Draft
Environmental Impact Report for the

Rocklin Crossings Project

SCH# 2006112097

Prepared for:

City of Rocklin

December 2007

EDAW | AECOM

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Environmental Impact Report for the

Rocklin Crossings Project

SCH# 2006112097

Prepared for:

City of Rocklin
3980 Rocklin Road
Rocklin, CA 95677

Contact:

David Mohlenbrok
916/625-5162

Prepared by:

EDAW
2022 J Street
Sacramento, CA 95811

Contact:

Douglas Brown
916/414-5800

December 2007

EDAW | AECOM

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City of Rocklin

3970 Rocklin Road
Rocklin, California 95677-2720
O | 916.625.5000
F | 916.625.5095
www.rocklin.ca.us

December 6, 2007

TO: INTERESTED PERSONS AND AGENCIES

SUBJECT: **NOTICE OF PUBLIC REVIEW AND AVAILABILITY OF A DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE ROCKLIN CROSSINGS PROJECT (SCH# 2006112097)**

The Rocklin Planning Department is announcing the availability of the Draft Environmental Impact Report for the Rocklin Crossings project and has forwarded a Notice of Availability of this document to the following: all agencies and organizations that received the Notice of Preparation, and all persons who own property within 600 feet of the site or have asked to be on the mailing list to receive project information. The State Clearinghouse has also distributed this document to numerous state agencies. The purpose of the Draft EIR is to provide sufficient information on the project so that the decision-makers, using this document, can make an informed decision regarding the relative environmental impacts and merits of the project. Reviewers should focus on the comprehensiveness and accuracy of the Draft EIR in discussing possible impacts upon the environment and measures that might mitigate adverse impacts.

Project Description: The Rocklin Crossings project (proposed project) includes the construction of a regional shopping center on approximately 55.1 acres (approximately 49.5-acre development site and 5.6-acre detention basin site) at the southeast corner of Interstate-80 and Sierra College Boulevard. A variety of retail uses are proposed for the center, including major tenants (expected to be a Wal-Mart Supercenter and a Home Depot), smaller retail tenants and restaurants. Other traveler-serving uses could also be developed within the project site. Preliminary plans call for approximately 21 buildings totaling a maximum of 543,500 square feet with 2,463 parking stalls. The number of parking stalls provided would be required to conform with the requirements set forth in the Rocklin Crossings General Development Guidelines.

Project Location: The project site is located in the City of Rocklin, south of Interstate 80 and east of Sierra College Boulevard. The City of Rocklin is located within the western portion of Placer County and is approximately 25 miles northeast of the City of Sacramento. The project site is comprised of the following Assessor's Parcel Numbers: 045-043-022, 024, 049, 053 and 051 (portions of); 045-053-031, 032, 033 and 034, and a portion of 045-043-050. Exhibit 3-2 identifies the site plan for the proposed project.

Notice of Public Review: This document is being circulated for a 45-day public review period. Consequently, comments should be received by the Rocklin Planning Department **NO LATER THAN 5:00 P.M. on JANUARY 23rd, 2008**. This Draft EIR and all written comments submitted before the close of the public review period will be incorporated into the Final EIR that is prepared. Notice of Availability of the Final EIR, including all comments and replies, will be sent to those electing to comment on the Draft

EIR. Therefore, the City requests that all agencies and individuals who comment on this Draft EIR keep the document for reference.

For individuals receiving only the Notice of Availability for the Draft EIR at this time, a copy of the document is available for public review at the following libraries: Placer County Library at 5460 Fifth Street, Rocklin, and Sierra College Library at 5000 Rocklin Road, Rocklin. In addition, the Draft EIR and all other reference documents are available for review or pick-up at the Rocklin Planning Department during normal business days from 8:00 a.m. to 5:00 p.m. **Please send your written comments to Sherri Abbas, Development Services Manager, 3970 Rocklin Road, Rocklin, CA 95677.** We would appreciate the name of the contact person in your organization and/or agency.

Public Hearing Notification: The Rocklin City Council and Planning Commission will conduct a joint public hearing to receive comments on this Draft EIR on **WEDNESDAY, JANUARY 16, 2008 AT 6:00 P.M. IN THE CITY OF ROCKLIN CITY COUNCIL CHAMBERS, 3970 ROCKLIN ROAD, ROCKLIN, CA.** This hearing is an opportunity to directly comment on the Draft EIR only. No decision will be made on the project at this time. The public hearing is an opportunity to directly comment on the Draft EIR, however, all *written* comments on the Draft EIR are due to the City within the 45-day review period.

In compliance with the Americans with Disabilities Act, the City of Rocklin encourages those with disabilities to participate fully in the public hearing process. If you have special needs to allow you to attend or participate in this public hearing process, please contact our office at 3970 Rocklin Road or call us at 632-4020 prior to the public hearing so that we may accommodate you.

PUBLIC HEARINGS TO CONSIDER CERTIFICATION OF THE ENVIRONMENTAL DOCUMENT AND A DECISION ON THE PROJECT WILL BE SCHEDULED AND NOTICED AS APPROPRIATE IN THE FUTURE.

