years of installation.

12. Sight distances for motorists and pedestrian safety shall be maintained in all landscape designs through the use of low-growing plant material and the proper placement of trees and parking lot light standards. Shrubs and ground covers separated from structures in front landscape areas, parking lot areas and street medians shall be designed to attain an ultimate untrimmed height of approximately thirty inches (30") so that pruning will not be necessary. Sight visibility shall be provided for street monument signs in medians and at all intersections of public streets, driveway entries

and end parking lot planters in accordance with the criteria specified within applicable standards for sight distances in the Road Design and Construction Standards of the Public Works Department.

13. Physically handicapped accessibility to buildings including the design of pedestrian walks, hardscape features and location of plant material shall be provided in accordance with Title 24, Part 2 of California Administrative Code and applicable Municipal Code regulations.
14. Vines and/or espaliers may be required on/or adjacent to garden and utility wall surfaces to visually soften walls, screen trash enclosures and public utilities and to discourage graffiti. Wide landscape areas may utilize shrubs and trees in lieu of vines and espaliers for screening.
15. Mounding and/or a screen wall including subordinate use of special landscape treatment with an undulating height to forty-two inches (42") shall be provided for all landscape planters between parking lots and public streets and said earthen mounding and/or screen wall shall be noted on both the landscape and grading plan. Special design treatment shall be required when the parking lot area is elevated above the adjacent public sidewalk or street to avoid automobile headlight glare onto roads and to screen unsightly views of automobile undercarriages. Specific design of mounding and/or screen wall including landscape planting shall be subject to the approval of the Community Development and Public Works Departments.
16. A concrete curb with a height of six inches (6") shall be installed to enclose all landscape planters in accordance with {Municipal Code Section 9-4.2404(e). A slough wall with a minimum height of six inches (6') shall be installed at the toe of all slopes adjacent to a sidewalk or walkway except where a flat area (5' minimum width and 5% or less gradient) abuts a public sidewalk or walkway. All construction materials shall be subject to the review and approval of the Community Development Department.

#### E. LANDSCAPE MAINTENANCE PROGRAM

1. Approved landscaping shall be permanently maintained in accordance with Section 1-6.01(e) of the City of Thousand Oaks Municipal Code (Maintenance of Property).
2. The standard Post-Maintenance Guidelines Note as referenced in Exhibit "C" shall be included on all landscape plans.
3. Any redesign or alteration of an existing project landscaping shall be subject to approval of the Community Development Department and shall

be accomplished through the review and approval of a Landscape Plan Check application.

**F. WAIVER OR AMENDMENT**

Any provision of these Guidelines and Standards may be waived by the Planning Commission or City Council in their review of an entitlement application. Any amendment to these Guidelines and Standards shall be accomplished by a Resolution of the City Council.

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## EXHIBIT "A"

### CITY OF THOUSAND OAKS COMMUNITY DEVELOPMENT DEPARTMENT LANDSCAPE PLAN REVIEW PROCESS

#### 1. PRELIMINARY DESIGN MEETING

Preliminary Design Meeting with applicants after project approval and prior to building permits.

##### A. PARTICIPANTS

1. Case Planner and City's Landscape Consultant
2. Public Works Representative
3. Building Division Representative
4. Applicant's Team, including Applicant, Landscape Architect, Architect, Civil Engineer, et. al.

##### B. PURPOSE

The Preliminary Design meeting is to review:

1. Conditions of Approval relative to landscape
2. Grading concept relative to landscape
3. The approved site plan
4. Lighting concept relative to landscape
5. Maintenance district/public areas (street trees)
6. Any area of specific concerns to the applicant or the City. Applicant should prepare a schematic planting and irrigation concept statement for discussion at this meeting

#### 2. LANDSCAPE PLAN SUBMITTAL "FIRST SUBMITTAL"

##### A. Complete submittal per the resolution including:

1. Planting and Irrigation Plans
2. Details and Written Specifications
3. City Document (Resolution or Approval Letter) of Project Approval
4. Approved site and Grading Plan
5. Approved Architectural Elevation Plans
6. Parking Lot Lighting Concept
7. Oak and/or Landmark Tree Report (if required for project)

- B. Submittals will be to the attention of the Case Planner. The City's Landscape Consultant will check submittal for completeness and distribute plans to other Departments. Incomplete submittals will be returned to the applicant by the Case Planner.
- C. Review is specific to project and conditions of approval. The City's Landscape Consultant reviews the plan check with the Case Planner.

### 3. REVIEW TIME

- A. Review time is 2-4 weeks depending on size of project.
- B. Plan check comments are on the submittal to be returned to the applicant through the case planner.

### 4. LANDSCAPE PLAN SUBMITTAL "RESUBMITTAL"

- A. If all plan check requirements are acceptable and plans are revised accordingly.
  - 1. Return the plan check and revised plans to the case planner for review.
  - 2. The case planner will obtain signatures from other Departments.
  - 3. Review time is approximately 1 week.
- B. If some plan check comments are unacceptable and/or need discussion, a meeting will be scheduled with the Applicant, Case Planner and the City's Landscape Consultant.
  - 1. The Case Planner will obtain signatures from all Departments when plan is approvable.
  - 2. Review time is 1-2 weeks depending on size of project, and extent of first submittal revisions.

### 5. FINAL APPROVAL

Final plan approval is given when mylar transparencies of the stamped plans are received at the Community Development Department.

EXHIBIT "B"

LANDSCAPE CERTIFICATION

PROJECT NAME:

TRACT NUMBER:

PERMIT NUMBER:

APPLICANT:

I certify that the landscape planting and irrigation was installed in compliance with the approved plans and specifications with the following exceptions itemized below (or on additional attached sheets).

SIGNED:

DATE:

(Landscape Architect of Record)

LICENSE NUMBER:

PRINT NAME:

FIRM NAME:

ADDRESS:

TELEPHONE: (      )

SIGNED:

DATE:

(Landscape Contractor of Record)

LICENSE NUMBER:

PRINT NAME:

FIRM NAME:

ADDRESS:

TELEPHONE: (      )

## EXHIBIT "C"

The following statement shall be shown on the Planting Plan:

### POST-MAINTENANCE GUIDELINES

1. Any alterations or modifications to the landscape must be approved by the City of Thousand Oaks Community Development Department.
2. Control all harmful diseases and pests. All chemical applications must be per state licensed advisors and applicators.
3. Pruning shall be done for removal of deadwood, cross-branching, etc., per International Society of Arboriculture standards (ISA). Plants shall never be sheared unless specified on the approved plan. Trees are to be allowed to grow to the designed size and to provide maximum shading of paved areas. Topping of trees is not an acceptable pruning method. Tree stakes and ties shall be removed after the roots become established to prevent girdling of the trunk from tight tree ties.
4. Water shall be applied for optimum plant growth with minimal runoff and overspray.
5. Program controllers per current California Irrigation Management Information Systems (CIMIS) data.
6. Always replace irrigation equipment and heads with manufacturer or one of equal matching precipitation rates.



## **APPENDIX E**

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**California Urban Water Conservation Council Annual Report 2007/2008**

**Water Supply & Reuse**

Reporting Unit:

Year:

**City of Thousand Oaks****2006****Water Supply Source Information**

Supply Source Name	Quantity (AF) Supplied	Supply Type
Calleguas Municipal Water District	13203.2	Imported
City Irrigation Wells	866	Groundwater

**Total AF: 14069.2**

Reported as of 5/24/10

**Accounts & Water Use**

Reporting Unit Name:	Submitted to CUWCC	Year:
<b>City of Thousand Oaks</b>	<b>11/07/2006</b>	<b>2006</b>

What is the reporting year?	Fiscal	Month Ending	June
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**A. Service Area Population Information:**

1. Total service area population	50000
----------------------------------	-------

**B. Number of Accounts and Water Deliveries (AF)**

Type	Metered		Unmetered	
	No. of Accounts	Water Deliveries (AF)	No. of Accounts	Water Deliveries (AF)
1. Single-Family	15101	8961.4	0	0
2. Multi-Family	388	787.1	0	0
3. Commercial	461	820.4	0	0
4. Industrial	18	28.4	0	0
5. Institutional	84	505.4	0	0
6. Dedicated Irrigation	420	1766	0	0
7. Recycled Water	0	0	0	0
8. Other	0	0	0	0
9. Unaccounted	NA	1200.5	NA	0
<b>Total</b>	16472	14069.2	0	0

**Metered****Unmetered**

Reported as of 5/24/10

## BMP 01: Water Survey Programs for Single-Family and Multi-Family Residential Customers

Reporting Unit: **City of Thousand Oaks**      BMP Form Status: **100% Complete**      Year: **2006**

### A. Implementation

1. Based on your signed MOU date, 12/03/1991, your Agency STRATEGY DUE DATE is: 12/02/1993
2. Has your agency developed and implemented a targeting/marketing strategy for SINGLE-FAMILY residential water use surveys? no
  - a. If YES, when was it implemented? 00/00/0000
3. Has your agency developed and implemented a targeting/marketing strategy for MULTI-FAMILY residential water use surveys? no
  - a. If YES, when was it implemented?

### B. Water Survey Data

Survey Counts:	Single Family Accounts	Multi-Family Units
1. Number of surveys offered:	0	0
2. Number of surveys completed:	0	0

#### Indoor Survey:

3. Check for leaks, including toilets, faucets and meter checks no no
4. Check showerhead flow rates, aerator flow rates, and offer to replace or recommend replacement, if necessary no no
5. Check toilet flow rates and offer to install or recommend installation of displacement device or direct customer to ULFT replacement program, as necessary; replace leaking toilet flapper, as necessary no no

#### Outdoor Survey:

6. Check irrigation system and timers no no
7. Review or develop customer irrigation schedule no no
8. Measure landscaped area (Recommended but not required for surveys) no no
9. Measure total irrigable area (Recommended but not required for surveys) no no
10. Which measurement method is typically used (Recommended but not required for surveys) None
11. Were customers provided with information packets that included evaluation results and water savings recommendations? no no
12. Have the number of surveys offered and completed, survey results, and survey costs been tracked? no no
  - a. If yes, in what form are surveys tracked? None
  - b. Describe how your agency tracks this information.

### C. "At Least As Effective As"

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? No
  - a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

### D. Comments

This BMP is not cost effective to implement.

Reported as of 5/24/10

**BMP 02: Residential Plumbing Retrofit**

Reporting Unit:	BMP Form Status:	Year:
<b>City of Thousand Oaks</b>	<b>100% Complete</b>	<b>2006</b>

**A. Implementation**

1. Is there an enforceable ordinance in effect in your service area requiring replacement of high-flow showerheads and other water use fixtures with their low-flow counterparts? no
  - a. If YES, list local jurisdictions in your service area and code or ordinance in each:
  
2. Has your agency satisfied the 75% saturation requirement for single-family housing units? no
3. Estimated percent of single-family households with low-flow showerheads: 35%
4. Has your agency satisfied the 75% saturation requirement for multi-family housing units? no
5. Estimated percent of multi-family households with low-flow showerheads: 7%
6. If YES to 2 OR 4 above, please describe how saturation was determined, including the dates and results of any survey research.

**B. Low-Flow Device Distribution Information**

1. Has your agency developed a targeting/ marketing strategy for distributing low-flow devices? no
  - a. If YES, when did your agency begin implementing this strategy? 00/00/0000
  - b. Describe your targeting/ marketing strategy.  
  
Distribute upon request.

<b>Low-Flow Devices Distributed/ Installed</b>	<b>SF Accounts</b>	<b>MF Units</b>
2. Number of low-flow showerheads distributed:	50	0
3. Number of toilet-displacement devices distributed:	0	0
4. Number of toilet flappers distributed:	0	0
5. Number of faucet aerators distributed:	0	0
6. Does your agency track the distribution and cost of low-flow devices?		yes
a. If YES, in what format are low-flow devices tracked?		Manual Activity
b. If yes, describe your tracking and distribution system :		
		Manual count of devices distributed.

**C. "At Least As Effective As"**

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? No
  - a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

**D. Comments**

Reported as of 5/24/10

### BMP 03: System Water Audits, Leak Detection and Repair

Reporting Unit: **City of Thousand Oaks**      BMP Form Status: **100% Complete**      Year: **2006**

#### A. Implementation

1. Does your agency own or operate a water distribution system? yes
2. Has your agency completed a pre-screening system audit for this reporting year? yes
3. If YES, enter the values (AF/Year) used to calculate verifiable use as a percent of total production:
  - a. Determine metered sales (AF) 12868.7
  - b. Determine other system verifiable uses (AF) 9.33
  - c. Determine total supply into the system (AF) 14069.2
  - d. Using the numbers above, if (Metered Sales + Other Verifiable Uses) / Total Supply is < 0.9 then a full-scale system audit is required. 0.92
4. Does your agency keep necessary data on file to verify the values entered in question 3? yes
5. Did your agency complete a full-scale audit during this report year? no
6. Does your agency maintain in-house records of audit results or completed AWWA M36 audit worksheets for the completed audit which could be forwarded to CUWCC? no
7. Does your agency operate a system leak detection program? yes
  - a. If yes, describe the leak detection program:  
  
Areas with poly service lines are surveyed for leaks. Meters >10 years old are routinely replaced.

#### B. Survey Data

1. Total number of miles of distribution system line. 301
2. Number of miles of distribution system line surveyed. 12

#### C. "At Least As Effective As"

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? No
  - a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

#### D. Comments

#### Voluntary Questions (Not used to calculate compliance)

#### E. Volumes

**Estimated      Verified**

1. Volume of raw water supplied to the system:
2. Volume treated water supplied into the system:
3. Volume of water exported from the system:
4. Volume of billed authorized metered consumption:
5. Volume of billed authorized unmetered consumption:
6. Volume of unbilled authorized metered consumption:
7. Volume of unbilled authorized unmetered consumption:

#### F. Infrastructure and Hydraulics

1. System input (source or master meter) volumes metered at the entry to the:
2. How frequently are they tested and calibrated?
3. Length of mains:
4. What % of distribution mains are rigid pipes (metal, ac, concrete)?
5. Number of service connections:
6. What % of service connections are rigid pipes (metal)?
7. Are residential properties fully metered?
8. Are non-residential properties fully metered?
9. Provide an estimate of customer meter under-registration:

10. Average length of customer service line from the main to the point of the meter:

11. Average system pressure:

12. Range of system pressures:

From to

13. What percentage of the system is fed from gravity feed?

14. What percentage of the system is fed by pumping and re-pumping?

## G. Maintenance Questions

1. Who is responsible for providing, testing, repairing and replacing customer meters?

2. Does your agency test, repair and replace your meters on a regular timed schedule?

a. If yes, does your agency test by meter size or customer category?:

b. If yes to meter size, please provide the frequency of testing by meter size:

Less than or equal to 1"

1.5" to 2"

3" and Larger

c. If yes to customer category, provide the frequency of testing by customer category:

SF residential

MF residential

Commercial

Industrial & Institutional

3. Who is responsible for repairs to the customer lateral or customer service line?

4. Who is responsible for service line repairs downstream of the customer meter?

5. Does your agency proactively search for leaks using leak survey techniques or does your utility reactively repair leaks which are called in, or both?

6. What is the utility budget breakdown for:

Leak Detection

\$

Leak Repair

\$

Auditing and Water Loss Evaluation

\$

Meter Testing

\$

## H. Comments

Reported as of 5/24/10

## BMP 04: Metering with Commodity Rates for all New Connections and Retrofit of Existing

Reporting Unit: **City of Thousand Oaks** BMP Form Status: **100% Complete** Year: **2006**

### A. Implementation

1. Please fill out the following matrix:

Types of Billed Accounts	% Accounts Metered	% Accounts Measured (Not Metered)	% Accounts Volumetric Billing
Treated Water SF Residential Accounts	100		100
Treated Water MF Residential Accounts	100		100
Treated Water Commercial Accounts	100		100
Treated Water Industrial Accounts	100		100
Treated Water Institutional Accounts	100		100
Raw Water Residential Deliveries	0	0	0
Raw Water Non-Residential Deliveries	0	0	0

2. If your agency does not meter 100% of all treated water accounts:

- a. Does your agency have a plan or program for retrofitting existing unmetered treated water connections? **No**
- b. By what date would 100% of all treated water accounts be metered? **NA**
- c. Number of previously unmetered accounts fitted with meters during report year: **0**

3. If your agency does not bill 100% of all treated water accounts by volume of use:

- a. By what date (Year must be four digit mm/dd/yyyy) will all customers with meters be billed by volume of use? **NA**

4. If your agency does not meter or measure 100% of all raw water delivery fields (as listed in quesiton 1f & 1g), does your agency intend to develop a program for measuring all raw water deliveries? **No**

5. If your agency does not volumetrically bill 100% of all raw water delivery, does your agency intend to develop a program for billing all raw water deliveries by volume of use? **No**

6. Does your agency meter by volume of use all municipal or governmental accounts?: **Yes**

- a. If no, which types of accounts are not included:

7. Does your agency bill by volume of use all municipal or governmental accounts? **Yes**

- a. If no, which types of accounts are not included:

### B. Feasibility Study

1. Has your agency conducted a feasibility study to assess the merits of a program to provide incentives to switch mixed-use accounts to dedicated landscape meters? **no**

- a. If YES, when was the feasibility study conducted? (mm/dd/yy)

- b. Describe the feasibility study:

2. Number of CII accounts with mixed-use meters: **250**

3. Number of CII accounts with mixed-use meters retrofitted with dedicated irrigation meters during reporting period **0**

### D. "At Least As Effective As"

1. Is your agency implementing an "at least as effective as" variant of this BMP? **No**

- a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

### E. Comments

All connections are metered. Number of CII accounts with mixed-use meters is an estimate.



## BMP 05: Large Landscape Conservation Programs and Incentives

Reporting Unit: **City of Thousand Oaks**      BMP Form Status: **100% Complete**      Year: **2006**

### A. Water Use Budgets

- |  |     |
|--|-----|
| 1. Number of Dedicated Irrigation Meter Accounts:  | 420 |
| 2. Number of Dedicated Irrigation Meter Accounts with Water Budgets:                       | 0   |
| 3. Budgeted Use for Irrigation Meter Accounts with Water Budgets (AF):                     | 0   |
| 4. Actual Use for Irrigation Meter Accounts with Water Budgets (AF):                       | 0   |
| 5. Does your agency provide water use notices to accounts with budgets each billing cycle? | no  |

### B. Landscape Surveys

- |  |    |
|--|----|
| 1. Has your agency developed a marketing / targeting strategy for landscape surveys? | no |
| a. If YES, when did your agency begin implementing this strategy?                    |    |
| b. Description of marketing / targeting strategy:                                    |    |
| 2. Number of Surveys Offered.  | 0  |
| 3. Number of Surveys Completed.  | 0  |
| 4. Indicate which of the following Landscape Elements are part of your survey:       |    |
| a. Irrigation System Check   | no |
| b. Distribution Uniformity Analysis  | no |
| c. Review / Develop Irrigation Schedules   | no |
| d. Measure Landscape Area  | no |
| e. Measure Total Irrigable Area  | no |
| f. Provide Customer Report / Information   | no |
| 5. Do you track survey offers and results?   | no |
| 6. Does your agency provide follow-up surveys for previously completed surveys?      | no |
| a. If YES, describe below:   |    |

### C. Other BMP 5 Actions

- |   |   |
|---|---|
| 1. An agency can provide mixed-use accounts with ETo-based landscape budgets in lieu of a large landscape survey program. Does your agency provide mixed-use accounts with landscape budgets? | no  |
| 2. Number of CII mixed-use accounts with landscape budgets.   | 0   |
| 3. Do you offer landscape irrigation training?  | yes   |
| 4. Does your agency offer financial incentives to improve landscape water use efficiency?   | no  |
| <b>Type of Financial Incentive:</b>   |   |
|   | <b>Budget (Dollars/Year)</b> <b>Number Awarded to Customers</b> <b>Total Amount Awarded</b> |
| a. Rebates  | 0      0      0   |
| b. Loans  | 0      0      0   |
| c. Grants   | 0      0      0   |
| 5. Do you provide landscape water use efficiency information to new customers and customers changing services?  | No  |
| a. If YES, describe below:  |   |
| 6. Do you have irrigated landscaping at your facilities?  | yes   |
| a. If yes, is it water-efficient?   | yes   |
| b. If yes, does it have dedicated irrigation metering?  | yes   |
| 7. Do you provide customer notices at the start of the irrigation season?   | no  |
| 8. Do you provide customer notices at the end of the irrigation season?   | no  |

### D. "At Least As Effective As"

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? No

a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

#### **E. Comments**

Reported as of 5/24/10

## BMP 06: High-Efficiency Washing Machine Rebate Programs

Reporting Unit:  
**City of Thousand Oaks**

BMP Form Status:  
**100% Complete**

Year:  
**2006**

### A. Coverage Goal

	Single Family	Multi-Family
1. Number of <b>residential</b> dwelling units in the agency service area.	15,076	397
2. Coverage Goal = Total Dwelling Units x 0.048	= 1,188 Points	

### B. Implementation

1. Does your agency offer rebates for **residential** high-efficiency washers? yes

HEW Water Factor	Number of Financial Incentives Issued	Retail Water Agency	Total Value of Financial Incentives			POINTS AWARDED
			Wholesaler/ Grants (if applicable)	Energy Utility (if applicable)	TOTAL	
2. <b>Greater than 8.5 but not exceeding 9.5</b> (1 point)	0	\$ 0	\$ 0	\$ 0	\$ 0	0
3. <b>Greater than 6.0 but not exceeding 8.5</b> (2 points)	0	\$ 0	\$ 0	\$ 0	\$ 0	0
4. <b>Less than or equal to 6.0</b> (3 points)	71	\$ 65	\$ 135	\$ 0	\$ 200	213
<b>TOTALS:</b>	<b>71</b>	<b>65</b>	<b>135</b>	<b>0</b>	<b>200</b>	<b>213</b>

### C. Past Credit Points

For HEW incentives issued before July 1, 2004, select ONE of the following TWO options:

- Method One: Points based on HEW Water Factor
- Method Two: Agency earns 1 point for each HEW.

NOTE: Agency shall not receive credit for any HEW incentives where the agency did not provide a financial incentive of \$25 or more.

#### Method One: Points based on HEW Water Factor

HEW Water Factor	Number of Financial Incentives Issued	Total Value of Water Agency Financial Incentives	POINTS AWARDED
1. <b>Greater than 8.5 but not exceeding 9.5</b> (1 point each)		\$ 0	
2. <b>Greater than 6.0 but not exceeding 8.5</b> (2 points each)		\$ 0	
3. <b>Less than or equal to 6.0</b> (3 points each)		\$ 0	

#### Method Two: Agency earns 1 point for each HEW

	Number of Financial Incentives Issued	Total Value of Water Agency Financial Incentives	POINTS AWARDED
4. <b>Total HEWs installed</b>	64	\$ 12,800	64

<b>PAST CREDIT TOTALS:</b>	<b>64</b>	<b>\$ 12,800</b>	<b>64</b>
----------------------------	-----------	------------------	-----------

### D. Rebate Program Expenditures

1. Average or Estimated Administration and Overhead \$ 5,680
2. Is the financial incentive offered per HEW at least equal to the marginal benefits of the water savings per HEW? yes

### E. "At Least As Effective As"

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? no
- a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

### F. Comments

**BMP 07: Public Information Programs**

Reporting Unit:	BMP Form Status:	Year:
<b>City of Thousand Oaks</b>	<b>100% Complete</b>	<b>2006</b>

**A. Implementation**

1. How is your public information program implemented?  
Wholesaler and retailer both materially participate in program  
Which wholesaler(s)?  
Calleguas MWD and MWD of SC
2. Describe the program and how it's organized:  
Each May, in conjunction with Water Awareness Month and Public Works Week, the City distributed approximately 1500 water conservation brochures and stickers to preschool and elementary school age children during tours of the City's Municipal Service Center. In addition, conservation related material is distributed at the City's annual Arbor/Earth Day celebration (approximately 5,000 residents attend). The City annually contributes to the Water Education Foundation which provides literature and materials for teacher water education programs. A variety of informational brochures are made available to the public at City Hall. Water conservation information is available on the City's web site.
3. Indicate which and how many of the following activities are included in your public information program:

Public Information Program Activity in Retail Service Area	Yes/No	Number of Events
a. Paid Advertising	no	
b. Public Service Announcement	no	
c. Bill Inserts / Newsletters / Brochures	no	
d. Bill showing water usage in comparison to previous year's usage	yes	
e. Demonstration Gardens	no	
f. Special Events, Media Events	yes	2
g. Speaker's Bureau	no	
h. Program to coordinate with other government agencies, industry and public interest groups and media	yes	

**B. Conservation Information Program Expenditures**

- |   |      |
|---|------|
| 1. Annual Expenditures (Excluding Staffing) | 1186 |
|---|------|

**C. "At Least As Effective As"**

- |  |    |
|--|----|
| 1. Is your AGENCY implementing an "at least as effective as" variant of this BMP?  | No |
| a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as." |    |

**D. Comments**

Reported as of 5/24/10

**BMP 08: School Education Programs**

Reporting Unit:	BMP Form Status:	Year:
<b>City of Thousand Oaks</b>	<b>100% Complete</b>	<b>2006</b>

**A. Implementation**

1. How is your public information program implemented?  
Wholesaler implements program (none or minimal retailer participation)  
Which wholesaler(s)?  
Calleguas MWD and MWD of SC

**Public Information Program Activity Reported By Wholesaler**

Reported as of 5/24/10

**BMP 09: Conservation Programs for CII Accounts**

Reporting Unit: **City of Thousand Oaks**      BMP Form Status: **100% Complete**      Year: **2006**

**A. Implementation**

- |  |     |
|--|-----|
| 1. Has your agency identified and ranked COMMERCIAL customers according to use?    | yes |
| 2. Has your agency identified and ranked INDUSTRIAL customers according to use?    | yes |
| 3. Has your agency identified and ranked INSTITUTIONAL customers according to use? | yes |

**Option A: CII Water Use Survey and Customer Incentives Program**

4. Is your agency operating a CII water use survey and customer incentives program for the purpose of complying with BMP 9 under this option? If so, please describe activity during reporting period:

CII Surveys	Commercial Accounts	Industrial Accounts	Institutional Accounts
a. Number of New Surveys Offered			
b. Number of New Surveys Completed			
c. Number of Site Follow-ups of Previous Surveys (within 1 yr)			
d. Number of Phone Follow-ups of Previous Surveys (within 1 yr)			
CII Survey Components	Commercial Accounts	Industrial Accounts	Institutional Accounts
e. Site Visit			
f. Evaluation of all water-using apparatus and processes			
g. Customer report identifying recommended efficiency measures, paybacks and agency incentives			
Agency CII Customer Incentives	Budget (\$/Year)	# Awarded to Customers	Total \$ Amount Awarded
h. Rebates			
i. Loans			
j. Grants			
k. Others			

**Option B: CII Conservation Program Targets**

5. Does your agency track CII program interventions and water savings for the purpose of complying with BMP 9 under this option? no
6. Does your agency document and maintain records on how savings were realized and the method of calculation for estimated savings? no
7. **System Calculated** annual savings (AF/yr):

CII Programs	# Device Installations
a. Ultra Low Flush Toilets	
b. Dual Flush Toilets	
c. High Efficiency Toilets	
d. High Efficiency Urinals	
e. Non-Water Urinals	
f. Commercial Clothes Washers (coin-op only; not industrial)	
g. Cooling Tower Controllers	
h. Food Steamers	
i. Ice Machines	
j. Pre-Rinse Spray Valves	
k. Steam Sterilizer Retrofits	
l. X-ray Film Processors	

8. **Estimated** annual savings (AF/yr) from agency programs not including the devices listed in Option B. 7., above:

CII Programs	Annual Savings (AF/yr)
a. Site-verified actions taken by agency:	
b. Non-site-verified actions taken by agency:	

**B. Conservation Program Expenditures for CII Accounts**

	This Year	Next Year
1. Budgeted Expenditures	0	0
2. Actual Expenditures	0	

**C. "At Least As Effective As"**

1. Is your agency implementing an "at least as effective as" variant of this BMP? No
  - a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

**D. Comments**

CII programs are provided by our wholesale suppliers (MWD of SC and Calleguas MWD).

**BMP 11: Conservation Pricing**

Reporting Unit: **City of Thousand Oaks**      BMP Form Status: **100% Complete**      Year: **2006**

**A. Implementation****Water Service Rate Structure Data by Customer Class**

Number of schedules:		Use of classification:
For the following accounts, how many rate schedules does agency offer/use?		This agency:
1. <b>Single-family residential</b>	1	Uses classification in its billing system
2. <b>Multi-family residential</b>	0	Includes customers in another class
3. <b>Commercial</b>	1	Uses classification in its billing system
4. <b>Industrial</b>	0	Includes customers in another class
5. <b>Institutional/government</b>	0	Includes customers in another class
6. <b>Dedicated irrigation</b> (potable water)	0	Includes customers in another class
7. <b>Other</b>	2	Uses classification in its billing system
8. <b>Recycled-reclaimed water</b>	0	Does not offer this type of water
9. <b>Raw water</b> (urban use)	0	Does not offer this type of water
10. <b>Wholesale</b> (urban use)	0	Does not offer this type of water

**Sewer Service**

11. Does your agency provide sewer service to your water customers? yes
12. If yes, does sewer service use conservation rate structures? no
13. Has your agency made the required efforts (as prescribed in BMP 11) to have sewer services billed on conservation rates? yes
14. What water agency activities have been undertaken during the reporting period to achieve waste water agency volumetric billing in your water agency service area? Identification of impediments

**B. "At Least As Effective As"**

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? No
- a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

**C. Comments**

Sewer service: Single family residential customers are billed at a flat rate. All other types of customers are billed at volumetric rates.



**BMP 11: Conservation Pricing**

Reporting Unit:	BMP Form Status:	Year:
<b>City of Thousand Oaks</b>	<b>100% Complete</b>	<b>2006</b>

**1.A. Single-Family Residential Rate Schedule A**

a. Water Rate Structure	Uniform
b. Sewer Rate Structure	Non-volumetric Flat Rate
c. Total Revenue from only Volumetric Charges	7988029
d. Total Revenue from Non-Volumetric Charges (Includes fixed fees, surcharges, minimum usage charges, monthly service charges, meter charges etc.)	1789936
e. Total Revenue from this category	9777965

**1.A. Rate Schedule - Volumetric****Title:** Residential

f. Billing Cycles/year	6
g. Service Charges/Cycle	17.9
h. Gallons/Bill Unit	748
i. Minimum Use/Cycle	0
j. Non-billed Units (included in monthly service charge)	0

	<b>Starting \$/Bill Unit</b>	<b>At (unit qty.)</b>
k. Tier 1	1.88	1
l. Tier 2		
m. Tier 3		
n. Tier 4		
o. Tier 5		
p. Tier 6		

q. Approximate quantity of meters/accounts on this rate schedule	15436
r. Are elevation charges included?	yes
s. Approximate total annual water usage (AF) from customers on this rate schedule	9584.7

**BMP 11: Conservation Pricing**

Reporting Unit:	BMP Form Status:	Year:
<b>City of Thousand Oaks</b>	<b>100% Complete</b>	<b>2006</b>

**3.A. Commercial Rate Schedule A**

a. Water Rate Structure	Uniform
b. Sewer Rate Structure	Uniform
c. Total Revenue from only Volumetric Charges	2411597
d. Total Revenue from Non-Volumetric Charges (Includes fixed fees, surcharges, minimum usage charges, monthly service charges, meter charges etc.)	356793
e. Total Revenue from this category	2768390

**3.A. Rate Schedule - Volumetric****Title:** Commercial

f. Billing Cycles/year	6
g. Service Charges/Cycle	17.9
h. Gallons/Bill Unit	748
i. Minimum Use/Cycle	0
j. Non-billed Units (included in monthly service charge)	0

	<b>Starting \$/Bill Unit</b>	<b>At (unit qty.)</b>
k. Tier 1	1.88	1
l. Tier 2		
m. Tier 3		
n. Tier 4		
o. Tier 5		
p. Tier 6		

q. Approximate quantity of meters/accounts on this rate schedule	1036
r. Are elevation charges included?	yes
s. Approximate total annual water usage (AF) from customers on this rate schedule	3284

**BMP 11: Conservation Pricing**

Reporting Unit:	BMP Form Status:	Year:
<b>City of Thousand Oaks</b>	<b>100% Complete</b>	<b>2006</b>

**7.A. Other Rate Schedule A**

a. Water Rate Structure	Uniform
b. Sewer Rate Structure	Service Not Provided
c. Total Revenue from only Volumetric Charges	49268
d. Total Revenue from Non-Volumetric Charges (Includes fixed fees, surcharges, minimum usage charges, monthly service charges, meter charges etc.)	0
e. Total Revenue from this category	49268

**7.A. Rate Schedule - Volumetric****Title:** City Irrigation Wells

f. Billing Cycles/year	6
g. Service Charges/Cycle	0
h. Gallons/Bill Unit	748
i. Minimum Use/Cycle	0
j. Non-billed Units (included in monthly service charge)	0

	<b>Starting \$/Bill Unit</b>	<b>At (unit qty.)</b>
k. Tier 1	1.5	1
l. Tier 2		
m. Tier 3		
n. Tier 4		
o. Tier 5		
p. Tier 6		

q. Approximate quantity of meters/accounts on this rate schedule	2
r. Are elevation charges included?	no
s. Approximate total annual water usage (AF) from customers on this rate schedule	866

**7.B. Other Rate Schedule B**

a. Water Rate Structure	Uniform
b. Sewer Rate Structure	Service Not Provided
c. Total Revenue from only Volumetric Charges	49726
d. Total Revenue from Non-Volumetric Charges (Includes fixed fees, surcharges, minimum usage charges, monthly service charges, meter charges etc.)	23382
e. Total Revenue from this category	73108

**7.B. Rate Schedule - Volumetric****Title:** Construction Water

f. Billing Cycles/year	12
g. Service Charges/Cycle	295.53
h. Gallons/Bill Unit	748
i. Minimum Use/Cycle	0
j. Non-billed Units (included in monthly service charge)	0

	<b>Starting \$/Bill Unit</b>	<b>At (unit qty.)</b>
k. Tier 1	2.52	1
l. Tier 2		
m. Tier 3		
n. Tier 4		
o. Tier 5		
p. Tier 6		

q. Approximate quantity of meters/accounts on this rate schedule	16
r. Are elevation charges included?	no
s. Approximate total annual water usage (AF) from customers on this rate schedule	6.2

**BMP 12: Conservation Coordinator**

Reporting Unit:	BMP Form Status:	Year:
<b>City of Thousand Oaks</b>	<b>100% Complete</b>	<b>2006</b>

**A. Implementation**

1. Does your Agency have a conservation coordinator? yes
2. Is a coordinator position supplied by another agency with which you cooperate in a regional conservation program ? no
  - a. Partner agency's name: N/A
3. If your agency supplies the conservation coordinator:
  - a. What percent is this conservation coordinator's position? 15%
  - b. Coordinator's Name JoAnne Kelly
  - c. Coordinator's Title Resource Division Manager
  - d. Coordinator's Experience and Number of Years 12
  - e. Date Coordinator's position was created (mm/dd/yyyy) 4/1/1990
4. Number of conservation staff (FTEs), including Conservation Coordinator. 1

**B. Conservation Staff Program Expenditures**

1. Staffing Expenditures (In-house Only) 16339
2. BMP Program Implementation Expenditures 14661

**C. "At Least As Effective As"**

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? no
  - a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

**D. Comments**

**BMP 13: Water Waste Prohibition**

Reporting Unit:	BMP Form Status:	Year:
<b>City of Thousand Oaks</b>	<b>100% Complete</b>	<b>2006</b>

**A. Requirements for Documenting BMP Implementation**

1. Is a water waste prohibition ordinance in effect in your service area? yes

a. If YES, describe the ordinance:

1)Paved surfaces may not be hose washed 2)Vehicle and equipment washing must be done with a hose equipped with a positive shutoff nozzle, 3)Fountains and water features must recycle water, 4)Water may not be served in restaurants unless requested, 5)Leaks must be repaired within 48 hours, 6)Landscape watering may only take place between 4:00 PM and 9:00 AM, 7)No runoff due to incorrectly directed or maintained sprinklers or as a result of overwatering.

2. Is a copy of the most current ordinance(s) on file with CUWCC? yes

a. List local jurisdictions in your service area in the first text box and water waste ordinance citations in each jurisdiction in the second text box:

City of Thousand Oaks	Ord. No. 1087-NS, as amended by Ord. No. 1144-NS, and Resolution No. 92-48.
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**B. Implementation**

1. Indicate which of the water uses listed below are prohibited by your agency or service area.

a. Gutter flooding	no
b. Single-pass cooling systems for new connections	no
c. Non-recirculating systems in all new conveyor or car wash systems	no
d. Non-recirculating systems in all new commercial laundry systems	no
e. Non-recirculating systems in all new decorative fountains	yes
f. Other, please name	no

2. Describe measures that prohibit water uses listed above:

Wastewater system connection fees are based on flow, making it prohibitively expensive to install single-pass cooling systems and non-recycling car washes.

**Water Softeners:**

3. Indicate which of the following measures your agency has supported in developing state law:

a. Allow the sale of more efficient, demand-initiated regenerating DIR models.	no
b. Develop minimum appliance efficiency standards that:	
i.) Increase the regeneration efficiency standard to at least 3,350 grains of hardness removed per pound of common salt used.	no
ii.) Implement an identified maximum number of gallons discharged per gallon of soft water produced.	no
c. Allow local agencies, including municipalities and special districts, to set more stringent standards and/or to ban on-site regeneration of water softeners if it is demonstrated and found by the agency governing board that there is an adverse effect on the reclaimed water or groundwater supply.	yes

4. Does your agency include water softener checks in home water audit programs? no

5. Does your agency include information about DIR and exchange-type water softeners in educational efforts to encourage replacement of less efficient timer models? no

**C. "At Least As Effective As"**

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? no

a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

**D. Comments**

**BMP 14: Residential ULFT Replacement Programs**

Reporting Unit: **City of Thousand Oaks**      BMP Form Status: **100% Complete**      Year: **2006**

**A. Implementation****Number of 1.6 gpf Toilets Replaced by Agency Program During Report Year**

	Single-Family Accounts	Multi-Family Units
1. Does your Agency have program(s) for replacing high-water-using toilets with ultra-low flush toilets?	yes	yes
<b>Replacement Method</b>	<b>SF Accounts</b>	<b>MF Units</b>
2. Rebate	37	0
3. Direct Install	0	0
4. CBO Distribution	0	0
5. Other	0	0
<b>Total</b>	<b>37</b>	<b>0</b>

**Number of 1.2 gpf High-Efficiency Toilets (HETs) Replaced by Agency Program During Report Year**

	Single-Family Accounts	Multi-Family Units
6. Does your Agency have program(s) for replacing high-water-using toilets with ultra-low flush toilets?	yes	yes
<b>Replacement Method</b>	<b>SF Accounts</b>	<b>MF Units</b>
7. Rebate	0	0
8. Direct Install	0	0
9. CBO Distribution	0	0
10. Other	0	0
<b>Total</b>	<b>0</b>	<b>0</b>

**Number of Dual-Flush Toilets Replaced by Agency Program During Report Year**

	Single-Family Accounts	Multi-Family Units
11. Does your Agency have program(s) for replacing high-water-using toilets with ultra-low flush toilets?	yes	yes
<b>Replacement Method</b>	<b>SF Accounts</b>	<b>MF Units</b>
12. Rebate	0	0
13. Direct Install	0	0
14. CBO Distribution	0	0
15. Other	0	0
<b>Total</b>	<b>0</b>	<b>0</b>

16. Describe your agency's ULFT, HET, and/or Dual-Flush Toilet programs for single-family residences.

\$60 rebate per 1.6 gpf (or less)toilet, \$80 rebate for dual flush toilets. Rebate dollars are reimbursed by our wholesale agency. City pays the cost of administering the program.

17. Describe your agency's ULFT, HET, and/or Dual-Flush Toilet programs for multi-family residences.

\$60 rebate per 1.6 gpf (or less)toilet, \$80 rebate for dual flush toilets. Rebate dollars are reimbursed by our wholesale agency. City pays the cost of administering the program.

18. Is a toilet retrofit on resale ordinance in effect for your service area? no

19. List local jurisdictions in your service area in the left box and ordinance citations in each jurisdiction in the right box:

City of Thousand Oaks

No citations

**B. Residential ULFT Program Expenditures**

1. Estimated cost per ULFT/HET replacement: 84

**C. "At Least As Effective As"**

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? no

a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

**D. Comments**

Expenditures do not include our wholesale agency rebate contribution.