Listing of Potential Significant Environmental Effects: As listed in the Draft EIR, the project would result in the following significant unavoidable adverse impacts –

- Contribution to Long-Term Operational (Regional) Criteria Air Pollutants.
- Changes in the Site's Visual Resources
- Short-Term Loss of Native Oak and Heritage Trees
- Cumulative Contribution to Long-Term Operational (Regional) Criteria Air Pollutants
- Cumulative Changes in Local Viewshed
- Cumulative Losses of Biological Resources

The project site is not on any of the lists enumerated under Section 65962.5 of the Government Code as related to hazardous materials.

Please contact David Mohlenbrok or myself at (916) 625-5160 if you have any questions regarding the project or the environmental review process.

Sincerely,

Sherri Abbas, AICP
Development Services Manager

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TABLE OF CONTENTS

Chapter **Page**

ACRONYMS AND ABBREVIATIONS vi

1 INTRODUCTION 1-1
1.1 Purpose and Intended Uses of This Draft Environmental Impact Report 1-1
1.2 Type of Environmental Impact Report 1-2
1.3 Scope of This Draft Environmental Impact Report 1-2
1.4 Effects Found Not to Be Significant 1-2
1.5 Agency Roles and Responsibilities 1-3
1.6 Terminology Used in the Environmental Impact Report 1-4
1.7 Organization of This Environmental Impact Report 1-5

2 EXECUTIVE SUMMARY 2-1
2.1 Introduction 2-1
2.2 Project Components 2-1
2.3 Summary of Environmental Impacts and Mitigation Measures 2-1
2.4 Significant and Unavoidable Environmental Impacts 2-2
2.5 Summary of Project Alternatives 2-4
2.6 Areas of Controversy, Issues Raised, and Areas Resolved in the EIR 2-4
2.7 City Approval Process 2-4

3 PROJECT DESCRIPTION 3-1
3.1 Project Overview 3-1
3.2 Project Location 3-1
3.3 Existing Setting 3-1
3.4 Project Objectives 3-5
3.5 Project Characteristics 3-5
3.6 Required Discretionary Actions/process 3-19

4 ENVIRONMENTAL SETTING, ENVIRONMENTAL IMPACTS, AND MITIGATION MEASURES 4-1
4.1 Land Use 4.1-1
4.2 Traffic and Circulation 4.2-1
4.3 Air Quality 4.3-1
4.4 Noise 4.4-1
4.5 Population and Housing 4.5-1
4.6 Public Services and Utilities 4.6-1
4.7 Aesthetics 4.7-1
4.8 Public Health and Hazards 4.8-1
4.9 Geology, Soils and Paleontology 4.9-1
4.10 Hydrology and Water Quality 4.10-1
4.11 Agriculture 4.11-1
4.12 Biological Resources 4.12-1
4.13 Cultural Resources 4.13-1
4.14 Energy 4.14-1

TABLE OF CONTENTS

Chapter		Page
5	**ECONOMIC IMPACT AND URBAN DECAY ANALYSIS**	**5-1**
5.1	Introduction	5-1
5.2	Study Conclusions	5-2
6	**CUMULATIVE AND GROWTH INDUCING IMPACTS**	**6-1**
6.1	Cumulative Impacts of the Proposed Project	6-1
6.2	Growth-Inducing Impacts of the Proposed Project	6-53
6.3	Significant and Irreversible Commitment of Resources	6-54
6.4	Global Climate Change	6-55
7	**ALTERNATIVES**	**7-1**
7.1	Introduction	7-1
7.2	Project Alternatives Evaluated in this EIR	7-3
7.3	Summary of Comparative Effects of the Alternatives	7-23
7.4	Alternatives Considered but Rejected as Infeasible	7-25
8	**REPORT PREPARATION**	**8-1**
9	**REFERENCES**	**9-1**

Appendices

A NOP and Comment Letters
B Economic Impact Analysis
C Traffic Report
D Air Quality Data
E Noise Data and Environmental Noise Assessment
F Water Supply Assessment

Tables

2-1	Summary of Environmental Impacts and Mitigation Measures	2-6
3-1	Principal Permitted Uses	3-13
4.2-1	Existing Peak Hour Intersection Levels of Service	4.2-8
4.2-2	Existing Daily Roadway Segment Level of Service Summary	4.2-9
4.2-3	Rocklin Crossings Trip Generation	4.2-18
4.2-4	Existing Plus Project Peak Hour Intersection Level of Service Summary	4.2-24
4.2-5	Existing Plus Project Daily Roadway Segment Level of Service Summary	4.2-25
4.2-6	Existing plus Project Peak Hour Roadway Segment Level of Service Summary	4.2-28
4.2-7	Trip Generation of Approved Projects	4.2-32
4.2-8	Existing Plus Approved Projects (Baseline) Condition Intersection Level of Service Summary	4.2-35
4.2-9	Existing Plus Approved Projects (Baseline) Daily Roadway Segment Level of Service Summary	4.2-36
4.2-10	Existing Plus Approved Projects (Baseline) Peak Hour Roadway Segment Level of Service Summary	4.2-37