## **APPENDIX F**

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**Memorandum from Don Kendall, General Manager,  
Calleguas Municipal Water District, to Purveyor Managers, July 13, 2009.**

TED GRANDSEN  
DIVISION 1

GAIL L. PRINGLE, DIRECTOR  
DIVISION 4

JEFFREY A. BORENSTEIN, TREASURER  
DIVISION 2



WILLIAM R. SEAVER, VICE PRESIDENT  
DIVISION 5

DONALD G. HAUSER, SECRETARY  
DIVISION 3

DONALD R. KENDALL, Ph.D., P.E.  
GENERAL MANAGER

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## Memorandum

**To:** Purveyor Managers  
**From:** Don Kendall, General Manager  
**Date:** July 13<sup>th</sup>, 2009  
**Re:** 2009/2010 Initial Allocation Notice

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As you are aware, Metropolitan's Water Supply Allocation Plan (WSAP) became effective July 1<sup>st</sup> and will remain in effect until June 30<sup>th</sup>, 2010. In April, given persistent drought conditions and dwindling reserves, Metropolitan's Board announced a Regional Shortage, Level 2 that calls for a 15 percent reduction in wholesale deliveries. In May, Calleguas' Board took formal action to develop and apply supply allocations for each District purveyor consistent with the WSAP (see attached resolution).

In recent months, Calleguas has coordinated with its purveyors to establish individual allocations based on the formula used by Metropolitan to derive allocations for its member agencies. Your agency's initial allocation is attached. It is important to note, that these allocations are not necessarily fixed as actual local supply production during the allocation year will likely lead to adjustments. The WSAP does not penalize those agencies for "extraordinary increased local production" during the allocation year. Calleguas recently submitted a letter to Metropolitan that we believe serves to further clarify this matter and will ensure fair treatment for Calleguas and its purveyors.

To assist in tracking each agency's progress, Calleguas will include a chart of monthly targets vs. actual deliveries in all water billings throughout the allocation year. While Metropolitan will not assess penalties on a monthly basis, closely monitoring our deliveries in this way will provide an early warning signal if demands are trending into a potential penalty scenario. Again, as local supply production will influence Calleguas' final Metropolitan allocation to be determined at the end of the allocation year, we will be contacting those purveyors with access to local supplies to incorporate this data into our tracking charts. Tracking will begin in August for the July 2009 billing period.

With respect to penalties, Metropolitan will assess any applicable penalties following a reconciliation process at the end of the allocation year. A penalty of double Metropolitan's Tier 2 rate in effect at time (\$811/af) will be applied to deliveries up to 15 percent above an agency's final allocation. A penalty of quadruple the Tier 2 rate will be assessed on deliveries above 15 percent. Calleguas will not assess any additional penalty, only pass through Metropolitan's to the affected purveyor(s).

As for allocation adjustments, we are preparing our first appeal given changed conditions for some purveyors related to newly annexed areas, lost local supplies, etc. Prior to submitting the appeal, we will follow-up with applicable purveyors to verify our understanding of the circumstances and related data.

Lastly, we are optimistic that a 15 percent reduction is achievable. This is new territory for all of us, but fortunately we expect to have ample time during the year to address any issues that may arise. As always, feel free to either contact Eric Bergh at 805-579-7128 or me at 805-579-7113 if you have any questions on this matter.



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Donald R. Kendall

RESOLUTION OF THE BOARD OF DIRECTORS  
OF CALLEGUAS MUNICIPAL WATER DISTRICT  
IMPLEMENTING A WATER SUPPLY  
ALLOCATION PROGRAM

WHEREAS, the Board of Directors Calleguas Municipal Water District (District) adopted an Urban Water Management Plan (the Plan) in 1995 in accordance with the requirements of the California Urban Water Management Planning Act (Water Code Sections 10610 et seq; the Act); and the plan was updated in accordance with applicable law and adopted by the Board in 2000; and further updated and adopted on October 5<sup>th</sup>, 2005;

WHEREAS, the Plan describes actions the District may follow to manage demand and, if necessary, allocate water in response to reductions in available water supplies;

WHEREAS, the State of California is now in its third consecutive year of drought and in each year of the current drought, annual rainfall and the water content in the Sierra snowpack have been significantly below the amounts needed to fill California's reservoir system;

WHEREAS, on February 27<sup>th</sup>, 2009, Governor Schwarzenegger declared a state of emergency regarding ongoing drought conditions and ordered immediate action to manage the State's dwindling supplies;


WHEREAS, on April 14<sup>th</sup>, 2009, the Metropolitan Water District of Southern California (Metropolitan) declared that a regional water shortage exists and implemented its Water Supply Allocation Plan (WSAP) at a Regional Shortage Level 2, effective July 1<sup>st</sup>, 2009, including penalty rates for water use in excess of a member agency's annual allocation; and

WHEREAS, Ordinance No. 12 authorizes the Board of Directors to pass through to member agencies of the District any allocations or penalties for use exceeding allocations the Metropolitan Water District of Southern California may impose or that the Board of Directors might independently judge to be necessary.

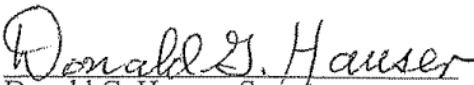
NOW, THEREFORE, THE BOARD OF DIRECTORS OF CALLEGUAS MUNICIPAL WATER DISTRICT RESOLVES AS FOLLOWS:

1. The General Manager is directed to develop and apply supply allocations for each District purveyor consistent with Metropolitan's WSAP; and
2. While the WSAP is in effect, the General Manager shall monitor implementation of WSAP requirements and provide monthly reports to the Board which compare actual purveyor demand with monthly allocation targets.

ADOPTED, SIGNED AND APPROVED this 27<sup>th</sup> day of May, 2009.

  
Ted Grandsen, President  
Board of Directors

ATTEST:

  
Donald G. Hauser, Secretary  
Board of Directors

**Metropolitan Allocation (Level 2 - Initial)**  
**City of Thousand Oaks - Revised 7/13/09**

	<u>Acre feet</u>
<b>Base Period Retail Demand</b>	<b>13,712</b>
Base Period Local Supply (CY 2004- 2006 avg.)	-
Base Period MWD Firm (CY 2004 - 2006 avg.)	13,712
<b>Allocation Year Retail Demand</b>	<b>14,082</b>
Base Period Retail Demand	13,712
2007 - 2009 VC County Growth Adjustment	2.70%
<b>Allocation Year Total Local Supply</b>	<b>-</b>
Base Period Local Supply	-
Planned Increase Local Supply	-
Extraordinary Increase Local Supply	-
<b>Allocation Year Local Supply for WSAP Calculation</b>	<b>-</b>
Base Period Local Supply	-
Planned Increase Local Supply	-
Shared Extraordinary Increase Local Supply	-
<b>Allocation Year Demand on MWD</b>	<b>14,082</b>
Allocation Year Retail Demand	14,082
Allocation Year Local Supply for WSAP Calculation	-
<b>Dependence on MWD</b>	<b>100.00%</b>
Allocation Year Retail Demand	14,082
Allocation Year Demand on MWD	14,082
<b>Wholesale Minimum Allocation</b>	<b>11,970</b>
Allocation Year Demand on MWD	14,082
Wholesale Minimum Percentage	85.00%
<b>Conservation Hardening Credit</b>	<b>69</b>
Qualifying Rate Structure (acre feet)	69
<b>MWD Allocation</b>	<b>12,039</b>
Wholesale Minimum Allocation	11,970
Conservation Hardening Credit	69
<b>Total Water Supply</b>	<b>12,039</b>
Base Period Local Supply	-
Planned Increase Local Supply	-
Extraordinary Increase Local Supply	-
MWD Allocation	12,039
<b>Retail Shortage</b>	<b>14.51%</b>
Allocation Year Retail Demand	14,082
Total Water Supply	12,039
<b>Wholesale Shortage</b>	<b>14.51%</b>
Allocation Year Demand on MWD	14,082
MWD Allocation	12,039

<b>Penalty if MWD Allocation exceeded</b>	
If 10% over Allocation	\$1,952,708
If no reduction from Allocation Year Demand	\$3,699,512
<b>Metropolitan Penalty (based on recent Met rate increase):</b>	
Use between 100% and 115% of allocation = \$1,622/af (2 x Tier 2)	
Use greater than 115% of allocation = \$3,244/af (4 x Tier 2)	

## **APPENDIX 4.10**

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### **Hazardous Materials Report**

**Thousand Oaks Boulevard**

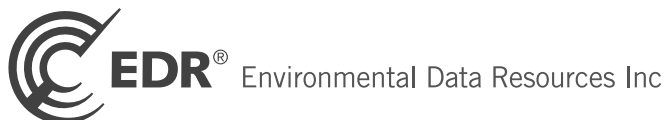
Thousand Oaks Boulevard

Thousand Oaks, CA 91362

Inquiry Number: 2717874.1s

March 10, 2010

## The EDR Radius Map™ Report with GeoCheck®



440 Wheelers Farms Road  
Milford, CT 06461  
Toll Free: 800.352.0050  
[www.edrnet.com](http://www.edrnet.com)

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***Thank you for your business.***  
Please contact EDR at 1-800-352-0050  
with any questions or comments.

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## EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-05) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

### TARGET PROPERTY INFORMATION

#### ADDRESS

THOUSAND OAKS BOULEVARD  
THOUSAND OAKS, CA 91362

#### COORDINATES

Latitude (North):	34.177700 - 34° 10' 39.7"
Longitude (West):	118.851400 - 118° 51' 5.0"
Universal Transverse Mercator:	Zone 11
UTM X (Meters):	329369.2
UTM Y (Meters):	3783213.2
Elevation:	806 ft. above sea level

### USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	34118-B7 THOUSAND OAKS, CA
Most Recent Revision:	1981

### TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

### DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

### STANDARD ENVIRONMENTAL RECORDS

#### ***Federal NPL site list***

NPL .....	National Priority List
Proposed NPL .....	Proposed National Priority List Sites
NPL LIENS .....	Federal Superfund Liens

#### ***Federal Delisted NPL site list***

Delisted NPL .....	National Priority List Deletions
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## EXECUTIVE SUMMARY

### ***Federal CERCLIS list***

CERCLIS..... Comprehensive Environmental Response, Compensation, and Liability Information System  
FEDERAL FACILITY..... Federal Facility Site Information listing

### ***Federal CERCLIS NFRAP site List***

CERC-NFRAP..... CERCLIS No Further Remedial Action Planned

### ***Federal RCRA CORRACTS facilities list***

CORRACTS..... Corrective Action Report

### ***Federal RCRA non-CORRACTS TSD facilities list***

RCRA-TSDF..... RCRA - Treatment, Storage and Disposal

### ***Federal RCRA generators list***

RCRA-CESQG..... RCRA - Conditionally Exempt Small Quantity Generator

### ***Federal institutional controls / engineering controls registries***

US ENG CONTROLS..... Engineering Controls Sites List  
US INST CONTROL..... Sites with Institutional Controls

### ***Federal ERNS list***

ERNS..... Emergency Response Notification System

### ***State- and tribal - equivalent NPL***

RESPONSE..... State Response Sites

### ***State and tribal leaking storage tank lists***

INDIAN LUST..... Leaking Underground Storage Tanks on Indian Land

### ***State and tribal registered storage tank lists***

INDIAN UST..... Underground Storage Tanks on Indian Land  
FEMA UST..... Underground Storage Tank Listing

### ***State and tribal voluntary cleanup sites***

INDIAN VCP..... Voluntary Cleanup Priority Listing

### **ADDITIONAL ENVIRONMENTAL RECORDS**

#### ***Local Brownfield lists***

US BROWNFIELDS..... A Listing of Brownfields Sites

#### ***Local Lists of Landfill / Solid Waste Disposal Sites***

DEBRIS REGION 9..... Torres Martinez Reservation Illegal Dump Site Locations

## EXECUTIVE SUMMARY

ODI.....	Open Dump Inventory
WMUDS/SWAT.....	Waste Management Unit Database
HAULERS.....	Registered Waste Tire Haulers Listing
INDIAN ODI.....	Report on the Status of Open Dumps on Indian Lands

### **Local Lists of Hazardous waste / Contaminated Sites**

US CDL.....	Clandestine Drug Labs
HIST Cal-Sites.....	Historical Calsites Database
Toxic Pits.....	Toxic Pits Cleanup Act Sites
CDL.....	Clandestine Drug Labs
US HIST CDL.....	National Clandestine Laboratory Register

### **Local Land Records**

LIENS 2.....	CERCLA Lien Information
LUCIS.....	Land Use Control Information System
LIENS.....	Environmental Liens Listing
DEED.....	Deed Restriction Listing

### **Records of Emergency Release Reports**

HMIRS.....	Hazardous Materials Information Reporting System
CHMIRS.....	California Hazardous Material Incident Report System
LDS.....	Land Disposal Sites Listing
MCS.....	Military Cleanup Sites Listing

### **Other Ascertainable Records**

DOT OPS.....	Incident and Accident Data
DOD.....	Department of Defense Sites
FUDS.....	Formerly Used Defense Sites
CONSENT.....	Superfund (CERCLA) Consent Decrees
ROD.....	Records Of Decision
UMTRA.....	Uranium Mill Tailings Sites
MINES.....	Mines Master Index File
TRIS.....	Toxic Chemical Release Inventory System
TSCA.....	Toxic Substances Control Act
FTTS.....	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
HIST FTTS.....	FIFRA/TSCA Tracking System Administrative Case Listing
SSTS.....	Section 7 Tracking Systems
ICIS.....	Integrated Compliance Information System
PADS.....	PCB Activity Database System
MLTS.....	Material Licensing Tracking System
RADINFO.....	Radiation Information Database
FINDS.....	Facility Index System/Facility Registry System
RAATS.....	RCRA Administrative Action Tracking System
CA BOND EXP. PLAN.....	Bond Expenditure Plan
NPDES.....	NPDES Permits Listing
CA WDS.....	Waste Discharge System
Cortese.....	"Cortese" Hazardous Waste & Substances Sites List
Notify 65.....	Proposition 65 Records
VENTURA CO. BWT.....	Business Plan, Hazardous Waste Producers, and Operating Underground Tanks
HAZNET.....	Facility and Manifest Data

## EXECUTIVE SUMMARY

EMI.....	Emissions Inventory Data
INDIAN RESERV.....	Indian Reservations
SCRD DRYCLEANERS.....	State Coalition for Remediation of Drycleaners Listing
MWMP.....	Medical Waste Management Program Listing
COAL ASH DOE.....	Sleam-Electric Plan Operation Data
COAL ASH EPA.....	Coal Combustion Residues Surface Impoundments List
PROC.....	Certified Processors Database
HWT.....	Registered Hazardous Waste Transporter Database
HWP.....	EnviroStor Permitted Facilities Listing
FINANCIAL ASSURANCE.....	Financial Assurance Information Listing
PCB TRANSFORMER.....	PCB Transformer Registration Database

### EDR PROPRIETARY RECORDS

#### ***EDR Proprietary Records***

Manufactured Gas Plants..... EDR Proprietary Manufactured Gas Plants

### SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.

Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

### STANDARD ENVIRONMENTAL RECORDS

#### ***Federal RCRA generators list***

RCRA-LQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

A review of the RCRA-LQG list, as provided by EDR, and dated 01/13/2010 has revealed that there are 4 RCRA-LQG sites within approximately 1.75 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
THOUSAND OAKS SERVICE CENTER	3589 FOOTHILL DR	SE 1 - 2 (1.393 mi.)	AE235	324
THOUSAND OAKS AUTO/CSO	3589 FOOTHILL	SE 1 - 2 (1.393 mi.)	AE236	326
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
CHEVRON 97236	101 THOUSAND OAKS BLVD	W 1 - 2 (1.355 mi.)	AD223	306

## EXECUTIVE SUMMARY

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
CHEVRON 97236	101 W THOUSAND OAKS BLV	W 1 - 2 (1.628 mi.)	AO316	425

RCRA-SQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

A review of the RCRA-SQG list, as provided by EDR, and dated 01/13/2010 has revealed that there are 50 RCRA-SQG sites within approximately 1.75 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
LEONS TRANSMISSION SERVICES	2026 THOUSAND OAKS BLVD	SE 1/8 - 1/4 (0.205 mi.)	C14	23
PEP BOYS #739	2099 EAST THOUSAND OAKS	ESE 1/4 - 1/2 (0.313 mi.)	E24	33
THOUSAND OAKS HYUNDAI	2321 THOUSAND OAKS BLVD	ESE 1/4 - 1/2 (0.452 mi.)	G45	61
WINSTON TIRE COMPANY #141	2343 E THOUSAND OAKS BL	ESE 1/4 - 1/2 (0.470 mi.)	G50	66
BECKMANS CLEANERS	2338 E THOUSAND OAKS BL	ESE 1/2 - 1 (0.502 mi.)	G58	78
THOUSAND OAKS TOYOTA	2401 THOUSAND OAKS BLVD	ESE 1/2 - 1 (0.515 mi.)	G64	85
OAKS CLEANERS	2524 E THOUSAND OAKS BL	ESE 1/2 - 1 (0.642 mi.)	K76	99
GOLD STORE THE	2539 THOUSAND OAKS BLVD	ESE 1/2 - 1 (0.663 mi.)	K79	108
NEWS CHRONICLE	2595 THOUSAND OAKS BLVD	ESE 1/2 - 1 (0.682 mi.)	M84	112
AL PIANO NISSAN	2594 THOUSAND OAKS BLVD	ESE 1/2 - 1 (0.690 mi.)	M87	114
SHELL OIL CO	2658 THOUSAND OAKS	ESE 1/2 - 1 (0.732 mi.)	M92	122
MAYFAIR	3065 EAST THOUSAND OAKS	SE 1 - 2 (1.052 mi.)	S129	173
NORTH RANCH BODY CRAFT AND GLA	3031 LOS FELIX	ESE 1 - 2 (1.053 mi.)	U131	180
PREFERRED AUTO CENTRE	3111 THOUSAND OAKS BLVD	SE 1 - 2 (1.068 mi.)	S144	197
PREMIER COACH	3053 LOS FELIZ DR	ESE 1 - 2 (1.073 mi.)	U145	200
CONEJO TRANSMISSIONS	3121 THOUSAND OAKS BLVD	SE 1 - 2 (1.076 mi.)	S146	203
AGS AUTOMOTIVE	3121 THOUSAND OAKS BLVD	SE 1 - 2 (1.077 mi.)	V147	205
GOODYEAR AUTO SERVICE CENTER S	3131 EAST THOUSAND OAKS	SE 1 - 2 (1.086 mi.)	V149	208
NORTH RANCH BODYCRAFT	3075 LOS FELIZ DRIVE	ESE 1 - 2 (1.093 mi.)	U153	214
PAINTING PLACE THE	3169 LOS FELIZ DR	ESE 1 - 2 (1.180 mi.)	Y178	249
NOAHS CLEANERS	3275 E THOUSAND OAKS BL	SE 1 - 2 (1.212 mi.)	Z188	256
KMART 4342	325 HAMPSHIRE RD	SE 1 - 2 (1.247 mi.)	AA192	264
EXPRESS PARTS EXCHANGE	3330 THOUSAND OAKS BLVD	SE 1 - 2 (1.256 mi.)	Z194	266
SCOTTY'S BODY SHOP	3400 SUNSET DR	SE 1 - 2 (1.294 mi.)	AB200	277
SHELL SERVICE STATION	395 HAMPSHIRE	SE 1 - 2 (1.308 mi.)	AA201	282
AL PIANO NISSAN	3444 THOUSAND OAKS BLVD	SE 1 - 2 (1.333 mi.)	AC218	298
WESTLAKE VOLVO	3550 DUESENBERG LN	SE 1 - 2 (1.358 mi.)	AC225	309
SILVER STAR MOTOR CAR CO	3601 AUTO MALL DR	SE 1 - 2 (1.374 mi.)	AC228	316
COURTESY CHEVROLET BODY SHOP I	3610 THOUSAND OAKS BLVD	SE 1 - 2 (1.456 mi.)	AJ285	380
GOULD NAVCOM 3DBM ELECTRONICS	2301 TOWNSGATE RD	SE 1 - 2 (1.460 mi.)	AE286	383
WESTLAKE IMPORTS INC DBA LADIN	3725 DUESENBERG DR	SE 1 - 2 (1.559 mi.)	AM305	407
COURTESY CHEVROLET	3610 1000 OAKS BLVD	SE 1 - 2 (1.627 mi.)	AN314	419
JAFRA COSMETICS INT	2451 TOWNSGATE RD	SE 1 - 2 (1.629 mi.)	AP317	428
KEMP FORD	3810 THOUSAND OAKS BLVD	SE 1 - 2 (1.684 mi.)	AN330	461
RUSMAK WESTLAKE	3832 THOUSAND OAKS BLVD	SE 1 - 2 (1.713 mi.)	AT337	474
WESTOAKS CHRYSLER DODGE INCORP	3839 DUESENBERG DRIVE	SE 1 - 2 (1.747 mi.)	AU343	485