TABLE OF CONTENTS

Chapter **Page**

Tables – *continued*

4.2-11 Existing Plus Approved Projects (Baseline) Plus Project Condition Intersection Level of Service Summary 4.2-40
4.2-12 Existing Plus Approved Projects (Baseline) Plus Project - Daily Roadway Segment Level of Service Summary 4.2-42
4.2-13 Existing Plus Approved Projects (Baseline) Plus Project Condition Peak Hour Intersection Level of Service Summary - With Mitigation 4.2-46

4.3-1 Summary of Annual Ambient Air Quality Data (2004–2006) 4.3-5
4.3-2 Ambient Air Quality Standards and Designations 4.3-6
4.3-3 Summary of Modeled Maximum Daily Short-term Construction-Generated Emissions 4.3-18
4.3-4 Summary of Modeled Maximum Daily Long-term Operational (Regional) Emissions 4.3-20

4.4-1 Subjective Reaction to Changes in Noise Levels of Similar Sources 4.4-2
4.4-2 Human Response to Different Levels of Groundborne Noise and Vibration 4.4-6
4.4-3 Summary of Measured 24-Hour Noise Levels 4.4-7
4.4-4 City of Rocklin General Plan Noise Compatibility Guidelines 4.4-8
4.4-5 Typical Construction Equipment Noise Levels 4.4-11
4.4-6 Summary of Modeled Baseline Traffic Noise Levels With & Without Project 4.4-14
4.4-7 Predicted Truck Delivery Noise Levels at Nearest Proposed Residences 4.4-16
4.4-8 Barrier Heights Required to Satisfy Exterior Noise Standards at Nearest Residences 4.4-17
4.4-9 Typical Construction-Equipment Vibration Levels 4.4-20

4-5.1 City of Rocklin Regional Housing Needs Allocation for 2000–2007 ..... 4.5-2

4.6-1 Water Supply Entitlements and Demands 4.6-3

4.9-1 Active Faults in the Project Vicinity 4.9-3
4.9-2 Modified Mercalli Scale of Earthquake Intensity 4.9-3
4.9-3 Approximate Relationships between Earthquake Magnitude and Intensity 4.9-4

4.10-1 Project Peak Flow Rates under Pre-Project, Post-Project, and Mitigated Project Conditions 4.10-12
4.10-2 Water Surface Elevations in the Detention Basin During Various Storm Events 4.10-13

4.11-1 Acreages of Important Farmland in Placer County 4.11-2

4.12-1 Biological Resource Background Reports 4.12-1
4.12-2 Special-Status Plants Potentially Occurring on the Site 4.12-8
4.12-3 Special-status Wildlife Species Potentially Occurring on the Site 4.12-10

4.13-1 Cultural Resource Sites Located Within the Project Site 4.11-5

5-1 Summary of Impacts on Primary Market Area Retailers 5-3

TABLE OF CONTENTS

Chapter **Page**

Tables – *continued*

6-1 Cumulative Projects 6-4
6-2 2025 No Project without Dominguez Road Condition Peak Hour Intersection Level of Service Summary 6-8
6-3 2025 No Project Without Dominguez Road Daily Roadway Segment Level of Service Summary 6-9
6-4 2025 Plus Project without Dominguez Road Condition Peak Hour Intersection Level of Service Summary 6-14
6-5 2025 Plus Project Without Dominguez Road Daily Roadway Segment Level of Service Summary 6-16
6-6 2025 Plus Project without Dominguez Road Condition Peak Hour Intersection Level of Service Summary – With Mitigation 6-19
6-7 2025 Without Dominguez Road Peak Hour Roadway Segment Level of Service Summary 6-24
6-8 2025 No Project With Dominguez Road Condition Peak Hour Intersection Level of Service Summary 6-27
6-9 2025 No Project With Dominguez Road Daily Roadway Segment Level of Service Summary 6-28
6-10 2025 Plus Project With Dominguez Road Condition Peak Hour Intersection Level of Service Summary 6-32
6-11 2025 Plus Project With Dominguez Road Daily Roadway Segment Level of Service Summary 6-33
6-12 2025 Plus Project with Dominguez Road Condition Peak Hour Intersection Level of Service Summary - With Mitigation 6-36
6-13 I-80/Sierra College Boulevard Freeway Ramp Intersection Analysis (2025 Plus Project) 6-42
6-14 2025 Peak Hour - Freeway Segment Level of Service Summary 6-44
6-15 Fleet-Average Greenhouse Gas Exhaust Emission Limits Included in CCR 13 1961.1 6-62
6-16 Summary of Modeled Greenhouse Gas (CO2e) Emissions 6-68
6-17 Project Compliance with Greenhouse Gas Emission Reduction Strategies 6-70

Exhibits

3-1 Project Site Location and Vicinity 3-2
3-2 Project Site Plan 3-3
3-3 Building Envelopes 3-9
3-4 Retail Promenade Elevations 3-15
3-5 Buildings D through G Elevations 3-17

4.1-1 Surrounding Land Uses 4.1-2
4.1-2 Land Use Map 4.1-3
4.1-3 Zoning Map 4.1-4

4.2-1 Study Intersections and Roadway Segments 4.2-3
4.2-2 Existing Geometrics and Traffic Control 4.2-4
4.2-3 Existing Peak Hour Traffic Volumes 4.2-6
4.2-4 Existing Saturday Peak Hour Traffic Volumes 4.2-7
4.2-5 Project Trip Distribution and Peak Hour Project Trips 4.2-20
4.2-6 Saturday Peak Hour Project Trips 4.2-21

TABLE OF CONTENTS

Chapter **Page**

Exhibits – *continued*

4.2-7 Existing Plus Project Peak Hour Traffic Volumes 4.2-22
4.2-8 Existing Plus Project Saturday Peak Hour Traffic Volumes 4.2-23
4.2-9 Short-Term Geometrics and Traffic Control 4.2-27
4.2-10 Location of Approved Projects 4.2-31
4.2-11 Existing Plus Approved Projects (Baseline) Peak Hour Traffic Volumes 4.2-33
4.2-12 Existing Plus Approved Projects (Baseline) Saturday Peak Hour Traffic Volumes 4.2-34
4.2-13 Existing Plus Approved Projects (Baseline) Plus Project Peak Hour Traffic Volumes 4.2-38
4.2-14 Existing Plus Approved Projects (Baseline) Plus Project Saturday Peak Hour Traffic Volumes 4.2-39
4.2-15 Existing Plus Approved Projects (Baseline) Plus Project Condition - Mitigations 4.2-45

4.4-1 Typical Noise Levels 4.4-3

4.6-1 Offsite Water Line Improvements 4.6-15
4.6-2 Area Affected by Water Line Improvements 4.6-16

4.7-1 Viewpoint Locations Views of the Project Site 4.7-2
4.7-2 Representative Photograph (Viewpoint 1) 4.7-4
4.7-3 Representative Photograph (Viewpoint 2) 4.7-4
4.7-4 Representative Photographs (Viewpoint 3) 4.7-5

4.9-1 Soils Types 4.9-7

4.10-1 Rocklin Crossing Regional Hydrology 4.10-2

4.12-1 Location and Extent of Habitat Types on the Project Site 4.12-3
4.12-2 Special-Status Species Previously Documented as Occurring within Five Miles of the Project Site 4.12-7
4.12-3 Jurisdictional Wetlands on the Project Site 4.12-15

6-1 Year 2025 No Project Peak Hour Traffic Volumes - Without Dominguez Road 6-5
6-2 Year 2025 No Project Saturday Peak Hour Traffic Volumes - Without Dominguez Road 6-7
6-3 Year 2025 Geometrics and Traffic Control 6-11
6-4 Year 2025 Plus Project Peak Hour Traffic Volumes - Without Dominguez Road 6-12
6-5 Year 2025 Plus Project Saturday Peak Hour Traffic Volumes - Without Dominguez Road 6-13
6-6 Year 2025 Plus Project Without Dominguez Road – Mitigations 6-17
6-7 Year 2025 No Project Peak Hour Traffic Volumes - With Dominguez Road 6-25
6-8 Year 2025 No Project Saturday Peak Hour Traffic Volumes – With Dominguez Road 6-26
6-9 Year 2025 Plus Project Peak Hour Traffic Volumes – With Dominguez Road 6-30
6-10 Year 2025 Plus Project Saturday Peak Hour Traffic Volumes – With Dominguez Road 6-31
6-11 Year 2025 Plus Project With Dominguez Road – Mitigations 6-35
6-12 The Köppen Climate Classification System 6-57

ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
AB 1807	Tanner Air Toxics Act
AB 2588	Air Toxics Hot Spots Information and Assessment Act of 1987
AB 32	California Global Warming Solutions Act of 2006
ADA	Americans with Disabilities Act
ADT	average daily traffic
ADWF	Average Dry Weather Flow
afy	acre-feet of water per year
AMR	American Medical Response
APCO	Air Pollution Control Officer
AQAP	Air Quality Attainment Plan
ARB	California Air Resources Board
ASTM	American Society for Testing and Materials
ASTs	aboveground storage tanks
ATCM	Airborne Toxics Control Measure
AWWF	Average Wet Weather Flows
Basin Plan	*Water Quality Control Plan for the Sacramento and San Joaquin River Basins*
Bcf	billion cubic feet
BMPs	best management practices
BMPs	best management practices
B-P	Business Professional
C-1, C-2, C-4, C-H	Commercial
C-2	Retail Business
CAA	federal Clean Air Act
CAAA	federal Clean Air Act Amendments of 1990
CAAQS	California ambient air quality standards
Cal/OSHA	California Department of Industrial Relations, Division of Occupational Safety and Health Administration
CalARPP	California Accidental Release Prevention Program
Caltrans	California Department of Transportation
CBC	California Building Standards Code
CCAA	California Clean Air Act
CCAR	California Climate Action Registry
CCN	cloud condensation nuclei
CCR	California Code of Regulations
CDC	California Department of Conservation
CDF's	California Department of Forestry and Fire Protection's
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CESA	California Endangered Species Act