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
COOPERS AUTOMOTIVE REPAIR	1530 THOUSAND OAKS BLVD	WNW 0 - 1/8 (0.084 mi.)	B9	17
CLIFF'S AUTO BODY & PAINT	102 CUNNINGHAM RD	W 1/4 - 1/2 (0.313 mi.)	D25	37
LEONS TRANSMISSIONS SVCS	881 THOUSAND OAKS BLVD	WNW 1/2 - 1 (0.655 mi.)	L78	105

## EXECUTIVE SUMMARY

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>BIKERS DREAM</b>	<b>75 LONG ST</b>	<b>W 1/2 - 1 (0.885 mi.)</b>	<b>R110</b>	<b>147</b>
<b>FOUR N HAUS CORP</b>	<b>389 THOUSAND OAKS BLVD</b>	<b>W 1 - 2 (1.085 mi.)</b>	<b>T148</b>	<b>207</b>
<b>MEDICAL DIAGNOSTIC IMAGING</b>	<b>300 LOMBARD ST</b>	<b>W 1 - 2 (1.148 mi.)</b>	<b>X163</b>	<b>229</b>
<b>TEXACO SERVICE STATION</b>	<b>56 E THOUSAND OAKS BLVD</b>	<b>W 1 - 2 (1.424 mi.)</b>	<b>AD243</b>	<b>336</b>
<b>SHELL OIL CO</b>	<b>172 MOORPARK</b>	<b>W 1 - 2 (1.424 mi.)</b>	<b>AF254</b>	<b>348</b>
<b>VILLAGE CLEANERS</b>	<b>235 N MOORPARK RD</b>	<b>W 1 - 2 (1.434 mi.)</b>	<b>AF269</b>	<b>363</b>
<b>MR CLEANERS</b>	<b>386 N MOORPARK RD</b>	<b>WNW 1 - 2 (1.439 mi.)</b>	<b>AI273</b>	<b>366</b>
<b>MARQUIS CLEANERS</b>	<b>1334 MOORPARK BLVD</b>	<b>NW 1 - 2 (1.672 mi.)</b>	<b>AQ326</b>	<b>450</b>
<b>STAR CLEANERS</b>	<b>1492 MOORE PARK RD</b>	<b>NW 1 - 2 (1.681 mi.)</b>	<b>AQ328</b>	<b>458</b>
<b>LINCOLN OAKS CLEANERS</b>	<b>140 W HILLCREST DR NO 1</b>	<b>W 1 - 2 (1.716 mi.)</b>	<b>AR340</b>	<b>478</b>
<b>SUDDEN 1 HOUR PHOTO</b>	<b>1378 MOORPARK RD</b>	<b>NW 1 - 2 (1.720 mi.)</b>	<b>AS341</b>	<b>483</b>

### State- and tribal - equivalent CERCLIS

ENVIROSTOR: The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifies sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

A review of the ENVIROSTOR list, as provided by EDR, and dated 02/08/2010 has revealed that there are 4 ENVIROSTOR sites within approximately 2.5 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>ROSEN PROPERTY</b> Status: No Further Action	<b>236 QUAILS TRAIL</b>	<b>W 1 - 2 (1.287 mi.)</b>	<b>199</b>	<b>274</b>
<b>COMMUNITY LEARNING CENTER</b> Status: No Further Action	<b>1400 EAST JANSS ROAD</b>	<b>N 1 - 2 (1.473 mi.)</b>	<b>291</b>	<b>388</b>
<b>WESTLAKE HIGH SCHOOL</b> Status: Inactive - Action Required	<b>100 NORTH LAKEVIEW CANY SE &gt;2</b>	<b>(2.314 mi.)</b>	<b>358</b>	<b>508</b>

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>PARK OAKS SHOPPING CENTER</b> Status: Refer: 1248 Local Agency	<b>1790 NORTH MOORPARK ROAD</b>	<b>NW 1 - 2 (1.941 mi.)</b>	<b>AW353</b>	<b>501</b>

### State and tribal landfill and/or solid waste disposal site lists

SWF/LF: The Solid Waste Facilities/Landfill Sites records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. The data come from the Integrated Waste Management Board's Solid Waste Information System (SWIS) database.

A review of the SWF/LF list, as provided by EDR, and dated 02/22/2010 has revealed that there is 1

## EXECUTIVE SUMMARY

SWF/LF site within approximately 2 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
THOUSAND OAKS COUNTY 1962	275 CONEJO RIDGE AVENUE	SSE 1/2 - 1 (0.634 mi.)	75	98

### State and tribal leaking storage tank lists

LUST: The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the State Water Resources Control Board Leaking Underground Storage Tank Information System.

A review of the LUST list, as provided by EDR, and dated 02/05/2010 has revealed that there are 96 LUST sites within approximately 2 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
THRIFTY OIL #211	1715 THOUSAND OAKS BLVD	ESE 0 - 1/8 (0.027 mi.)	A5	12
<b>THRIFTY OIL #211</b>	<b>1715 THOUSAND OAKS BLVD</b>	<b>ESE 0 - 1/8 (0.027 mi.)</b>	<b>A8</b>	<b>14</b>
Status: Completed - Case Closed				
<b>ROBERT D HEGGEN</b>	<b>1964 THOUSAND OAKS BL</b>	<b>SE 1/8 - 1/4 (0.200 mi.)</b>	<b>C12</b>	<b>21</b>
Status: Completed - Case Closed				
<b>BO-CAP AUTO SERVICES</b>	<b>1998 THOUSAND OAKS BLVD</b>	<b>ESE 1/4 - 1/2 (0.261 mi.)</b>	<b>C17</b>	<b>25</b>
Status: Completed - Case Closed				
<b>PEP BOYS #739</b>	<b>2099 THOUSAND OAKS BL</b>	<b>ESE 1/4 - 1/2 (0.313 mi.)</b>	<b>E23</b>	<b>31</b>
Status: Completed - Case Closed				
<b>PEP BOYS #739</b>	<b>2099 EAST THOUSAND OAKS</b>	<b>ESE 1/4 - 1/2 (0.313 mi.)</b>	<b>E24</b>	<b>33</b>
Status: Completed - Case Closed				
Status: Completed - Case Closed				
CHEVRON #9-2832	2321 THOUSAND OAKS BLVD	ESE 1/4 - 1/2 (0.452 mi.)	G46	63
<b>CHEVRON #9-2832</b>	<b>2321 THOUSAND OAKS BLVD</b>	<b>ESE 1/4 - 1/2 (0.452 mi.)</b>	<b>G49</b>	<b>64</b>
Status: Completed - Case Closed				
CONEJO ELEMENTARY SCHOOL	280 CONEJO SCHOOL RD	E 1/4 - 1/2 (0.484 mi.)	H51	69
Status: Completed - Case Closed				
<b>UNOCAL #5126</b>	<b>2378 THOUSAND OAKS BLVD</b>	<b>ESE 1/2 - 1 (0.513 mi.)</b>	<b>G61</b>	<b>81</b>
Status: Completed - Case Closed				
<b>THOUSAND OAKS TOYOTA</b>	<b>2401 THOUSAND OAKS BLVD</b>	<b>ESE 1/2 - 1 (0.515 mi.)</b>	<b>G64</b>	<b>85</b>
Status: Completed - Case Closed				
<b>FAST GAS</b>	<b>2473 THOUSAND OAKS BLVD</b>	<b>ESE 1/2 - 1 (0.596 mi.)</b>	<b>K71</b>	<b>94</b>
Status: Open - Remediation				
<b>AL PIANO/FORMER THRIFTY CAR RE</b>	<b>2594 THOUSAND OAKS BLVD</b>	<b>ESE 1/2 - 1 (0.690 mi.)</b>	<b>M88</b>	<b>116</b>
SHELL SERVICE STATION	2658 THOUSAND OAKS BL	ESE 1/2 - 1 (0.732 mi.)	M89	119
Status: Completed - Case Closed				
<b>KEMIK AUTO SCRUBBER</b>	<b>2725 THOUSAND OAKS BLVD</b>	<b>ESE 1/2 - 1 (0.778 mi.)</b>	<b>N96</b>	<b>127</b>
Status: Completed - Case Closed				
<b>JIFFY LUBE</b>	<b>2905 THOUSAND OAKS BL</b>	<b>ESE 1/2 - 1 (0.906 mi.)</b>	<b>Q116</b>	<b>152</b>
Status: Completed - Case Closed				
<b>LISTER RENTS</b>	<b>252 SKYLINE DR</b>	<b>ESE 1/2 - 1 (0.958 mi.)</b>	<b>117</b>	<b>155</b>
Status: Completed - Case Closed				
TEXACO SS - THOUSAND OAKS	3050 THOUSAND OAKS BLVD	ESE 1 - 2 (1.008 mi.)	S120	159
Status: Completed - Case Closed				

## EXECUTIVE SUMMARY

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
<b>ALLIANCE THOUSAND OAKS</b>	<b>3050 THOUSAND OAKS BLVD</b>	<b>ESE 1 - 2 (1.008 mi.)</b>	<b>S121</b>	<b>161</b>
<b>LEN AIR CONDITIONING</b>	<b>3031 LOS FELIZ DR</b>	<b>ESE 1 - 2 (1.053 mi.)</b>	<b>U134</b>	<b>183</b>
Status: Completed - Case Closed				
MOBIL OIL SS #18-KP6	3102 THOUSAND OAKS BLVD	SE 1 - 2 (1.061 mi.)	S138	190
Status: Open - Remediation				
<b>WESTLAKE AUTO CARE</b>	<b>3111 THOUSAND OAKS BL</b>	<b>SE 1 - 2 (1.068 mi.)</b>	<b>S142</b>	<b>195</b>
Status: Completed - Case Closed				
<b>WERKSTATT</b>	<b>3177 THOUSAND OAKS BLVD</b>	<b>SE 1 - 2 (1.126 mi.)</b>	<b>V157</b>	<b>219</b>
Status: Completed - Case Closed				
<b>CHEVRON #9-2892</b>	<b>3199 WILLOW LANE</b>	<b>SE 1 - 2 (1.148 mi.)</b>	<b>W161</b>	<b>225</b>
Status: Completed - Case Closed				
CHEVRON #9-2892	3199 WILLOW LN	SE 1 - 2 (1.148 mi.)	W162	227
Status: Completed - Case Closed				
<b>OAKS AUTO CENTER</b>	<b>3209 THOUSAND OAKS BLVD</b>	<b>SE 1 - 2 (1.154 mi.)</b>	<b>V164</b>	<b>230</b>
Status: Completed - Case Closed				
<b>EXXON SS #7-3089</b>	<b>225 HAMPSHIRE BLVD</b>	<b>SE 1 - 2 (1.167 mi.)</b>	<b>W167</b>	<b>235</b>
Status: Completed - Case Closed				
AMERICAN GAS	225 HAMPSHIRE BLVD	SE 1 - 2 (1.167 mi.)	W169	238
Status: Completed - Case Closed				
<b>JB'S ELECTRA TUNE</b>	<b>3169 LOS FELIZ DR</b>	<b>ESE 1 - 2 (1.180 mi.)</b>	<b>Y177</b>	<b>247</b>
Status: Completed - Case Closed				
V-FIRE STATION #31	151 DUESENBERG DR	ESE 1 - 2 (1.197 mi.)	Y186	254
Status: Completed - Case Closed				
<b>JOHN HOLMAN</b>	<b>3302 THOUSAND OAKS BL</b>	<b>SE 1 - 2 (1.235 mi.)</b>	<b>Z189</b>	<b>261</b>
Status: Completed - Case Closed				
<b>VILLAGE CAR WASH</b>	<b>3369 THOUSAND OAKS BLVD</b>	<b>SE 1 - 2 (1.282 mi.)</b>	<b>Z197</b>	<b>269</b>
Status: Open - Remediation				
<b>SCOTTY'S BODY SHOP</b>	<b>3400 SUNSET DR</b>	<b>SE 1 - 2 (1.294 mi.)</b>	<b>AB200</b>	<b>277</b>
Status: Completed - Case Closed				
SHELL SS - HAMPSHIRE	395 HAMPSHIRE ST.	SE 1 - 2 (1.308 mi.)	AA203	286
Status: Open - Remediation				
GERMAN PRESTIGE AUTOS INC.	3440 AUTO MALL DR	SE 1 - 2 (1.323 mi.)	AC209	290
Status: Completed - Case Closed				
<b>THOUSAND OAKS POST OFFICE</b>	<b>3435 THOUSAND OAKS BL</b>	<b>SE 1 - 2 (1.326 mi.)</b>	<b>AC214</b>	<b>293</b>
Status: Completed - Case Closed				
U. S. POSTAL SERVICE	3435 THOUSAND OAKS BLVD	SE 1 - 2 (1.326 mi.)	AC215	295
Status: Completed - Case Closed				
<b>WESTLAKE VOLVO/VW</b>	<b>3550 AUTO MALL DR</b>	<b>SE 1 - 2 (1.358 mi.)</b>	<b>AC226</b>	<b>313</b>
Status: Completed - Case Closed				
<b>SILVER STAR MOTOR CAR CO</b>	<b>3601 AUTO MALL DR</b>	<b>SE 1 - 2 (1.374 mi.)</b>	<b>AC228</b>	<b>316</b>
Status: Open - Site Assessment				
SILVER STAR MOTOR COMPANY	3601 AUTO MALL DR	SE 1 - 2 (1.374 mi.)	AC230	320
Status: Completed - Case Closed				
<b>THOUSAND OAKS SERVICE CENTER</b>	<b>3589 FOOTHILL DR</b>	<b>SE 1 - 2 (1.393 mi.)</b>	<b>AE237</b>	<b>327</b>
Status: Completed - Case Closed				
UNITED PARCEL SERVICE	2251 TOWNSGATE RD	SE 1 - 2 (1.419 mi.)	AE239	333
Status: Completed - Case Closed				



## EXECUTIVE SUMMARY

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
COURTESY CHEVROLET	3610 THOUSAND OAKS BLVD SE 1 - 2 (1.456 mi.)		AJ283	375
<b>COURTESY CHEVROLET</b>	<b>3610 THOUSAND OAKS BLVD SE 1 - 2 (1.456 mi.)</b>		<b>AJ284</b>	<b>377</b>
<b>COURTESY CHEVROLET BODY SHOP I</b>	<b>3610 THOUSAND OAKS BLVD SE 1 - 2 (1.456 mi.)</b>		<b>AJ285</b>	<b>380</b>
Status: Completed - Case Closed				
Status: Completed - Case Closed				
<b>LADIN LINCOLN MERCURY</b>	<b>3725 DUESENBERG DR</b>	<b>SE 1 - 2 (1.559 mi.)</b>	<b>AM306</b>	<b>410</b>
Status: Completed - Case Closed				
<b>SILVER STAR BUICK</b>	<b>3755 DUESENBERG DR</b>	<b>SE 1 - 2 (1.615 mi.)</b>	<b>AM311</b>	<b>416</b>
Status: Completed - Case Closed				
<b>BUICK, GMC, &amp; NISSAN</b>	<b>3755 AUTO MALL DR</b>	<b>SE 1 - 2 (1.615 mi.)</b>	<b>AM313</b>	<b>418</b>
Status: Completed - Case Closed				
<b>JAFRA COSMETICS INT</b>	<b>2451 TOWNSGATE RD</b>	<b>SE 1 - 2 (1.629 mi.)</b>	<b>AP317</b>	<b>428</b>
Status: Completed - Case Closed				
<b>KEMP FORD</b>	<b>3810 THOUSAND OAKS BLVD SE 1 - 2 (1.684 mi.)</b>		<b>AN330</b>	<b>461</b>
Status: Completed - Case Closed				
RUSNACK BMW	3832 THOUSAND OAKS BLVD SE 1 - 2 (1.713 mi.)		AT335	472
Status: Completed - Case Closed				
<b>RUSNAK PORSCHE AUDI</b>	<b>3832 THOUSAND OAKS BLVD SE 1 - 2 (1.713 mi.)</b>		<b>AT338</b>	<b>476</b>
Status: Completed - Case Closed				
<b>RUSNAK WESTLAKE</b>	<b>3832 THOUSAND OAKS BLVD SE 1 - 2 (1.713 mi.)</b>		<b>AT339</b>	<b>478</b>
<b>WESTOAKS CHRYSLER PLYMOUTH</b>	<b>3839 DUESENBERG DR SE 1 - 2 (1.747 mi.)</b>		<b>AU344</b>	<b>487</b>
Status: Completed - Case Closed				
<b>WEST OAKS CHRYSLER</b>	<b>3839 AUTO MALL DR</b>	<b>SE 1 - 2 (1.748 mi.)</b>	<b>AU346</b>	<b>490</b>
Status: Completed - Case Closed				
<b>SHAVER PONTIAC AMC</b>	<b>3888 E THOUSAND OAKS BL SE 1 - 2 (1.792 mi.)</b>		<b>AT348</b>	<b>494</b>
Status: Completed - Case Closed				
<b>EXXON #7-3543</b>	<b>3995 THOUSAND OAKS BLVD SE 1 - 2 (1.981 mi.)</b>		<b>AX356</b>	<b>503</b>
Status: Open - Verification Monitoring				
Lower Elevation	Address	Direction / Distance	Map ID	Page
<b>MOSHE SILAGI/PRIVATE PROPERTY</b>	<b>1500 THOUSAND OAKS BLVD WNW 0 - 1/8 (0.098 mi.)</b>		<b>B11</b>	<b>20</b>
Status: Completed - Case Closed				
GTE SWITCHING STATION	1205 THOUSAND OAKS BLVD W 1/4 - 1/2 (0.368 mi.)		F30	42
Status: Completed - Case Closed				
THOUSAND OAKS CHEVRON	1201 THOUSAND OAKS BLVD W 1/4 - 1/2 (0.370 mi.)		F31	44
<b>EXXON #7-3548</b>	<b>1201 THOUSAND OAKS BLVD W 1/4 - 1/2 (0.370 mi.)</b>		<b>F33</b>	<b>44</b>
Status: Completed - Case Closed				
Status: Completed - Case Closed				
SHELL	1195 THOUSAND OAKS BLVD W 1/4 - 1/2 (0.387 mi.)		F37	53
Status: Completed - Case Closed				
SHELL SS - THOUSAND OAKS (FORM	1195 THOUSAND OAKS BLVD W 1/4 - 1/2 (0.387 mi.)		F39	55
SHELL SS - THOUSAND OAKS (FORM	1195 THOUSAND OAKS BLVD W 1/4 - 1/2 (0.387 mi.)		F40	55
Status: Open - Verification Monitoring				
<b>CHEVRON</b>	<b>1180 THOUSAND OAKS BLVD W 1/4 - 1/2 (0.395 mi.)</b>		<b>F42</b>	<b>59</b>
Status: Completed - Case Closed				
ARMSTRONG NURSERY / FORMER SIN	928 THOUSAND OAKS BLVD WNW 1/2 - 1 (0.613 mi.)		L73	97
INDEPENDENT VOLKSWAGON REPAIR	851 THOUSAND OAKS BLVD W 1/2 - 1 (0.674 mi.)		L81	110
Status: Completed - Case Closed				