CFCs	chlorofluorocarbons
CFR	Code of Federal Regulations
cfs	cubic feet per second
CH_4	methane
CHP	California Highway Patrol
City General Plan	*City of Rocklin General Plan*
CIWMA	California Integrated Waste Management Act
CIWMB	California Integrated Waste Management Board
CMA	Critical Movement Analysis”
CNDDB	California Natural Diversity Data Base
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	Carbon monoxide
CO_2	carbon dioxide
CPUC	California Public Utilities Commission
CRHR	California Register of Historic Resources
CUPAs	Certified Unified Program Agencies
CVP	Central Valley Project
CWA	federal Clean Water Act
dB	decibels
dBA	A-weighted dB
dBA/DD	dBA per doubling of distance
DBH	diameter at breast height
DDT	dichlorodiphenyltrichloroethane
DFG	California Department of Fish and Game
DHS	California Department of Health Services
diesel PM	diesel-fueled engines
DOT	U.S. Department of Transportation
DTSC	Department of Toxic Substances Control
DWR	California Department of Water Resources
EPA	U.S. Environmental Protection Agency
ESA	Phase I Environmental Site Assessment
FEMA	Federal Emergency Management Agency
FIFRA	federal Insecticide, Fungicide, and Rodenticide Act
FIP	Federal Implementation Plan
FMMP	Farmland Mapping and Monitoring Program
FRAP	Fire Resource Assessment Program
FTA	Federal Transit Administration

GC	Government Code
GHG	greenhouse gas
gpm	gallons per minute
GWh/y	gigawatt-hours per year
GWP	Global Warming Potential
HAPs	hazardous air pollutants
HAZWOPER	Hazardous Waste Operations and Emergency Response
HCD	California Department of Housing and Community Development
HCM	Highway Capacity Manual
HCP	Habitat Conservation Plan
H-D	Historic District
HEPA	High Efficiency Particulate Air
HVAC	heating, ventilation and air conditioning
Hz	hertz
I-80	Interstate 80
ICU	Intersection Capacity Utilization
in/sec	inches per second
IPCC	Intergovernmental Panel on Climate Change
ITE	Institute of Transportation Engineers
kV	kilovolt
kVs	kilovolts
L_{50}	Median noise levels
lb/day	pounds/day
LDL	Larson Davis Laboratories
L_{dn}	Day-Night Noise Level
L_{eq}	Equivalent Noise Level
LEV	Low Emission Vehicle
L_{max}	Maximum Noise Level
L_{min}	Minimum Noise Level
LOS	level of service
LX	Statistical Descriptor
M	magnitude
MACT and BACT	maximum or best available control technology for toxics
MAD	Mosquito Abatement District
MBTA	Migratory Bird Treaty Act
MCLs)	Maximum Contaminant Levels
MDR	Medium Density Residential
MLD	most likely descendant
MRF	Materials Recovery Facility

MRZ	Mineral Resource Zones
MS4s	NPDES Phase II General Permit for the Discharge of Storm Water from small municipal separate storm sewer systems
N_2O	water vapor, nitrous oxide
NAAQS	national ambient air quality standards
NAHC	Native American Heritage Commission
NCCP	Natural Communities Conservation Plan
NCHRP	National Cooperative Highway Research Program Report
NCIC	North-Central Information Center
NEHRP	National Earthquake Hazards Reduction Program
NEPA	National Environmental Policy Act
NESHAP	national emissions standards for HAPs
NFIP	National Flood Insurance Program
NMFS	National Marine Fisheries Service
NO	nitric oxide
NO_2	Nitrogen dioxide
NOA	Naturally occurring asbestos
NOAA	National Oceanic and Atmospheric Administration
NO_X	oxides of nitrogen
NPDES	National Pollutant Discharge Elimination System
NPDES	National Pollutant Discharge Elimination System
NWP	Nationwide Permit
O_3	ozone
OA	Open Area
OAP	Ozone Attainment Plan
OEHHA	Office of Environmental Health Hazard Assessment
ONC	State of California Office of Noise Control
OPR	State Governor's Office of Planning and Research
OSHA	Occupational Safety and Health Administration
ozone	photochemical smog
PAH	polycyclic aromatic hydrocarbons
parts per million	ppm
PCAPCD	Placer County Air Pollution Control District
PCBs	polychlorinated biphenyls
PCCP	Placer County Conservation Plan
PCFCD	Placer County Flood Control and Water Conservation District
PCWA	Placer County Water Agency
PD	Planned Development
PD-C	Planned Development - Commercial
PG&E	Pacific Gas and Electric
PM_{10} and $PM_{2.5}$	particulate matter
Porter-Cologne Act	Porter-Cologne Water Quality Control Act