## EXECUTIVE SUMMARY

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>CAL-U-RENT</b> Status: Open - Remediation	<b>661 THOUSAND OAKS BLVD</b>	<b>W 1/2 - 1 (0.820 mi.)</b>	<b>O101</b>	<b>136</b>
<b>ALDON INVESTMENTS</b> Status: Completed - Case Closed	<b>72 MOODY COURT</b>	<b>W 1/2 - 1 (0.853 mi.)</b>	<b>O104</b>	<b>141</b>
<b>ABANDONED GAS STATION</b> Status: Completed - Case Closed	<b>602 THOUSAND OAKS BLVD</b>	<b>W 1/2 - 1 (0.904 mi.)</b>	<b>R113</b>	<b>150</b>
<b>UNOCAL</b> Status: Completed - Case Closed	<b>420 THOUSAND OAKS BLVD</b>	<b>W 1 - 2 (1.028 mi.)</b>	<b>T124</b>	<b>163</b>
<b>UNOCAL #6081</b> Status: Completed - Case Closed	<b>420 THOUSAND OAKS BL</b>	<b>W 1 - 2 (1.028 mi.)</b>	<b>T126</b>	<b>170</b>
<b>FOUR-N-HAUS</b> Status: Completed - Case Closed	<b>389 THOUSAND OAKS BLVD</b>	<b>W 1 - 2 (1.085 mi.)</b>	<b>T152</b>	<b>212</b>
<b>RUBBER DUCK TIRE &amp; AUTO CENTER</b> Status: Completed - Case Closed	<b>299 THOUSAND OAKS BL</b>	<b>W 1 - 2 (1.175 mi.)</b>	<b>X173</b>	<b>242</b>
<b>GTE</b> Status: Completed - Case Closed	<b>50 PARKER</b>	<b>W 1 - 2 (1.177 mi.)</b>	<b>X176</b>	<b>245</b>
CHEVRON #9-7236 Status: Completed - Case Closed	101 THOUSAND OAKS BLVD	W 1 - 2 (1.355 mi.)	AD224	308
<b>TEXACO SS - THOUSAND OAKS</b> Status: Open - Remediation	<b>56 THOUSAND OAKS BLVD</b>	<b>W 1 - 2 (1.424 mi.)</b>	<b>AD245</b>	<b>338</b>
TEXACO SS - THOUSAND OAKS	56 THOUSAND OAKS BLVD	W 1 - 2 (1.424 mi.)	AD247	341
SHELL SS - MOORPARK	172 MOORPARK RD	W 1 - 2 (1.424 mi.)	AF248	341
Status: Completed - Case Closed				
SHELL SS - MOORPARK	172 MOORPARK RD	W 1 - 2 (1.424 mi.)	AF249	343
SHELL OIL	172 MOORPARK RD	W 1 - 2 (1.424 mi.)	AF252	345
Status: Completed - Case Closed				
MOBIL OIL S/S #11-GYO	1 THOUSAND OAKS BL	W 1 - 2 (1.427 mi.)	AD255	350
<b>MOBIL OIL SS #11-GYO</b>	<b>1 THOUSAND OAKS BL</b>	<b>W 1 - 2 (1.427 mi.)</b>	<b>AD256</b>	<b>351</b>
Status: Completed - Case Closed				
Status: Completed - Case Closed				
TOSCO - 76 SS #5229	293 MOORPARK RD	W 1 - 2 (1.429 mi.)	AG266	359
Status: Completed - Case Closed				
UNOCAL #5229 (FORMER TOSCO - 7	293 MOORPARK RD	WNW 1 - 2 (1.435 mi.)	AH272	366
<b>CHEVRON #9-7157</b>	<b>398 MOORPARK RD</b>	<b>WNW 1 - 2 (1.441 mi.)</b>	<b>AI277</b>	<b>369</b>
Status: Completed - Case Closed				
JANSS CAR WASH	467 MOORPARK RD	WNW 1 - 2 (1.454 mi.)	AI281	373
Status: Open - Verification Monitoring				
<b>UNOCAL #4687</b>	<b>550 MOORPARK RD</b>	<b>WNW 1 - 2 (1.464 mi.)</b>	<b>AK290</b>	<b>387</b>
Status: Open - Remediation				
<b>ARCO #1695</b>	<b>600 MOORPARK RD</b>	<b>WNW 1 - 2 (1.476 mi.)</b>	<b>AK295</b>	<b>394</b>
Status: Open - Remediation				
EXXON #7-3416	595 MOORPARK RD	WNW 1 - 2 (1.483 mi.)	AK297	398
<b>EXXON #7-3416</b>	<b>595 MOORPARK RD</b>	<b>WNW 1 - 2 (1.483 mi.)</b>	<b>AK298</b>	<b>399</b>
Status: Open - Site Assessment				
<b>LINCOLN OAKS CORPORATE CENTER</b>	<b>225 HILLCREST DR #300</b>	<b>W 1 - 2 (1.775 mi.)</b>	<b>347</b>	<b>492</b>
Status: Completed - Case Closed				
EXXON #7-2872 (FORMER)	1596 MOORPARK RD	NNW 1 - 2 (1.802 mi.)	AV350	497
Status: Completed - Case Closed				

## EXECUTIVE SUMMARY

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>USA PETROLEUM SS #256</b> Status: Open - Remediation	<b>1640 MOORPARK RD</b>	<b>NNW 1 - 2 (1.833 mi.)</b>	<b>AV351</b>	<b>499</b>
<b>PARK OAKS SHOPPING CENTER</b> VCO FIRE STN #30 Status: Open - Verification Monitoring	<b>1790 MOORPARK RD, NORTH</b> 325 HILLCREST DR	<b>NNW 1 - 2 (1.941 mi.)</b> WNW 1 - 2 (1.994 mi.)	<b>AW354</b> 357	<b>502</b> 507

SLIC: SLIC Region comes from the California Regional Water Quality Control Board.

A review of the SLIC list, as provided by EDR, and dated 02/05/2010 has revealed that there are 14 SLIC sites within approximately 2 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
AL PIANO	2594 THOUSAND OAKS	ESE 1/2 - 1 (0.690 mi.)	M85	114
<b>AL PIANO/FORMER THRIFTY CAR RE</b> Facility Status: Completed - Case Closed Facility Status: Completed - Case Closed	<b>2594 THOUSAND OAKS BLVD</b>	<b>ESE 1/2 - 1 (0.690 mi.)</b>	<b>M88</b>	<b>116</b>
<b>OAKS AUTO CENTER</b> Facility Status: Completed - Case Closed	<b>3209 THOUSAND OAKS BLVD</b>	<b>SE 1 - 2 (1.154 mi.)</b>	<b>V164</b>	<b>230</b>
WILLOW WESTLAKE Facility Status: Completed - Case Closed	3500 WILLOW LANE	SE 1 - 2 (1.347 mi.)	AB220	304
EVERGREEN CLEANERS	3745 THOUSAND OAKS	SE 1 - 2 (1.636 mi.)	AN320	438
EVERGREEN CLEANERS Facility Status: Completed - Case Closed	3745 E. THOUSAND OAKS B	SE 1 - 2 (1.636 mi.)	AN324	449

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
JIM DANDY CLEANERS - NORTHSTAR Facility Status: Open - Verification Monitoring	1321-1345 EAST THOUSAND	W 1/4 - 1/2 (0.289 mi.)	D20	30
ARMSTRONG NURSERY / FORMER SIG Facility Status: Completed - Case Closed	928 THOUSAND OAKS BLVD	WNW 1/2 - 1 (0.613 mi.)	L74	98
<b>VILLAGE CLEANERS</b>	<b>235 N MOORPARK RD</b>	<b>W 1 - 2 (1.434 mi.)</b>	<b>AF269</b>	<b>363</b>
VILLAGE CLEANERS Facility Status: Open	235 N. MOORPARK RD	W 1 - 2 (1.434 mi.)	AF271	365
MR. CLEANERS (FORMER)	386 MOORPARK	WNW 1 - 2 (1.439 mi.)	AI274	369
MR. CLEANERS (FORMER) Facility Status: Completed - Case Closed	386 N. MOORPARK RD	WNW 1 - 2 (1.439 mi.)	AI275	369
SUNBELT DRYCLEANER Facility Status: Completed - Case Closed	716 MOORPARK ROAD, NORTH	WNW 1 - 2 (1.509 mi.)	AL303	406
<b>PARK OAKS SHOPPING CENTER</b> Facility Status: Completed - Case Closed	<b>1790 MOORPARK RD, NORTH</b>	<b>NNW 1 - 2 (1.941 mi.)</b>	<b>AW354</b>	<b>502</b>

## EXECUTIVE SUMMARY

### State and tribal registered storage tank lists

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the State Water Resources Control Board's Hazardous Substance Storage Container Database.

A review of the UST list, as provided by EDR, and dated 02/05/2010 has revealed that there are 82 UST sites within approximately 1.75 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
ZUNIGA, MARTHA	1710 THOUSAND OAKS BLVD	S 0 - 1/8 (0.007 mi.)	A1	8
<b>TUNE UP FACTORY</b>	<b>1695 THOUSAND OAKS BLVDN 0 - 1/8 (0.011 mi.)</b>		<b>A2</b>	<b>8</b>
ARCO #9614	1715 THOUSAND OAKS BLVD	ESE 0 - 1/8 (0.027 mi.)	A6	12
TORCH	67 ERBES ROAD	NE 0 - 1/8 (0.087 mi.)	10	20
HEGGEN, ROBERT D	1964 THOUSAND OAKS BLVD	SE 1/8 - 1/4 (0.200 mi.)	C13	23
BO-CAP AUTOMOTIVE	1998 THOUSAND OAKS BLVD	SE 1/4 - 1/2 (0.261 mi.)	C18	27
<b>PEP BOYS #739</b>	<b>2099 EAST THOUSAND OAKS ESE 1/4 - 1/2 (0.313 mi.)</b>		<b>E24</b>	<b>33</b>
<b>PETER NEUMANN</b>	<b>2141 THOUSAND OAKS BLVDESE 1/4 - 1/2 (0.339 mi.)</b>		<b>E26</b>	<b>40</b>
CHEVRON 92832	2321 THOUSAND OAKS BLVD	ESE 1/4 - 1/2 (0.452 mi.)	G48	64
WILMA PACIFIC INC.	2310 THOUSAND OAKS BLVD	ESE 1/4 - 1/2 (0.494 mi.)	G55	71
CONEJO ELEMENTARY SCHOOL	280 CONEJO SCHOOL ROAD	E 1/2 - 1 (0.510 mi.)	H59	80
<b>UNOCAL #5126</b>	<b>2378 THOUSAND OAKS BLVDESE 1/2 - 1 (0.513 mi.)</b>		<b>G61</b>	<b>81</b>
TOYOTA OF THOUSAND OAKS	2401 THOUSAND OAKS BL	ESE 1/2 - 1 (0.515 mi.)	G65	90
CONEJO REC. & PARKS DIST.	290 CONEJO SCHOOL ROAD	SSE 1/2 - 1 (0.523 mi.)	J68	93
THOUSAND OAKS VALERO	2473 E. THOUSAND OAKS B	ESE 1/2 - 1 (0.596 mi.)	K69	93
<b>T.O. AMERICAN GAS &amp; MINI MART</b>	<b>2473 E THOUSAND OAKS BL ESE 1/2 - 1 (0.596 mi.)</b>		<b>K72</b>	<b>97</b>
CAL AMERICAN	2439 HILLCREST DRIVE	E 1/2 - 1 (0.677 mi.)	83	112
<b>AL PIANO NISSAN</b>	<b>2594 THOUSAND OAKS BLVDESE 1/2 - 1 (0.690 mi.)</b>		<b>M87</b>	<b>114</b>
SHELL STATION	2658 THOUSAND OAKS BLVD	ESE 1/2 - 1 (0.732 mi.)	M91	121
<b>KEMIK AUTO SCRUBBER</b>	<b>2725 THOUSAND OAKS BLVDESE 1/2 - 1 (0.778 mi.)</b>		<b>N96</b>	<b>127</b>
MOSHI SILAGI	2865 THOUSAND OAKS BLVD	ESE 1/2 - 1 (0.871 mi.)	Q109	147
<b>JIFFY LUBE #0681</b>	<b>2905 THOUSAND OAKS BLVDESE 1/2 - 1 (0.906 mi.)</b>		<b>Q114</b>	<b>151</b>
<b>TEXACO WEST (DENVER)</b>		<b>ESE 1 - 2 (1.007 mi.)</b>	<b>S119</b>	<b>158</b>
ALLIANCE THOUSAND OAKS (USA)	3050 E THOUSAND OAKS BL	ESE 1 - 2 (1.008 mi.)	S122	161
LEN AIR CONDITIONING/HEATING I	3031 LOS FELIZ DR	ESE 1 - 2 (1.053 mi.)	U132	183
MIKE PLY 76	3102 E. THOUSAND OAKS B	SE 1 - 2 (1.061 mi.)	S137	190
<b>WESTLAKE AUTO CARE CENTER</b>	<b>3111 E THOUSAND OAKS BL SE 1 - 2 (1.068 mi.)</b>		<b>S141</b>	<b>194</b>
CHEVRON USA	3199 WILLOWS LANE	SE 1 - 2 (1.094 mi.)	W154	217
1000 OAKS WERKSTATT	3177 THOUSAND OAKS BLVD	SE 1 - 2 (1.126 mi.)	V156	218
G.I. EQUIPMENT LEASING	3185 THOUSAND OAKS BLVD	SE 1 - 2 (1.133 mi.)	V158	221
<b>OAKS AUTO CENTER</b>	<b>3209 THOUSAND OAKS BLVDESE 1 - 2 (1.154 mi.)</b>		<b>V164</b>	<b>230</b>
<b>JB'S ELECTRA TUNE</b>	<b>3169 LOS FELIZ DR ESE 1 - 2 (1.180 mi.)</b>		<b>Y177</b>	<b>247</b>
K. E. CURTIS CONST. CO.	3170 LOS FELIZ DR	ESE 1 - 2 (1.182 mi.)	Y180	250
VENTURA CO FIRE PROTECTION DS	151 DUESENBERG DRIVE	ESE 1 - 2 (1.197 mi.)	Y185	254
HOLMAN, JOHN	3302 THOUSAND OAKS BLVD	SE 1 - 2 (1.235 mi.)	Z190	263
K-MART CORP.	325 HAMPSHIRE ROAD	SE 1 - 2 (1.247 mi.)	AA191	264
WASH DEPOT	3369 THOUSAND OAKS BLVD	SE 1 - 2 (1.282 mi.)	Z196	269
<b>SCOTTY'S BODY SHOP</b>	<b>3400 SUNSET DR SE 1 - 2 (1.294 mi.)</b>		<b>AB200</b>	<b>277</b>
SHELL OIL CO.	395 HAMPSHIRE	SE 1 - 2 (1.308 mi.)	AA205	289
<b>GERMAN PRESTIGE AUTO</b>	<b>3440 AUTO MALL DR SE 1 - 2 (1.323 mi.)</b>		<b>AC208</b>	<b>290</b>
UNITED STATES POSTAL SERVICE	3435 THOUSAND OAKS BLVD	SE 1 - 2 (1.326 mi.)	AC211	293
U S POSTAL SERVICE	3435 E THOUSAND OAKS BL	SE 1 - 2 (1.326 mi.)	AC212	293
TOPA EQUITIES	3440 THOUSAND OAKS BLVD	SE 1 - 2 (1.330 mi.)	AC216	297
<b>WESTLAKE VOLVO/VW</b>	<b>3550 AUTO MALL DR SE 1 - 2 (1.358 mi.)</b>		<b>AC226</b>	<b>313</b>
SILVER STAR MOTOR CAR CO	3601 AUTO MALL DR	SE 1 - 2 (1.374 mi.)	AC229	320
SOUTHERN CALIFORNIA EDISON	3589 FOOTHILL DR	SE 1 - 2 (1.393 mi.)	AE234	324
UNITED PARCEL SERVICE	2251 TOWNSGATE ROAD	SE 1 - 2 (1.419 mi.)	AE242	336

## EXECUTIVE SUMMARY

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
<b>COURTESY CHEVROLET BODY SHOP I</b>	<b>3610 THOUSAND OAKS BLVD</b>	<b>SE 1 - 2 (1.456 mi.)</b>	<b>AJ285</b>	<b>380</b>
<b>LADIN LINCOLN MERCURY</b>	<b>3725 DUESENBERG DRIVE</b>	<b>SE 1 - 2 (1.559 mi.)</b>	<b>AM307</b>	<b>412</b>
<b>BUICK-GMC TRUCK OF TH. OAKS</b>	<b>3755 AUTO MALL DR</b>	<b>SE 1 - 2 (1.615 mi.)</b>	<b>AM312</b>	<b>417</b>
<b>JAFRA COSMETICS INT</b>	<b>2451 TOWNSGATE RD</b>	<b>SE 1 - 2 (1.629 mi.)</b>	<b>AP317</b>	<b>428</b>
<b>KEMP FORD</b>	<b>3810 THOUSAND OAKS BLVD</b>	<b>SE 1 - 2 (1.684 mi.)</b>	<b>AN330</b>	<b>461</b>
<b>RUSNAK WESTLAKE</b>	<b>3832 THOUSAND OAKS BLVD</b>	<b>SE 1 - 2 (1.713 mi.)</b>	<b>AT339</b>	<b>478</b>
<b>WESTOAKS CHRYSLER PLYMOUTH</b>	<b>3839 AUTO MALL DR</b>	<b>SE 1 - 2 (1.748 mi.)</b>	<b>AU345</b>	<b>490</b>
Lower Elevation	Address	Direction / Distance	Map ID	Page
ROY HOOVER	1344 THOUSAND OAKS BLVD	W 1/4 - 1/2 (0.259 mi.)	D15	25
PACIFIC TELEPHONE	60 CUNNINGHAM	W 1/4 - 1/2 (0.309 mi.)	D21	30
GTE CALIFORNIA	1204 THOUSAND OAKS BLVD	W 1/4 - 1/2 (0.354 mi.)	F27	41
THOUSAND OAKS CHEVRON	1201 E. THOUSAND OAKS B	W 1/4 - 1/2 (0.370 mi.)	F32	44
SHELL OIL CO (2)	1195 THOUSAND OAKS BLVD	W 1/4 - 1/2 (0.387 mi.)	F38	54
CHEVRON #95246	1180 THOUSAND OAKS BLVD	W 1/4 - 1/2 (0.400 mi.)	F44	61
<b>FIRESTONE STORE #2791</b>	<b>1100 THOUSAND OAKS BLVD</b>	<b>W 1/4 - 1/2 (0.487 mi.)</b>	<b>I53</b>	<b>70</b>
<b>SHELLEY PRECISION AUTO</b>	<b>901 THOUSAND OAKS BLVD</b>	<b>WNW 1/2 - 1 (0.644 mi.)</b>	<b>L77</b>	<b>104</b>
INDEPENDENT VOLKSWAGEN REPAI	851 THOUSAND OAKS BLVD	W 1/2 - 1 (0.674 mi.)	L82	112
CAL U RENT	661 THOUSAND OAKS BLVD	W 1/2 - 1 (0.820 mi.)	O100	136
<b>ALDON INVESTMENTS</b>	<b>72 MOODY COURT</b>	<b>W 1/2 - 1 (0.853 mi.)</b>	<b>O104</b>	<b>141</b>
KURT RALSTON	602 THOUSAND OAKS BLVD	W 1/2 - 1 (0.904 mi.)	R111	149
CONEJO VALLEY 76 #256081	420 E. THOUSAND OAKS BL	W 1 - 2 (1.028 mi.)	T127	172
<b>FOUR-N-HAUS</b>	<b>389 THOUSAND OAKS BLVD</b>	<b>W 1 - 2 (1.085 mi.)</b>	<b>T152</b>	<b>212</b>
<b>RUBBER DUCK TIRE &amp; AUTO CENTE</b>	<b>299 THOUSAND OAKS BLVD</b>	<b>W 1 - 2 (1.175 mi.)</b>	<b>X171</b>	<b>241</b>
<b>GTE</b>	<b>50 PARKER</b>	<b>W 1 - 2 (1.177 mi.)</b>	<b>X176</b>	<b>245</b>
CHEVRON USA PRODUCTS	101 THOUSAND OAKS BLVD	W 1 - 2 (1.355 mi.)	AD222	306
OAKS SHELL CENTER #121403	56 E. THOUSAND OAKS BLV	W 1 - 2 (1.424 mi.)	AD244	337
THOUSAND OAKS SHELL (2)	172 MOORPARK RD.	W 1 - 2 (1.424 mi.)	AF250	343
<b>CITY OF THOUSAND OAKS</b>	<b>299 MOORPARK RD</b>	<b>W 1 - 2 (1.427 mi.)</b>	<b>AG257</b>	<b>353</b>
MOBIL	1 THOUSAND OAKS BLVD	W 1 - 2 (1.428 mi.)	AD259	354
ROLLING OAKS 76 #255229	293 S. MOORPARK RD.	W 1 - 2 (1.429 mi.)	AG262	357
CHEVRON #97157	398 MOORPARK RD	WNW 1 - 2 (1.441 mi.)	AI276	369
WASH DEPOT IV, INC.	467 N MOORPARK RD	WNW 1 - 2 (1.454 mi.)	AI280	372
UNOCAL CORP.	550 MOORPARK RD	WNW 1 - 2 (1.464 mi.)	AK289	386
ARCO #1695/SMOG PROS	600 N MOORPARK RD	WNW 1 - 2 (1.476 mi.)	AK293	393
EXXON CO. USA	595 MOORPARK RD	WNW 1 - 2 (1.483 mi.)	AK299	400
CONEJO BOWL	125 THOUSAND OAKS BLVD	W 1 - 2 (1.695 mi.)	AO331	470

AST: The Aboveground Storage Tank database contains registered ASTs. The data come from the State Water Resources Control Board's Hazardous Substance Storage Container Database.