ppm	parts per million
PPV	peak particle velocity
PRC	Public Resources Code
PRGs	Preliminary Remedial Goals
proposed project	Rocklin Crossings project
PSHA	Probabilistic Seismic Hazards Assessment
RC	Retail Commercial
RCRA	Resource Conservation and Recovery Act of 1976
RECs	recognized environmental concerns
RHNP	Regional Housing Needs Plan
RMS	root mean square
ROG	reactive organic gases
RWQCB	Regional Water Quality Control Board
SACOG	Sacramento Area Council of Governments
SARA	Superfund Amendments and Reauthorization Act
SB	Senate Bill
SCS	Soil Conservation Service
SCWA	Sacramento County Water Agency
SEL	Sound Exposure Level
SENL	Single Event [Impulsive] Noise Level
SIP	State Implementation Plan
SMAQMD	Sacramento Metropolitan Air Quality Management District
SO_2	sulfur dioxide
SPMUD	South Placer Municipal Utility District
SPWA	South Placer Wastewater Authority
SR-65	State Route 65
SSWD	Sacramento Suburban Water District
SVAB	Sacramento Valley Air Basin
SWP	State Water Project
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TACs	toxic air contaminants
T-BACT	Best Available Control Technology for Toxics
TDV	Time Dependent Variation
therms/y	therms per year
TMDL	total maximum daily load
tpd	tons per day
TSCA	Toxic Substances Control Act
UBC	federal Uniform Building Code
UFC	California Uniform Fire Code
UN	Unclassified

USFWS	United States Fish and Wildlife Service
USGS	U.S. Geological Survey
UST	Underground storage tank
v/c	volume-to-capacity ratio
VdB	vibration decibels
VELB	valley elderberry longhorn beetle
VMT	vehicle miles traveled
VOC	volatile organic carbon
WPWMA	Western Placer Waste Management Authority
WSA	water supply assessments”
WTP	Water Treatment Plant
µin/sec	microinch per second

1 INTRODUCTION

This Draft Environmental Impact Report (Draft EIR) has been prepared to evaluate the environmental impacts associated with implementation of the proposed Rocklin Crossings Project. The Rocklin Crossings Project (proposed project) includes the construction of a regional shopping center on approximately 55.1 acres at the southeast corner of Interstate-80 and Sierra College Boulevard. The property is proposed to be subdivided into 18 parcels. A variety of retail uses are proposed for the center, including major tenants (expected to be a Wal-Mart Supercenter and a Home Depot), smaller retail tenants and restaurants. Other traveler-serving uses could also be developed within the project site. Preliminary plans call for approximately 21 buildings totaling a maximum of 543,500 square feet with approximately 2,463 parking stalls. Some tenants would require drive-throughs, outside storage, outdoor display, outdoor vendor sales and/or outside seasonal sales. These uses and structures would be permitted and controlled through a set of design guidelines that would be subject to City approval and would be applicable to the entire shopping center. Parking and signage would be governed by project-specific program guidelines and criteria. Signage is proposed in multiple locations adjacent to Interstate 80 (I-80) and Sierra College Boulevard.

1.1 PURPOSE AND INTENDED USES OF THIS DRAFT ENVIRONMENTAL IMPACT REPORT

This Draft EIR was prepared in compliance with the California Environmental Quality Act (CEQA) of 1970 (Public Resources Code Section 21000 et seq.) and the State CEQA Guidelines (California Code of Regulations Section 15000 et seq.). An EIR is a full disclosure, public information document in which the significant environmental impacts of a project are evaluated, feasible measures to mitigate significant impacts are identified, and alternatives to the project that can reduce or avoid significant environmental effects are discussed.

An EIR is an informational document used in the planning and decision-making process by the lead agency and responsible and trustee agencies. The lead agency is the public agency with primary responsibility over the proposed project. In accordance with State CEQA Guidelines Section 15051(b)(1), “the lead agency will normally be the agency with general governmental powers, such as a city or county, rather than an agency with a single or limited purpose.” The lead agency for the proposed project is the City of Rocklin (City).

The purpose of an EIR is not to recommend either approval or denial of a project. CEQA requires decision-makers to balance the benefits of a project against its unavoidable environmental effects in deciding whether to carry out a project. The lead agency will consider the Draft EIR, comments received on the Draft EIR, and responses to those comments before making a decision. If significant environmental effects are identified, the lead agency must adopt “Findings” indicating whether feasible mitigation measures or alternatives exist that can avoid or reduce those effects. If the significant environmental impacts are identified as significant and unavoidable, the lead agency may still approve the project if it determines that the social, economic, or other benefits outweigh the unavoidable impacts. The lead agency would then be required to prepare a “Statement of Overriding Considerations” that discusses the specific reasons for approving the project, based on information in the EIR and other information in the record.

1.2 TYPE OF ENVIRONMENTAL IMPACT REPORT

The Rocklin Crossings EIR is a Project EIR, pursuant to State CEQA Guidelines Section 15161. A Project EIR is an informational document designed to provide the basis for the local planning and decision-making process. A Project EIR is the most common type of EIR, examining the environmental impacts of a specific development. This type of EIR focuses on the changes in the environment that would result from the development project. In accordance with the State CEQA Guidelines, a Project EIR must examine all phases of the project, including construction and operation.

1.3 SCOPE OF THIS DRAFT ENVIRONMENTAL IMPACT REPORT

The issues evaluated in this Draft EIR are those anticipated with implementation of the proposed project, as determined from comments received on the Notice of Preparation (NOP) and an understanding of the project characteristics. The resource areas for which issues are evaluated in this Draft EIR are as follows:

- Land Use
- Traffic
- Air Quality
- Noise
- Population and Housing
- Public Utilities and Services
- Aesthetics
- Public Health and Hazards
- Geology, Soils and Paleontology
- Hydrology and Water Quality
- Hazards and Hazardous Materials
- Agriculture
- Biological Resources
- Cultural Resources
- Energy
- Climate Change (within discussion of cumulative impacts.)

1.4 EFFECTS FOUND NOT TO BE SIGNIFICANT

Under the CEQA statutes and the State CEQA Guidelines, a lead agency may limit an EIR's discussion of environmental effects when they are not considered potentially significant (Public Resources Code Section 21002.1(e); State CEQA Guidelines Sections 15128 and 15143). Information used to determine which impacts would be potentially significant was derived from a review of applicable planning and CEQA documentation, field work, a review of the project, feedback from ongoing public and agency consultation, and comments received on the NOP (Appendix A). Following the issuance of the NOP, comments were received and reviewed to determine the final scope of the Draft EIR. As a result of the review of existing information and the scoping process, effects on the following resources were found not to be significant, and therefore, are not included in the detailed analysis of potential project impacts:

1.4.1 RECREATION

The proposed project is a commercial development that would employ retail workers and attract consumers from the surrounding area. However, the project is not anticipated to attract a substantial number of new residents to the area, would not be expected to increase the demands on existing recreational resources within the City and would not require the construction or expansion of other recreational facilities.

1.5 AGENCY ROLES AND RESPONSIBILITIES

1.5.1 LEAD AGENCY

The City of Rocklin is the lead agency for the proposed project. As such, the City has the principal responsibility for approving and carrying out the project and for ensuring that the requirements of CEQA have been met.

1.5.2 TRUSTEE AND RESPONSIBLE AGENCIES

A trustee agency is a State agency that has jurisdiction by law over natural resources that are held in trust for the people of the State of California. The California Department of Fish and Game has jurisdiction over resources potentially affected by the project as a trustee agency.

Responsible agencies are public agencies, other than the lead agency, that are anticipated to have discretionary approval responsibility for reviewing, carrying out, or approving elements of a project. Responsible agencies should participate in the lead agency's CEQA process, review the lead agency's CEQA document, and use the document when making a decision on project elements. Several agencies may have responsibility for or jurisdiction over elements of the proposed project. These agencies may include the following:

FEDERAL AGENCIES

- U.S. Army Corps of Engineers (Clean Water Act - Section 404 - Nationwide Permit)
- U.S. Fish and Wildlife Service (Endangered Species Act - Section 7 Consultation)

STATE AGENCIES

- Central Valley Regional Water Quality Control Board (Clean Water Act - Section 401 Certification, construction activity stormwater permit and National Pollutant Discharge Elimination System permit)

LOCAL AGENCIES

- Town of Loomis (encroachment permit or similar approval as may be required for off-site water line extensions or road improvements to be constructed)
- South Placer Municipal Utility District (approval of sewer facility extensions)
- Placer County Water Agency (approval of water line extensions)

1.5.3 PUBLIC REVIEW PROCESS

Consistent with the requirements of CEQA, a good faith effort has been made during the preparation of this Draft EIR to contact affected agencies, organizations, and individuals who may have an interest in the project. This effort included the circulation of an NOP to a project-specific mailing list and to the Governor's Office of Planning and Research for a 30-day comment period that commenced on December 16, 2006. The NOP is a brief notice sent by the lead agency to notify responsible agencies, trustee agencies, and potentially affected federal, state, and local agencies that the lead agency plans to prepare a Draft EIR and solicits guidance regarding the scope and content of the Draft EIR. The City of Rocklin also held a scoping meeting on December 4, 2006 to receive comments on the NOP. The comments received on the NOP are included in Appendix A.

This Draft EIR is being circulated to federal, State, and local agencies, and to interested organizations and individuals who may wish to review and comment on the report. During the 45-day public review period, written comments will be received by the City at the following address:

Mr. David Mohlenbrok
City of Rocklin
3970 Rocklin Road
Rocklin, CA 95677
(916) 625-5162

1.6 TERMINOLOGY USED IN THE ENVIRONMENTAL IMPACT REPORT

To assist in the understanding of this report, the following descriptions, as found in Article 20 of the State CEQA Guidelines, are provided:

- "Project" means the whole of an action, which has the potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment directly or ultimately.

- "Significant effect on the environment" means a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant.