A review of the AST list, as provided by EDR, and dated 08/01/2009 has revealed that there are 8 AST sites within approximately 1.75 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
<b>THOUSAND OAKS TOYOTA</b>	<b>2401 E THOUSAND OAKS BL</b>	<b>ESE 1/2 - 1 (0.515 mi.)</b>	<b>G66</b>	<b>90</b>
<b>WESTLAKE VOLVO/VW</b>	<b>3550 AUTO MALL DR</b>	<b>SE 1 - 2 (1.358 mi.)</b>	<b>AC226</b>	<b>313</b>
<b>SILVER STAR MOTOR CAR CO</b>	<b>3601 AUTO MALL DR</b>	<b>SE 1 - 2 (1.374 mi.)</b>	<b>AC228</b>	<b>316</b>
<b>SO CAL EDISON-1000 OAKS DIST O</b>	<b>3589 FOOTHILL DR</b>	<b>SE 1 - 2 (1.393 mi.)</b>	<b>AE233</b>	<b>324</b>
<b>COURTESY CHEVROLET BODY SHOP I</b>	<b>3610 THOUSAND OAKS BLVD</b>	<b>SE 1 - 2 (1.456 mi.)</b>	<b>AJ285</b>	<b>380</b>
<b>LADIN LINCOLN MERCURY</b>	<b>3725 DUESENBERG DRIVE</b>	<b>SE 1 - 2 (1.559 mi.)</b>	<b>AM307</b>	<b>412</b>
<b>BUICK-GMC TRUCK OF TH. OAKS</b>	<b>3755 AUTO MALL DR</b>	<b>SE 1 - 2 (1.615 mi.)</b>	<b>AM312</b>	<b>417</b>
<b>KEMP FORD</b>	<b>3810 THOUSAND OAKS BLVD</b>	<b>SE 1 - 2 (1.684 mi.)</b>	<b>AN330</b>	<b>461</b>

## EXECUTIVE SUMMARY

### ***State and tribal voluntary cleanup sites***

VCP: Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

A review of the VCP list, as provided by EDR, and dated 02/08/2010 has revealed that there is 1 VCP site within approximately 2 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>ROSEN PROPERTY</b>	<b>236 QUAILS TRAIL</b>	<b>W 1 - 2 (1.287 mi.)</b>	<b>199</b>	<b>274</b>

### **ADDITIONAL ENVIRONMENTAL RECORDS**

### ***Local Lists of Landfill / Solid Waste Disposal Sites***

SWRCY: A listing of recycling facilities in California.

A review of the SWRCY list, as provided by EDR, and dated 12/18/2009 has revealed that there are 3 SWRCY sites within approximately 2 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
TOMRA PACIFIC INC	3963 E THOUSAND OAKS BL	SE 1 - 2 (1.894 mi.)	352	500
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>WHOLE FOODS MARKET INC</b>	<b>740 N MOORPARK RD</b>	<b>WNW 1 - 2 (1.517 mi.)</b>	<b>AL304</b>	<b>407</b>
TOMRA PACIFIC INC	1332 N MOORPARK RD	NW 1 - 2 (1.707 mi.)	AS334	471

### ***Local Lists of Hazardous waste / Contaminated Sites***

SCH: This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category. depending on the level of threat to public health and safety or the environment they pose.

A review of the SCH list, as provided by EDR, and dated 02/08/2010 has revealed that there is 1 SCH site within approximately 1.75 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>COMMUNITY LEARNING CENTER</b>	<b>1400 EAST JANSS ROAD</b>	<b>N 1 - 2 (1.473 mi.)</b>	<b>291</b>	<b>388</b>

### ***Local Lists of Registered Storage Tanks***

CA FID UST: The Facility Inventory Database contains active and inactive underground storage tank locations. The source is the State Water Resource Control Board.

A review of the CA FID UST list, as provided by EDR, and dated 10/31/1994 has revealed that there are

## EXECUTIVE SUMMARY

28 CA FID UST sites within approximately 1.75 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>THRIFTY OIL</b>	<b>1715 THOUSAND OAKS BLVDESE 0 - 1/8 (0.027 mi.)</b>		<b>A7</b>	<b>12</b>
<b>PEP BOYS OF CALIFORNIA</b>	<b>2099 THOUSAND OAKS BLVDESE 1/4 - 1/2 (0.313 mi.)</b>		<b>E22</b>	<b>30</b>
<b>FAST GAS</b>	<b>2473 THOUSAND OAKS BLVDESE 1/2 - 1 (0.596 mi.)</b>		<b>K71</b>	<b>94</b>
<b>SHELL OIL CO</b>	<b>2658 THOUSAND OAKS ESE 1/2 - 1 (0.732 mi.)</b>		<b>M92</b>	<b>122</b>
<b>JIFFY LUBE</b>	<b>2905 THOUSAND OAKS BL ESE 1/2 - 1 (0.906 mi.)</b>		<b>Q116</b>	<b>152</b>
<b>EXXON SERVICE STATION</b>	<b>2995 THOUSAND OAKS BLVDESE 1/2 - 1 (0.996 mi.)</b>		<b>S118</b>	<b>157</b>
<b>TEXACO #61-106-007</b>	<b>3050 THOUSAND OAKS BLVDESE 1 - 2 (1.008 mi.)</b>		<b>S123</b>	<b>161</b>
<b>LEN AIR CONDITIONING</b>	<b>3031 LOS FELIZ DR ESE 1 - 2 (1.053 mi.)</b>		<b>U133</b>	<b>183</b>
<b>MOBIL OIL CORP #11-KP6</b>	<b>3102 E THOUSAND OAKS BL SE 1 - 2 (1.061 mi.)</b>		<b>S136</b>	<b>187</b>
<b>WESTLAKE AUTO CARE CENTER</b>	<b>3111 E THOUSAND OAKS BL SE 1 - 2 (1.068 mi.)</b>		<b>S143</b>	<b>197</b>
<b>OAKS AUTO CENTER</b>	<b>3209 THOUSAND OAKS BLVD SE 1 - 2 (1.154 mi.)</b>		<b>V165</b>	<b>233</b>
<b>EXXON #73089</b>	<b>225 HAMPSHIRE RD SE 1 - 2 (1.167 mi.)</b>		<b>W166</b>	<b>234</b>
<b>FIRE STATION #31</b>	<b>151 DUESENBERG DR ESE 1 - 2 (1.197 mi.)</b>		<b>Y183</b>	<b>252</b>
<b>SHELL #20478121104</b>	<b>395 HAMPSHIRE RD SE 1 - 2 (1.308 mi.)</b>		<b>AA202</b>	<b>284</b>
<b>GERMAN PRESTIGE AUTOS</b>	<b>3440 DUESENBERG DR SE 1 - 2 (1.322 mi.)</b>		<b>AC206</b>	<b>289</b>
<b>U.S. POSTAL SERVICE</b>	<b>3435 E THOUSAND OAKS BL SE 1 - 2 (1.326 mi.)</b>		<b>AC210</b>	<b>292</b>
<b>WESTLAKE VOLVO</b>	<b>3550 DUESENBERG LN SE 1 - 2 (1.358 mi.)</b>		<b>AC225</b>	<b>309</b>
<b>WESTLAKE CENTER</b>	<b>2251 TOWNSGATE RD SE 1 - 2 (1.419 mi.)</b>		<b>AE241</b>	<b>335</b>
<b>LADIN LINCOLN MERCURY</b>	<b>3725 DUESENBERG DR SE 1 - 2 (1.559 mi.)</b>		<b>AM306</b>	<b>410</b>
<b>SILVER STAR GMC</b>	<b>3755 DUESENBERG DR SE 1 - 2 (1.615 mi.)</b>		<b>AM310</b>	<b>415</b>
<b>RUSNAK PORSCHE AUDI</b>	<b>3832 THOUSAND OAKS BLVD SE 1 - 2 (1.713 mi.)</b>		<b>AT338</b>	<b>476</b>
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>GENERAL TELEPHONE</b>	<b>1205 THOUSAND OAKS BLVD W 1/4 - 1/2 (0.368 mi.)</b>		<b>F29</b>	<b>41</b>
<b>EXXON #7-3548</b>	<b>1201 THOUSAND OAKS BLVD W 1/4 - 1/2 (0.370 mi.)</b>		<b>F33</b>	<b>44</b>
<b>NEFTIN CARS INC.</b>	<b>299 E THOUSAND OAKS BLV W 1 - 2 (1.175 mi.)</b>		<b>X170</b>	<b>240</b>
<b>GENERAL TELEPHONE</b>	<b>50 S PARKER AVE W 1 - 2 (1.177 mi.)</b>		<b>X175</b>	<b>244</b>
<b>MOBIL OIL CORP #11-GYO</b>	<b>1 E THOUSAND OAKS BLVD W 1 - 2 (1.430 mi.)</b>		<b>AD267</b>	<b>361</b>
<b>JANSS MALL CAR WASH</b>	<b>467 N MOORPARK RD WNW 1 - 2 (1.454 mi.)</b>		<b>AI282</b>	<b>374</b>
<b>ARCO #1695-12</b>	<b>600 MOORPARK RD WNW 1 - 2 (1.476 mi.)</b>		<b>AK292</b>	<b>391</b>

HIST UST: Historical UST Registered Database.

A review of the HIST UST list, as provided by EDR, and dated 10/15/1990 has revealed that there are 63 HIST UST sites within approximately 1.75 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>ARCO STN. #211</b>	<b>1715 E THOUSAND OAKS BL ESE 0 - 1/8 (0.027 mi.)</b>		<b>A3</b>	<b>9</b>
<b>BO CAP AUTO SERVICE</b>	<b>1998 E THOUSAND OAKS BL SE 1/4 - 1/2 (0.261 mi.)</b>		<b>C16</b>	<b>25</b>
<b>PETER NEUMANN</b>	<b>2141 THOUSAND OAKS BLVDESE 1/4 - 1/2 (0.339 mi.)</b>		<b>E26</b>	<b>40</b>
<b>92832</b>	<b>2321 E THOUSAND OAKS BL ESE 1/4 - 1/2 (0.452 mi.)</b>		<b>G47</b>	<b>63</b>
<b>UNOCAL #5126</b>	<b>2378 E THOUSAND OAKS BL ESE 1/2 - 1 (0.513 mi.)</b>		<b>G62</b>	<b>83</b>
<b>UNION OIL SERVICE STATION 5126</b>	<b>2378 E THOUSAND OAKS BL ESE 1/2 - 1 (0.513 mi.)</b>		<b>G63</b>	<b>85</b>
<b>THOUSAND OAKS TOYOTA</b>	<b>2401 E THOUSAND OAKS BL ESE 1/2 - 1 (0.515 mi.)</b>		<b>G66</b>	<b>90</b>
<b>CONEJO SERVICE YARD</b>	<b>290 CONEJO SCHOOL RD SSE 1/2 - 1 (0.523 mi.)</b>		<b>J67</b>	<b>92</b>
<b>FAST GAS</b>	<b>2473 E THOUSAND OAKS BL ESE 1/2 - 1 (0.596 mi.)</b>		<b>K70</b>	<b>93</b>
<b>EUGENE &amp; DONALD BOLES</b>	<b>2658 E THOUSAND OAKS BL ESE 1/2 - 1 (0.732 mi.)</b>		<b>M90</b>	<b>120</b>
<b>KEMIK AUTO SCRUBBER</b>	<b>2725 THOUSAND OAKS BLVDESE 1/2 - 1 (0.778 mi.)</b>		<b>N96</b>	<b>127</b>
<b>BRUCE DECKER</b>	<b>339 S SKYLINE DR SSE 1/2 - 1 (0.837 mi.)</b>		<b>102</b>	<b>139</b>
<b>VEARL C. DECKER</b>	<b>446 S SKYLINE DR SSE 1/2 - 1 (0.858 mi.)</b>		<b>P107</b>	<b>146</b>
<b>DECKER RANCH</b>	<b>446 S SKYLINE DR SSE 1/2 - 1 (0.858 mi.)</b>		<b>P108</b>	<b>147</b>
<b>AUTO LUBE CARE</b>	<b>2905 E THOUSAND OAKS BL ESE 1/2 - 1 (0.906 mi.)</b>		<b>Q115</b>	<b>152</b>

## EXECUTIVE SUMMARY

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
<b>THOUSAND OAKS TRANSMISSION</b>	<b>3043 E THOUSAND OAKS BL</b>	<b>ESE 1 - 2 (1.043 mi.)</b>	<b>S128</b>	<b>172</b>
<b>LEN AIR CONDITIONING</b>	<b>3031 LOS FELIZ DR</b>	<b>ESE 1 - 2 (1.053 mi.)</b>	<b>U134</b>	<b>183</b>
R. JOHN BAILEY #14-614	3102 THOUSAND OAKS	SE 1 - 2 (1.060 mi.)	S135	186
R.J. BAILEY MOBIL	3102 E THOUSAND OAKS BL	SE 1 - 2 (1.061 mi.)	S139	192
92892	3199 WILLOW LN	SE 1 - 2 (1.148 mi.)	W160	224
EXXON SERVICE STATION	225 HAMPSHIRE RD	SE 1 - 2 (1.167 mi.)	W168	237
K.E. CURTIS CONSTRUCTION CO.,	3170 LOS FELIZ DR	ESE 1 - 2 (1.182 mi.)	Y182	252
WESTLAKE FIRE STATION	151 DUESENBERG DR	ESE 1 - 2 (1.197 mi.)	Y184	254
<b>KMART ENTERPRISES</b>	<b>325 HAMPSHIRE RD</b>	<b>SE 1 - 2 (1.247 mi.)</b>	<b>AA193</b>	<b>265</b>
<b>VILLAGE CAR WASH</b>	<b>3369 E THOUSAND OAKS BL</b>	<b>SE 1 - 2 (1.282 mi.)</b>	<b>Z198</b>	<b>273</b>
SHELL OIL COMPANY	395 HAMPSHIRE RD	SE 1 - 2 (1.308 mi.)	AA204	288
THOUSAND OAKS POST OFFICE	3435 E THOUSAND OAKS BL	SE 1 - 2 (1.326 mi.)	AC213	293
<b>SILVER STAR</b>	<b>3440 E THOUSAND OAKS BL</b>	<b>SE 1 - 2 (1.330 mi.)</b>	<b>AC217</b>	<b>297</b>
<b>NESEN MOTOR CAR CO</b>	<b>3601 DUESENBERG DR</b>	<b>SE 1 - 2 (1.375 mi.)</b>	<b>AC232</b>	<b>322</b>
<b>THOUSAND OAKS SERVICE CENTER</b>	<b>3589 FOOTHILL DR</b>	<b>SE 1 - 2 (1.393 mi.)</b>	<b>AE237</b>	<b>327</b>
WESTLAKE CENTER	2251 TOWNSGATE RD	SE 1 - 2 (1.419 mi.)	AE240	334
<b>COURTESY CHEVROLET</b>	<b>3610 THOUSAND OAKS BLVD</b>	<b>SE 1 - 2 (1.456 mi.)</b>	<b>AJ284</b>	<b>377</b>
WESTLAKE IMPORTS, INC.	3725 DUESENBERG DR	SE 1 - 2 (1.559 mi.)	AM308	414
SILVER STAR MERCEDES-BENZ, BUIC	3755 DUESENBERG DR	SE 1 - 2 (1.615 mi.)	AM309	415
<b>JAFRA COSMETICS INC.</b>	<b>2451 TOWNSGATE RD</b>	<b>SE 1 - 2 (1.629 mi.)</b>	<b>AP319</b>	<b>433</b>
KEMP FORD	3810 E THOUSAND OAKS BL	SE 1 - 2 (1.684 mi.)	AN329	460
<b>KEMP FORD</b>	<b>3810 THOUSAND OAKS BLVD</b>	<b>SE 1 - 2 (1.684 mi.)</b>	<b>AN330</b>	<b>461</b>
<b>RUSNAK/WESTLAKE PORSCHE-AUDI,</b>	<b>3832 E THOUSAND OAKS BL</b>	<b>SE 1 - 2 (1.713 mi.)</b>	<b>AT336</b>	<b>473</b>
Lower Elevation	Address	Direction / Distance	Map ID	Page
FOREIGN CARRIAGE SERVICE	67 S RANCHO RD	W 1/4 - 1/2 (0.385 mi.)	F36	52
<b>SHELL #20478120106-RANCHO</b>	<b>1195 E THOUSAND OAKS BL</b>	<b>W 1/4 - 1/2 (0.387 mi.)</b>	<b>F41</b>	<b>56</b>
95246	1180 E THOUSAND OAKS BL	W 1/4 - 1/2 (0.400 mi.)	F43	60
<b>FIRESTONE STORE #2791</b>	<b>1100 THOUSAND OAKS BLVD</b>	<b>W 1/4 - 1/2 (0.487 mi.)</b>	<b>I53</b>	<b>70</b>
<b>INDEPENDENT REP. OF VOLKSWAGON</b>	<b>851 E THOUSAND OAKS BLV</b>	<b>W 1/2 - 1 (0.674 mi.)</b>	<b>L80</b>	<b>109</b>
<b>CAL U RENT</b>	<b>661 E THOUSAND OAKS BLV</b>	<b>W 1/2 - 1 (0.820 mi.)</b>	<b>O99</b>	<b>133</b>
<b>ALDON INVESTMENTS</b>	<b>72 MOODY COURT</b>	<b>W 1/2 - 1 (0.853 mi.)</b>	<b>O104</b>	<b>141</b>
GASCO SERVICE STATION #043	602 E THOUSAND OAKS BLV	W 1/2 - 1 (0.904 mi.)	R112	149
<b>UNOCAL</b>	<b>420 THOUSAND OAKS BLVD</b>	<b>W 1 - 2 (1.028 mi.)</b>	<b>T124</b>	<b>163</b>
<b>UNOCAL #6081</b>	<b>420 E THOUSAND OAKS BLV</b>	<b>W 1 - 2 (1.028 mi.)</b>	<b>T125</b>	<b>168</b>
<b>AUTO CENTER</b>	<b>389 E THOUSAND OAKS BLV</b>	<b>W 1 - 2 (1.085 mi.)</b>	<b>T150</b>	<b>211</b>
HORNBURG MOTORS INC.	299 E THOUSAND OAKS BLV	W 1 - 2 (1.175 mi.)	X172	242
97236	101 THOUSAND OAKS BLVD	W 1 - 2 (1.355 mi.)	AD221	305
TEXACO	56 E THOUSAND OAKS /	W 1 - 2 (1.398 mi.)	AD238	332
<b>SERVICE STATION 5229</b>	<b>293 S MOORPARK RD</b>	<b>W 1 - 2 (1.429 mi.)</b>	<b>AG260</b>	<b>354</b>
<b>JOHNS UNION 76</b>	<b>293 S MOORPARK RD</b>	<b>W 1 - 2 (1.429 mi.)</b>	<b>AG263</b>	<b>357</b>
UNION OIL SERVICE STATION 5229	293 S MOORPARK RD	W 1 - 2 (1.429 mi.)	AG265	359
KAMEL SAWALHA #14-289	#1 E. THOUSAND OAKS	W 1 - 2 (1.430 mi.)	AD268	362
97157	398 MOORPARK RD	WNW 1 - 2 (1.441 mi.)	AI278	371
UNION OIL #4687	550 N MOORPARK RD	WNW 1 - 2 (1.464 mi.)	AK287	384
<b>UNOCAL #4687</b>	<b>550 N MOORPARK RD</b>	<b>WNW 1 - 2 (1.464 mi.)</b>	<b>AK288</b>	<b>385</b>
ROY SHELLEY	600 N MOORPARK RD	WNW 1 - 2 (1.476 mi.)	AK294	393
<b>EXXON #73416</b>	<b>595 N MOORPARK RD</b>	<b>WNW 1 - 2 (1.483 mi.)</b>	<b>AK296</b>	<b>396</b>
<b>SEARS ROEBUCK &amp; CO.AUTO</b>	<b>145 W HILLCREST DR</b>	<b>W 1 - 2 (1.674 mi.)</b>	<b>AR327</b>	<b>455</b>
CONEJO VILLAGE BOWL	125 WEST THOUSAND OAKS	W 1 - 2 (1.695 mi.)	AO332	470



## EXECUTIVE SUMMARY

SWEEPS UST: Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

A review of the SWEEPS UST list, as provided by EDR, and dated 06/01/1994 has revealed that there are 50 SWEEPS UST sites within approximately 1.75 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
THRIFTY OIL	1715 THOUSAND OAKS BLVDESE 0 - 1/8 (0.027 mi.)		A7	12
PEP BOYS OF CALIFORNIA	2099 THOUSAND OAKS BLVDESE 1/4 - 1/2 (0.313 mi.)		E22	30
UNOCAL #5126	2378 E THOUSAND OAKS BL ESE 1/2 - 1 (0.513 mi.)		G62	83
THOUSAND OAKS TOYOTA	2401 E THOUSAND OAKS BL ESE 1/2 - 1 (0.515 mi.)		G66	90
FAST GAS	2473 THOUSAND OAKS BLVDESE 1/2 - 1 (0.596 mi.)		K71	94
SHELL OIL CO	2658 THOUSAND OAKS ESE 1/2 - 1 (0.732 mi.)		M92	122
JIFFY LUBE	2905 THOUSAND OAKS BL ESE 1/2 - 1 (0.906 mi.)		Q116	152
EXXON SERVICE STATION	2995 THOUSAND OAKS BLVDESE 1/2 - 1 (0.996 mi.)		S118	157
TEXACO #61-106-007	3050 THOUSAND OAKS BLVDESE 1 - 2 (1.008 mi.)		S123	161
THOUSAND OAKS TRANSMISSION	3043 E THOUSAND OAKS BL ESE 1 - 2 (1.043 mi.)		S128	172
LEN AIR CONDITIONING	3031 LOS FELIZ DR ESE 1 - 2 (1.053 mi.)		U134	183
MOBIL OIL CORP #11-KP6	3102 E THOUSAND OAKS BL SE 1 - 2 (1.061 mi.)		S136	187
WESTLAKE AUTO CARE CENTER	3111 E THOUSAND OAKS BL SE 1 - 2 (1.068 mi.)		S141	194
WERKSTATT	3177 THOUSAND OAKS BLVDSE 1 - 2 (1.126 mi.)		V157	219
OAKS AUTO CENTER	3209 THOUSAND OAKS BLVDSE 1 - 2 (1.154 mi.)		V164	230
EXXON #73089	225 HAMPSHIRE RD SE 1 - 2 (1.167 mi.)		W166	234
JB'S ELECTRA TUNE	3169 LOS FELIZ DR ESE 1 - 2 (1.180 mi.)		Y177	247
FIRE STATION #31	151 DUESENBERG DR ESE 1 - 2 (1.197 mi.)		Y183	252
VILLAGE CAR WASH	3369 THOUSAND OAKS BLVDSE 1 - 2 (1.282 mi.)		Z197	269
SHELL #20478121104	395 HAMPSHIRE RD SE 1 - 2 (1.308 mi.)		AA202	284
GERMAN PRESTIGE AUTOS	3440 DUESENBERG DR SE 1 - 2 (1.322 mi.)		AC206	289
U.S. POSTAL SERVICE	3435 E THOUSAND OAKS BL SE 1 - 2 (1.326 mi.)		AC210	292
SILVER STAR	3440 E THOUSAND OAKS BL SE 1 - 2 (1.330 mi.)		AC217	297
WESTLAKE VOLVO	3550 DUESENBERG LN SE 1 - 2 (1.358 mi.)		AC225	309
NESEN MOTOR CAR CO	3601 DUESENBERG DR SE 1 - 2 (1.375 mi.)		AC232	322
THOUSAND OAKS SERVICE CENTER	3589 FOOTHILL DR SE 1 - 2 (1.393 mi.)		AE237	327
WESTLAKE CENTER	2251 TOWNSGATE RD SE 1 - 2 (1.419 mi.)		AE241	335
COURTESY CHEVROLET	3610 THOUSAND OAKS BLVDSE 1 - 2 (1.456 mi.)		AJ284	377
LADIN LINCOLN MERCURY	3725 DUESENBERG DR SE 1 - 2 (1.559 mi.)		AM306	410
SILVER STAR GMC	3755 DUESENBERG DR SE 1 - 2 (1.615 mi.)		AM310	415
JAFRA COSMETICS INC.	2451 TOWNSGATE RD SE 1 - 2 (1.629 mi.)		AP319	433
KEMP FORD	3810 THOUSAND OAKS BLVDSE 1 - 2 (1.684 mi.)		AN330	461
RUSNAK PORSCHE AUDI	3832 THOUSAND OAKS BLVDSE 1 - 2 (1.713 mi.)		AT338	476
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
GENERAL TELEPHONE	1205 THOUSAND OAKS BLVD W 1/4 - 1/2 (0.368 mi.)		F29	41
EXXON #7-3548	1201 THOUSAND OAKS BLVD W 1/4 - 1/2 (0.370 mi.)		F33	44
SHELL #20478120106-RANCHO	1195 E THOUSAND OAKS BL W 1/4 - 1/2 (0.387 mi.)		F41	56
CAL U RENT	661 E THOUSAND OAKS BLV W 1/2 - 1 (0.820 mi.)		O99	133
UNOCAL #6081	420 E THOUSAND OAKS BLV W 1 - 2 (1.028 mi.)		T125	168
NEFTIN CARS INC.	299 E THOUSAND OAKS BLV W 1 - 2 (1.175 mi.)		X170	240
GENERAL TELEPHONE	50 S PARKER AVE W 1 - 2 (1.177 mi.)		X175	244
TEXACO STATION	56 E THOUSAND OAKS BLVD W 1 - 2 (1.424 mi.)		AD246	339
SHELL THOUSAND OAKS	172 N MOORPARK RD W 1 - 2 (1.424 mi.)		AF251	343
UNOCAL #5229	293 S MOORPARK BLVD W 1 - 2 (1.429 mi.)		AG261	356
MOBIL OIL CORP #11-GYO	1 E THOUSAND OAKS BLVD W 1 - 2 (1.430 mi.)		AD267	361
JANSS MALL CAR WASH	467 N MOORPARK RD WNW 1 - 2 (1.454 mi.)		AI282	374
UNOCAL #4687	550 N MOORPARK RD WNW 1 - 2 (1.464 mi.)		AK288	385

## EXECUTIVE SUMMARY

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
ARCO #1695-12	600 MOORPARK RD	WNW 1 - 2 (1.476 mi.)	AK292	391
EXXON #73416	595 N MOORPARK RD	WNW 1 - 2 (1.483 mi.)	AK296	396
CHEVRON 97236	101 W THOUSAND OAKS BLV	W 1 - 2 (1.628 mi.)	AO315	422
SEARS ROEBUCK & CO.AUTO	145 W HILLCREST DR	W 1 - 2 (1.674 mi.)	AR327	455

### Other Ascertainable Records

RCRA-NonGen: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

A review of the RCRA-NonGen list, as provided by EDR, and dated 01/13/2010 has revealed that there are 4 RCRA-NonGen sites within approximately 1.75 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
OAKS CLEANERS	2797 E THOUSAND OAKS BL	ESE 1/2 - 1 (0.812 mi.)	N97	130
VALLEY COMMERCIAL DISPOSAL COM	3159 THOUSAND OAKS BOULSE	1 - 2 (1.097 mi.)	V155	217
TERADYNE INC	3500 WILLOW LN	SE 1 - 2 (1.347 mi.)	AB219	299
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
SHELL SERVICE STATION 136173	1195 THOUSAND OAKS/RANCW	1/4 - 1/2 (0.379 mi.)	F34	49

HIST CORTESE: The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES].

A review of the HIST CORTESE list, as provided by EDR, and dated 04/01/2001 has revealed that there are 64 HIST CORTESE sites within approximately 2 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
1X CIRCLE K CORP STORE# 7911	1715 THOUSAND OAKS	ESE 0 - 1/8 (0.027 mi.)	A4	11
ROBERT D HEGGEN	1964 THOUSAND OAKS BL	SE 1/8 - 1/4 (0.200 mi.)	C12	21
BO-CAP AUTO SERVICES	1998 THOUSAND OAKS BLVD	SE 1/4 - 1/2 (0.261 mi.)	C17	25
PEP BOYS #739	2099 THOUSAND OAKS BL	ESE 1/4 - 1/2 (0.313 mi.)	E23	31
CHEVRON #9-2832	2321 THOUSAND OAKS BLVD	ESE 1/4 - 1/2 (0.452 mi.)	G49	64
CONEJO ELEMENTARY SCHOOL	280 CONEJO SCHOOL	E 1/4 - 1/2 (0.484 mi.)	H52	70
UNOCAL SERVICE STATION #5126	2378 THOUSAND OAKS BLVD	ESE 1/2 - 1 (0.513 mi.)	G60	80
THOUSAND OAKS TOYOTA	2401 THOUSAND OAKS BLVD	ESE 1/2 - 1 (0.515 mi.)	G64	85
FAST GAS	2473 THOUSAND OAKS BLVD	ESE 1/2 - 1 (0.596 mi.)	K71	94
AL PIANO/FORMER THRIFTY C	2594 THOUSAND OAKS	ESE 1/2 - 1 (0.690 mi.)	M86	114
EQUILON ENTERPRISES LLC	2658 THOUSAND OAKS	ESE 1/2 - 1 (0.732 mi.)	M93	125
KEMIK AUTO SCRUBBER	2725 THOUSAND OAKS	ESE 1/2 - 1 (0.778 mi.)	N95	127
JEFFY LUBE	2905 THOUSAND OAKS BL	ESE 1/2 - 1 (0.906 mi.)	Q116	152
LEN AIR CONDITIONING	3031 LOS FELIZ	ESE 1 - 2 (1.053 mi.)	U130	180
MOBIL #KP6	3102 THOUSAND OAKS BLVD	SE 1 - 2 (1.061 mi.)	S140	193
WESTLAKE AUTO CARE	3111 THOUSAND OAKS BL	SE 1 - 2 (1.068 mi.)	S142	195
WERKSTATT	3177 THOUSAND OAKS BLVD	SE 1 - 2 (1.126 mi.)	V157	219
CHEVRON #9-2892	3199 WILLOW LANE	SE 1 - 2 (1.148 mi.)	W161	225
EXXON SS #7-3089	225 HAMPSHIRE BLVD	SE 1 - 2 (1.167 mi.)	W167	235

## EXECUTIVE SUMMARY

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
JB'S ELECTRA TUNE	3169 LOS FELIZ	ESE 1 - 2 (1.180 mi.)	Y179	250
<b>MIKE'S AUTO BODY</b>	<b>3170 LOS FELIZ #A</b>	<b>ESE 1 - 2 (1.182 mi.)</b>	<b>Y181</b>	<b>250</b>
V-FIRE STATION #31	151 DUESENBERG	ESE 1 - 2 (1.197 mi.)	Y187	256
<b>JOHN HOLMAN</b>	<b>3302 THOUSAND OAKS BL</b>	<b>SE 1 - 2 (1.235 mi.)</b>	<b>Z189</b>	<b>261</b>
<b>VILLAGE CARWASH</b>	<b>3369 THOUSAND OAKS</b>	<b>SE 1 - 2 (1.282 mi.)</b>	<b>Z195</b>	<b>268</b>
GERMAN PRESTIGE AUTOS INC	3440 AUTO MALL	SE 1 - 2 (1.323 mi.)	AC207	290
<b>THOUSAND OAKS POST OFFICE</b>	<b>3435 THOUSAND OAKS BL</b>	<b>SE 1 - 2 (1.326 mi.)</b>	<b>AC214</b>	<b>293</b>
<b>WESTLAKE VOLKSWAGON</b>	<b>3550 AUTO MALL DR</b>	<b>SE 1 - 2 (1.358 mi.)</b>	<b>AC227</b>	<b>315</b>
SILVER STAR MOTOR COMPANY	3601 AUTO MALL	SE 1 - 2 (1.374 mi.)	AC231	321
<b>COURTESY CHEVROLET</b>	<b>3610 THOUSAND OAKS BLVD</b>	<b>SE 1 - 2 (1.456 mi.)</b>	<b>AJ284</b>	<b>377</b>
<b>WESTLAKE IMPORTS INC DBA LADIN</b>	<b>3725 DUESENBERG DR</b>	<b>SE 1 - 2 (1.559 mi.)</b>	<b>AM305</b>	<b>407</b>
<b>SILVER STAR BUICK</b>	<b>3755 DUESENBERG DR</b>	<b>SE 1 - 2 (1.615 mi.)</b>	<b>AM311</b>	<b>416</b>
<b>BUICK, GMC, &amp; NISSAN</b>	<b>3755 AUTO MALL DR</b>	<b>SE 1 - 2 (1.615 mi.)</b>	<b>AM313</b>	<b>418</b>
JAFRA COSMETICS INC	2451 TOWNSGATE	SE 1 - 2 (1.629 mi.)	AP318	433
<b>KEMP FORD</b>	<b>3810 THOUSAND OAKS BLVD</b>	<b>SE 1 - 2 (1.684 mi.)</b>	<b>AN330</b>	<b>461</b>
<b>RUSNAK/WESTLAKE PORSCHE-AUDI,</b>	<b>3832 E THOUSAND OAKS BL</b>	<b>SE 1 - 2 (1.713 mi.)</b>	<b>AT336</b>	<b>473</b>
MONAHAN, DANIEL D. & DARA	2459 SAPRA	NE 1 - 2 (1.721 mi.)	342	485
<b>WESTOAKS CHRYSLER PLYMOUTH</b>	<b>3839 DUESENBERG DR</b>	<b>SE 1 - 2 (1.747 mi.)</b>	<b>AU344</b>	<b>487</b>
<b>SHAVER PONTIAC AMC</b>	<b>3888 E THOUSAND OAKS BL</b>	<b>SE 1 - 2 (1.792 mi.)</b>	<b>AT348</b>	<b>494</b>
<b>EXXONMOBIL OIL CORPORATION #10</b>	<b>3995 THOUSAND OAKS BLVD</b>	<b>SE 1 - 2 (1.981 mi.)</b>	<b>AX355</b>	<b>502</b>
Lower Elevation	Address	Direction / Distance	Map ID	Page
<b>MOSHE SILAGI/PRIVATE PROPERTY</b>	<b>1500 THOUSAND OAKS BLVD</b>	<b>WNW 0 - 1/8 (0.098 mi.)</b>	<b>B11</b>	<b>20</b>
GTE SWITCHING STATION	1205 THOUSAND OAKS	W 1/4 - 1/2 (0.368 mi.)	F28	41
<b>EXXON #7-3548</b>	<b>1201 THOUSAND OAKS BLVD</b>	<b>W 1/4 - 1/2 (0.370 mi.)</b>	<b>F33</b>	<b>44</b>
<b>1X SHELL STATION #204-7812-010</b>	<b>1195 THOUSAND OAKS</b>	<b>W 1/4 - 1/2 (0.379 mi.)</b>	<b>F35</b>	<b>51</b>
<b>CHEVRON</b>	<b>1180 THOUSAND OAKS BLVD</b>	<b>W 1/4 - 1/2 (0.395 mi.)</b>	<b>F42</b>	<b>59</b>
JIFFY FOOD STORE #14	1100 THOUSAND OAKS	W 1/4 - 1/2 (0.487 mi.)	I54	71
<b>INDEPENDENT REP. OF VOLKSWAGON</b>	<b>851 E THOUSAND OAKS BLV</b>	<b>W 1/2 - 1 (0.674 mi.)</b>	<b>L80</b>	<b>109</b>
<b>CAL-U-RENT</b>	<b>661 THOUSAND OAKS BLVD</b>	<b>W 1/2 - 1 (0.820 mi.)</b>	<b>O101</b>	<b>136</b>
ALDON INVESTMENTS	72 MOODY	W 1/2 - 1 (0.853 mi.)	O105	143
<b>ABANDONED GAS STATION</b>	<b>602 THOUSAND OAKS BLVD</b>	<b>W 1/2 - 1 (0.904 mi.)</b>	<b>R113</b>	<b>150</b>
<b>UNOCAL #6081</b>	<b>420 THOUSAND OAKS BL</b>	<b>W 1 - 2 (1.028 mi.)</b>	<b>T126</b>	<b>170</b>
FOUR-N-HAUS	389 THOUSAND OAKS	W 1 - 2 (1.085 mi.)	T151	212
<b>RUBBER DUCK TIRE &amp; AUTO CENTER</b>	<b>299 THOUSAND OAKS BL</b>	<b>W 1 - 2 (1.175 mi.)</b>	<b>X173</b>	<b>242</b>
GTE	50 PARKER	W 1 - 2 (1.177 mi.)	X174	244
<b>TEXACO SS - THOUSAND OAKS</b>	<b>56 THOUSAND OAKS BLVD</b>	<b>W 1 - 2 (1.424 mi.)</b>	<b>AD245</b>	<b>338</b>
<b>EQUILON ENTERPRISES LLC</b>	<b>172 MOORPARK</b>	<b>W 1 - 2 (1.424 mi.)</b>	<b>AF253</b>	<b>347</b>
<b>MOBIL OIL SS #11-GYO</b>	<b>1 THOUSAND OAKS BL</b>	<b>W 1 - 2 (1.427 mi.)</b>	<b>AD256</b>	<b>351</b>
UNOCAL #5229	293 MOORPARK	W 1 - 2 (1.429 mi.)	AG264	358
<b>CHEVRON #9-7157</b>	<b>398 MOORPARK RD</b>	<b>WNW 1 - 2 (1.441 mi.)</b>	<b>AI277</b>	<b>369</b>
<b>UNOCAL #4687</b>	<b>550 MOORPARK RD</b>	<b>WNW 1 - 2 (1.464 mi.)</b>	<b>AK290</b>	<b>387</b>
<b>ARCO #1695</b>	<b>600 MOORPARK RD</b>	<b>WNW 1 - 2 (1.476 mi.)</b>	<b>AK295</b>	<b>394</b>
<b>EXXON #7-3416</b>	<b>595 MOORPARK RD</b>	<b>WNW 1 - 2 (1.483 mi.)</b>	<b>AK298</b>	<b>399</b>
<b>LINCOLN OAKS CORPORATE CENTER</b>	<b>225 HILLCREST DR #300</b>	<b>W 1 - 2 (1.775 mi.)</b>	<b>347</b>	<b>492</b>
EXXON #7-2872	1596 MOORPARK	NNW 1 - 2 (1.802 mi.)	AV349	497
<b>USA PETROLEUM SS #256</b>	<b>1640 MOORPARK RD</b>	<b>NNW 1 - 2 (1.833 mi.)</b>	<b>AV351</b>	<b>499</b>

## EXECUTIVE SUMMARY

DRYCLEANERS: A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaners' agents; linen supply; coin-operated laundries and cleaning; drycleaning plants except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

A review of the DRYCLEANERS list, as provided by EDR, and dated 12/22/2009 has revealed that there are 24 DRYCLEANERS sites within approximately 1.75 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>BECKMAN CLEANERS</b>	<b>2334 E THOUSAND OAKS BL</b>	<b>ESE 1/2 - 1 (0.501 mi.)</b>	<b>G56</b>	<b>71</b>
<b>BECKMAN CLEANERS</b>	<b>2338 THOUSAND OAKS BLVDESE</b>	<b>1/2 - 1 (0.502 mi.)</b>	<b>G57</b>	<b>74</b>
<b>OAKS CLEANERS</b>	<b>2524 E THOUSAND OAKS BL</b>	<b>ESE 1/2 - 1 (0.642 mi.)</b>	<b>K76</b>	<b>99</b>
<b>OAKS ONE HR CLEANERS</b>	<b>2797 THOUSAND OAKS BLVDESE</b>	<b>1/2 - 1 (0.812 mi.)</b>	<b>N98</b>	<b>131</b>
<b>SABRA DISCOUNT CLEANERS INC</b>	<b>2845 THOUSAND OAKS BLVDESE</b>	<b>1/2 - 1 (0.852 mi.)</b>	<b>N103</b>	<b>139</b>
<b>TLC CLEANERS</b>	<b>2847 THOUSAND OAKS BLVDESE</b>	<b>1/2 - 1 (0.854 mi.)</b>	<b>N106</b>	<b>143</b>
<b>MAYFAIR</b>	<b>3065 EAST THOUSAND OAKS SE</b>	<b>1 - 2 (1.052 mi.)</b>	<b>S129</b>	<b>173</b>
<b>MR DRYCLEAN</b>	<b>3200 E THOUSAND OAKS BL</b>	<b>SE 1 - 2 (1.147 mi.)</b>	<b>V159</b>	<b>221</b>
<b>NOAHS CLEANERS</b>	<b>3275 E THOUSAND OAKS BL</b>	<b>SE 1 - 2 (1.212 mi.)</b>	<b>Z188</b>	<b>256</b>
<b>GREEN OAKS CLEANERS</b>	<b>3745 E THOUSAND OAKS BL</b>	<b>SE 1 - 2 (1.636 mi.)</b>	<b>AN321</b>	<b>438</b>
<b>EVERGREEN DRY CLEANERS</b>	<b>3745 THOUSAND OAKS BLVDESE</b>	<b>1 - 2 (1.636 mi.)</b>	<b>AN322</b>	<b>442</b>
<b>GREEN OAKS CLEANERS</b>	<b>3745 E THOUSAND OAKS BL</b>	<b>SE 1 - 2 (1.636 mi.)</b>	<b>AN323</b>	<b>444</b>
<b>EVERGREEN CLEANERS</b>	<b>3745 E THOUSAND OAKS</b>	<b>SE 1 - 2 (1.637 mi.)</b>	<b>AN325</b>	<b>449</b>
<b>NORTH RANCH CLEANERS</b>	<b>3809 EAST THOUSAND OAKS</b>	<b>SE 1 - 2 (1.705 mi.)</b>	<b>AN333</b>	<b>471</b>
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>NORTHSTAR I SHOPPING CENTER</b>	<b>1341 E THOUSAND OAKS BL</b>	<b>W 1/4 - 1/2 (0.273 mi.)</b>	<b>D19</b>	<b>27</b>
<b>VIP CLEANERS</b>	<b>763 THOUSAND OAKS BLVD</b>	<b>W 1/2 - 1 (0.742 mi.)</b>	<b>94</b>	<b>126</b>
<b>MR CLEANERS</b>	<b>386 N MOORPARK RD</b>	<b>WNW 1 - 2 (1.428 mi.)</b>	<b>AH258</b>	<b>354</b>
<b>VILLAGE CLEANERS</b>	<b>235 N MOORPARK RD</b>	<b>W 1 - 2 (1.434 mi.)</b>	<b>AF270</b>	<b>365</b>
<b>MR CLEANERS</b>	<b>386 N MOORPARK RD</b>	<b>WNW 1 - 2 (1.439 mi.)</b>	<b>AI273</b>	<b>366</b>
<b>ALEX THE TAILOR &amp; DRY CLEANERS</b>	<b>712-714 NORTH MOORPARK</b>	<b>WNW 1 - 2 (1.508 mi.)</b>	<b>AL301</b>	<b>401</b>
<b>ALEX THE TAILOR &amp; DRY CLEANERS</b>	<b>714 N MOORPARK RD</b>	<b>WNW 1 - 2 (1.508 mi.)</b>	<b>AL302</b>	<b>404</b>
<b>MARQUIS CLEANERS</b>	<b>1334 MOORPARK BLVD</b>	<b>NW 1 - 2 (1.672 mi.)</b>	<b>AQ326</b>	<b>450</b>
<b>STAR CLEANERS</b>	<b>1492 MOORE PARK RD</b>	<b>NW 1 - 2 (1.681 mi.)</b>	<b>AQ328</b>	<b>458</b>
<b>LINCOLN OAKS CLEANERS</b>	<b>140 W HILLCREST DR NO 1</b>	<b>W 1 - 2 (1.716 mi.)</b>	<b>AR340</b>	<b>478</b>

WIP: Well Investigation Program case in the San Gabriel and San Fernando Valley area.

A review of the WIP list, as provided by EDR, and dated 07/03/2009 has revealed that there is 1 WIP site within approximately 1.75 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<b>STAR CLEANERS</b> Facility Status: Historical	<b>1492 MOORE PARK RD</b>	<b>NW 1 - 2 (1.681 mi.)</b>	<b>AQ328</b>	<b>458</b>

### EDR PROPRIETARY RECORDS

#### **EDR Proprietary Records**

## EXECUTIVE SUMMARY

EDR Historical Auto Stations: EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc.

A review of the EDR Historical Auto Stations list, as provided by EDR, has revealed that there is 1 EDR Historical Auto Stations site within approximately 1.75 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
GOODMAN S UNION STATION	11 N MOORPARK RD	W 1 - 2 (1.444 mi.)	279	372

EDR Historical Cleaners: EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc.

A review of the EDR Historical Cleaners list, as provided by EDR, has revealed that there is 1 EDR Historical Cleaners site within approximately 1.75 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
VILLAGE CLEANERS	49 CONEJO BLVD	W 1 - 2 (1.506 mi.)	300	400

## EXECUTIVE SUMMARY

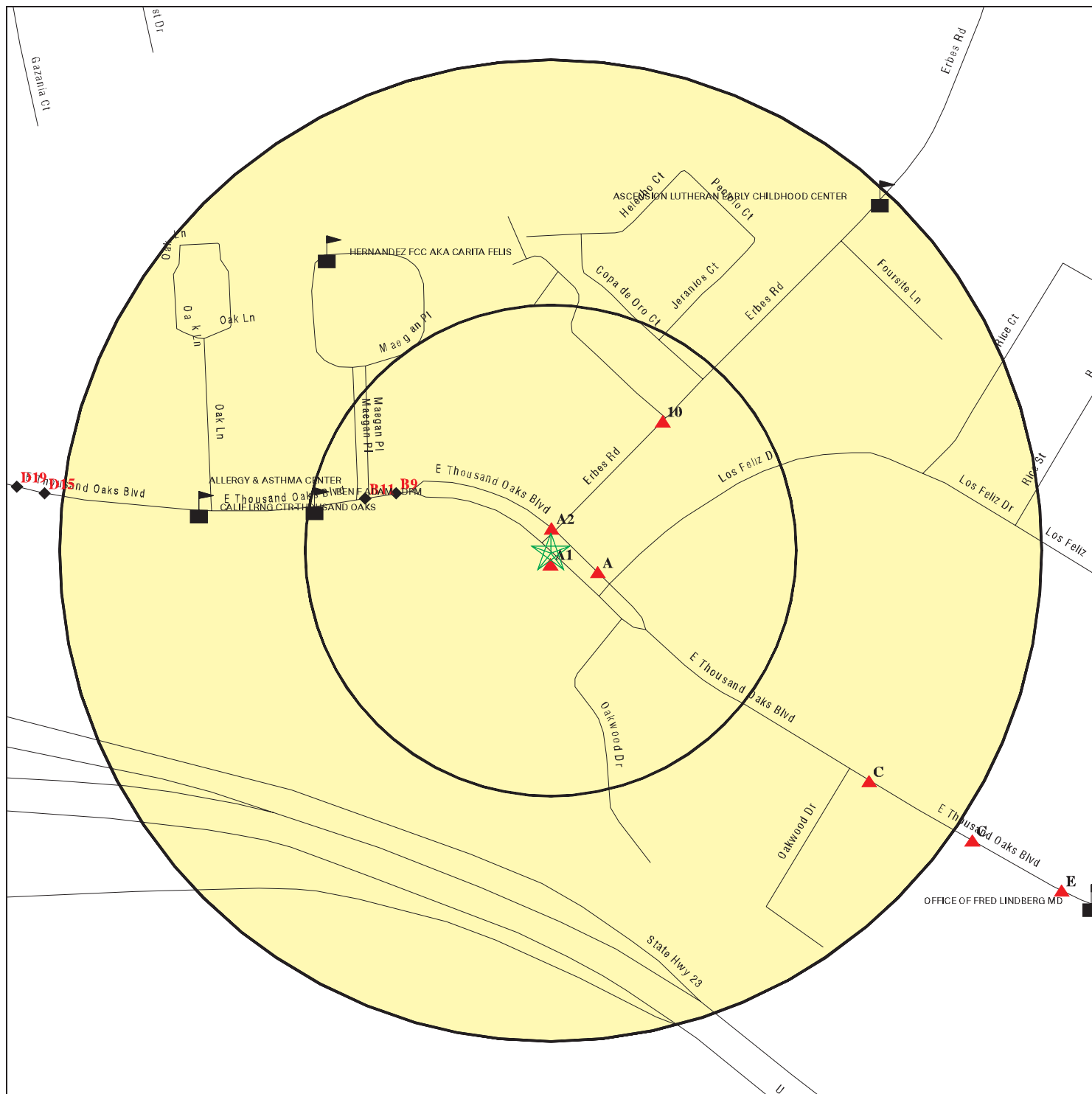
Due to poor or inadequate address information, the following sites were not mapped:

Site Name	Database(s)
THOUSAND OAKS-MUNICIPAL S	HIST CORTESE
PERMALAB	HIST CORTESE
TEXACO REFINING AND MARKETING INC	HAZNET,HIST CORTESE
TIRE PRO'S	HIST CORTESE
ALVAREZ TEXACO #2	HIST CORTESE
FIRESTONE TIRE STATION #6	HIST CORTESE
V-FIRE STATION #30	HIST CORTESE
V-FIRE STATION #34	HIST CORTESE
OAKS AUTO CENTER	HIST CORTESE
CHEVRON SS #7236	HIST CORTESE
THE TALLEY SITE, NEWBURY PARK	DEED,NPDES,WDS,EMI,WMUDS/SWAT
FIRE STATION #34	FID,SWEEPS UST
FIRESTONE	SWEEPS UST
GENERAL TELEPHONE	SWEEPS UST
LISTER RENTS INC.	SWEEPS UST
WESTLAKE VILLAGE CAR WASH	HAZNET,SWEEPS UST,LUST SAN MATEO
HILLCREST CLEANERS	DRYCLEANERS
BRODY'S ONE HOUR CLEANERS	DRYCLEANERS
SILVER OAKS CLEANERS	DRYCLEANERS
THOUSAND OAKS ABANDONED SITE	CERCLIS-NFRAP
CHEVRON #9-0482	LUST SAN MATEO
VCO FIRE STATION #30	LUST SAN MATEO
O'REILY/JANSS PROPERTY (CLAN LAB)	SLIC REGION 2,LUST SAN MATEO
MOBIL OIL SS #11-GYO	LUST SAN MATEO
J. C. PENNY'S	UST ALAMEDA
FIRESTONE (J C PENNEY CO,INC)	UST ALAMEDA
WESTOAKS CHRYSLER/DODGE INC	AST
HEAT TREAT&PLATE, NEWBURY PARK	WMUDS/SWAT
WESTLAKE VILLAGE DUMP	WMUDS/SWAT
THOUSAND OAKS PRECISION AUTO REPAI	HAZNET
CITY THOUSAND OAKS/CITY MANAGERS O	HAZNET
PREMIERE OF THOUSAND OAKS APARTMEN	HAZNET
PCF THOUSAND OAKS, LLC	HAZNET
CITY OF THOUSAND OAKS/UTILITIES	HAZNET
THOUSAND OAKS PATHOLOGY ASSOCIATES	HAZNET
1000 OAKS FOREIGN AUTO SERVICE	HAZNET
OAKS CHRISTIAN HIGH SCHOOL	HAZNET
INFINITI OF THOUSAND OAKS	FINDS
CITY OF THOUSAND OAKS MUNICIPAL YA	SLIC REGION 2
THOUSAND OAKS HEALTH CARE CENTER	BWT VENTURA
J. WAYNE SAND & GRAVEL, INC.	MINES
CEMEX, INC.	MINES

- 

CLIENT: Impact Sciences  
CONTACT: Paul Stephenson  
INQUIRY #: 2717874.1s  
DATE: March 10, 2010 6:05 pm

# DETAIL MAP - 2717874.1s



- ★ Target Property
- ▲ Sites at elevations higher than or equal to the target property
- ◆ Sites at elevations lower than the target property
- ⚙ Manufactured Gas Plants
- ⚡ Sensitive Receptors
- 🚒 National Priority List Sites
- 🚒 Dept. Defense Sites

- Indian Reservations BIA
- Oil & Gas pipelines
- 100-year flood zone
- 500-year flood zone
- Areas of Concern

SITE NAME: Thousand Oaks Boulevard  
 ADDRESS: Thousand Oaks Boulevard  
 Thousand Oaks CA 91362  
 LAT/LONG: 34.1777 / 118.8514

CLIENT: Impact Sciences  
 CONTACT: Paul Stephenson  
 INQUIRY #: 2717874.1s  
 DATE: March 10, 2010 6:05 pm



## MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
<b><u>STANDARD ENVIRONMENTAL RECORDS</u></b>								
<b><i>Federal NPL site list</i></b>								
NPL		2.500	0	0	0	0	0	0
Proposed NPL		2.500	0	0	0	0	0	0
NPL LIENS	TP		NR	NR	NR	NR	NR	0
<b><i>Federal Delisted NPL site list</i></b>								
Delisted NPL		2.500	0	0	0	0	0	0
<b><i>Federal CERCLIS list</i></b>								
CERCLIS		2.000	0	0	0	0	0	0
FEDERAL FACILITY		2.500	0	0	0	0	0	0
<b><i>Federal CERCLIS NFRAP site List</i></b>								
CERC-NFRAP		2.000	0	0	0	0	0	0
<b><i>Federal RCRA CORRACTS facilities list</i></b>								
CORRACTS		2.500	0	0	0	0	0	0
<b><i>Federal RCRA non-CORRACTS TSD facilities list</i></b>								
RCRA-TSDF		2.000	0	0	0	0	0	0
<b><i>Federal RCRA generators list</i></b>								
RCRA-LQG		1.750	0	0	0	0	4	4
RCRA-SQG		1.750	1	1	4	9	35	50
RCRA-CESQG		1.750	0	0	0	0	0	0
<b><i>Federal institutional controls / engineering controls registries</i></b>								
US ENG CONTROLS		2.000	0	0	0	0	0	0
US INST CONTROL		2.000	0	0	0	0	0	0
<b><i>Federal ERNS list</i></b>								
ERNS	TP		NR	NR	NR	NR	NR	0
<b><i>State- and tribal - equivalent NPL</i></b>								
RESPONSE		2.500	0	0	0	0	0	0
<b><i>State- and tribal - equivalent CERCLIS</i></b>								
ENVIROSTOR		2.500	0	0	0	0	4	4
<b><i>State and tribal landfill and/or solid waste disposal site lists</i></b>								
SWF/LF		2.000	0	0	0	1	0	1
<b><i>State and tribal leaking storage tank lists</i></b>								
LUST		2.000	3	1	13	13	66	96
SLIC		2.000	0	0	1	3	10	14

## MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
INDIAN LUST		2.000	0	0	0	0	0	0
<b>State and tribal registered storage tank lists</b>								
UST		1.750	4	1	12	17	48	82
AST		1.750	0	0	0	1	7	8
INDIAN UST		1.750	0	0	0	0	0	0
FEMA UST		1.750	0	0	0	0	0	0
<b>State and tribal voluntary cleanup sites</b>								
VCP		2.000	0	0	0	0	1	1
INDIAN VCP		2.000	0	0	0	0	0	0
<b>ADDITIONAL ENVIRONMENTAL RECORDS</b>								
<b>Local Brownfield lists</b>								
US BROWNFIELDS		2.000	0	0	0	0	0	0
<b>Local Lists of Landfill / Solid Waste Disposal Sites</b>								
DEBRIS REGION 9		2.000	0	0	0	0	0	0
ODI		2.000	0	0	0	0	0	0
WMUDS/SWAT		2.000	0	0	0	0	0	0
SWRCY		2.000	0	0	0	0	3	3
HAULERS		TP	NR	NR	NR	NR	NR	0
INDIAN ODI		2.000	0	0	0	0	0	0
<b>Local Lists of Hazardous waste / Contaminated Sites</b>								
US CDL		TP	NR	NR	NR	NR	NR	0
HIST Cal-Sites		2.500	0	0	0	0	0	0
SCH		1.750	0	0	0	0	1	1
Toxic Pits		2.500	0	0	0	0	0	0
CDL		TP	NR	NR	NR	NR	NR	0
US HIST CDL		TP	NR	NR	NR	NR	NR	0
<b>Local Lists of Registered Storage Tanks</b>								
CA FID UST		1.750	1	0	3	4	20	28
HIST UST		1.750	1	0	7	15	40	63
SWEEPS UST		1.750	1	0	4	7	38	50
<b>Local Land Records</b>								
LIENS 2		TP	NR	NR	NR	NR	NR	0
LUCIS		2.000	0	0	0	0	0	0
LIENS		TP	NR	NR	NR	NR	NR	0
DEED		2.000	0	0	0	0	0	0
<b>Records of Emergency Release Reports</b>								
HMIRS		TP	NR	NR	NR	NR	NR	0
CHMIRS		TP	NR	NR	NR	NR	NR	0
LDS		TP	NR	NR	NR	NR	NR	0

## MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
MCS		TP	NR	NR	NR	NR	NR	0
<b><i>Other Ascertainable Records</i></b>								
RCRA-NonGen		1.750	0	0	1	1	2	4
DOT OPS		TP	NR	NR	NR	NR	NR	0
DOD		2.500	0	0	0	0	0	0
FUDS		2.500	0	0	0	0	0	0
CONSENT		2.500	0	0	0	0	0	0
ROD		2.500	0	0	0	0	0	0
UMTRA		2.000	0	0	0	0	0	0
MINES		1.750	0	0	0	0	0	0
TRIS		TP	NR	NR	NR	NR	NR	0
TSCA		TP	NR	NR	NR	NR	NR	0
FTTS		TP	NR	NR	NR	NR	NR	0
HIST FTTS		TP	NR	NR	NR	NR	NR	0
SSTS		TP	NR	NR	NR	NR	NR	0
ICIS		TP	NR	NR	NR	NR	NR	0
PADS		TP	NR	NR	NR	NR	NR	0
MLTS		TP	NR	NR	NR	NR	NR	0
RADINFO		TP	NR	NR	NR	NR	NR	0
FINDS		TP	NR	NR	NR	NR	NR	0
RAATS		TP	NR	NR	NR	NR	NR	0
CA BOND EXP. PLAN		2.500	0	0	0	0	0	0
NPDES		TP	NR	NR	NR	NR	NR	0
CA WDS		TP	NR	NR	NR	NR	NR	0
Cortese		2.000	0	0	0	0	0	0
HIST CORTESE		2.000	2	1	9	11	41	64
Notify 65		2.500	0	0	0	0	0	0
DRYCLEANERS		1.750	0	0	1	7	16	24
WIP		1.750	0	0	0	0	1	1
VENTURA CO. BWT		TP	NR	NR	NR	NR	NR	0
HAZNET		TP	NR	NR	NR	NR	NR	0
EMI		TP	NR	NR	NR	NR	NR	0
INDIAN RESERV		2.500	0	0	0	0	0	0
SCRD DRYCLEANERS		2.000	0	0	0	0	0	0
MWMP		1.750	0	0	0	0	0	0
COAL ASH DOE		TP	NR	NR	NR	NR	NR	0
COAL ASH EPA		2.000	0	0	0	0	0	0
PROC		2.000	0	0	0	0	0	0
HWT		1.750	0	0	0	0	0	0
HWP		2.500	0	0	0	0	0	0
FINANCIAL ASSURANCE		TP	NR	NR	NR	NR	NR	0
PCB TRANSFORMER		TP	NR	NR	NR	NR	NR	0
<b><u>EDR PROPRIETARY RECORDS</u></b>								
<b><i>EDR Proprietary Records</i></b>								
Manufactured Gas Plants		2.500	0	0	0	0	0	0
EDR Historical Auto Stations		1.750	0	0	0	0	1	1
EDR Historical Cleaners		1.750	0	0	0	0	1	1

## MAP FINDINGS SUMMARY

<u>Database</u>	<u>Target Property</u>	<u>Search Distance (Miles)</u>	<u>&lt; 1/8</u>	<u>1/8 - 1/4</u>	<u>1/4 - 1/2</u>	<u>1/2 - 1</u>	<u>&gt; 1</u>	<u>Total Plotted</u>
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### NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

The Map Findings, Orphan Summary, Government Records Searched/Data Currency Tracking sections and Geotech Addendum of the report are available for reference at the City of Thousand Oaks Community Development Department.