- "Environment" means the physical conditions that exist within the area which will be affected by a proposed project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historical or aesthetic significance. The area involved shall be the area in which significant effects would occur either directly or indirectly as a result of the project. The "environment" includes both natural and man-made conditions.

- "Effects" and "impacts" as used in this document are synonymous. Effects analyzed under CEQA must be related to a physical change. Effects include:

  - direct or primary effects that are caused by the project and occur at the same time and place, and

  - indirect or secondary effects that are caused by the project and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect or secondary effects may include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density, or growth rate, and related effects on air and water and other natural systems, including ecosystems.

- "Mitigation" includes:

  - avoiding the impact altogether by not taking a certain action or parts of an action;

  - minimizing impacts by limiting the degree or magnitude of the action and its implementation;

  - rectifying the impact by repairing, rehabilitating, or restoring the impacted environment;

  - reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; or

  - compensating for the impact by replacing or providing substitute resources or environments.

- "Cumulative impacts" refers to two or more individual effects that, when considered together, are considerable or which compound or increase other environmental impacts:
  - The individual effects may be changes resulting from a single project or a number of separate projects.
  - The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.

This Draft EIR uses a variety of terms to describe the level of significance of adverse impacts identified during the course of the environmental analysis. These terms are defined below.

- A "less-than-significant impact" is an impact that is adverse but that does not exceed the defined standards of significance. Less-than-significant impacts do not require mitigation.
- A "potentially significant impact" is an impact for which there is not enough information to make a finding of less-than-significant impact; however, for the purpose of this Draft EIR, the impact is considered significant. A potentially significant impact is equivalent to a significant impact and requires the identification of feasible mitigation measures or alternatives.
- A "significant impact" is an impact that exceeds the defined standards of significance and would or could cause a substantial adverse change in the environment. Mitigation measures are recommended to eliminate the impact or reduce it to a less-than-significant level.
- A "significant and unavoidable impact" is an impact that exceeds the defined standards of significance and that cannot be eliminated or reduced to a less-than-significant level through the implementation of mitigation measures.

1.7 ORGANIZATION OF THIS ENVIRONMENTAL IMPACT REPORT

This Draft EIR is organized into chapters, as identified and briefly described below. Chapters are further divided into sections (e.g., Section 4.1, Land Use).

Chapter 1, Introduction. Chapter 1 describes the purpose and organization of the Draft EIR, context, and terminology used in the Draft EIR.

Chapter 2, Executive Summary. This section summarizes the project description, alternatives to the project, significant environmental impacts that would result from the project, and mitigation measures proposed to reduce or eliminate those impacts.

Chapter 3, Project Description. Chapter 3 describes the project location, background, project characteristics, and project objectives.

Chapter 4, Environmental Setting, Environmental Impacts, and Mitigation Measures. For each environmental issue area, this chapter describes the existing environmental setting, discusses the environmental impacts associated with the proposed project, and identifies mitigation for the impacts.

Chapter 5, Economic Impact and Urban Decay Analysis. This chapter evaluates whether the economic impacts of the project would foreseeably cause or contribute to urban decay in the City or in the region.

Chapter 6, Cumulative and Growth-Inducing Impacts. This chapter evaluates the extent to which the project would contribute to cumulative impacts in the region or induce economic or population growth in City. This section also includes a discussion of global climate change and estimates of the project's greenhouse gas emissions.

Chapter 7, Alternatives. This chapter describes the alternatives to the project that are being considered to mitigate the project's environmental impacts while meeting most of the project's objectives. This chapter also describes alternatives previously considered and rejected.

Chapter 8, Report Preparation. This chapter identifies the Draft EIR authors and consultants who provided analysis in support of the Draft EIR's conclusions.

Chapter 9, References. This chapter sets forth a comprehensive listing of all sources of information used in the preparation of the Draft EIR, including agencies or individuals consulted during preparation of the Draft EIR.

Appendices. Appendices contain various technical reports, letters, and official publications that have been summarized or otherwise used for preparation of the Draft EIR.

2 EXECUTIVE SUMMARY

2.1 INTRODUCTION

This Executive Summary section is provided in accordance with the California Environmental Quality Act (CEQA) Guidelines Section 15123. As stated in the State CEQA Guidelines Section 15123(a), "[a]n EIR shall contain a brief summary of the proposed actions and its consequences. The language of the summary should be as clear and simple as reasonably practical." State CEQA Guidelines Section 15123(b) states, "[t]he summary shall identify: (1) each significant effect with proposed mitigation measures and alternatives that would reduce or avoid that effect; (2) areas of controversy known to the Lead Agency, including issues raised by agencies and the public; and (3) issues to be resolved including the choice among alternatives and whether or how to mitigate the significant effects." Accordingly, this summary includes a brief synopsis of the proposed project and project alternatives, environmental impacts and mitigation, areas of known controversy, and issues to be resolved during environmental review. Table 2-1 (at the end of this section) presents the summary of potential environmental impacts, their level of significance without mitigation measures, the recommended mitigation measures, and the levels of significance following the implementation of mitigation measures.

2.2 PROJECT COMPONENTS

The Rocklin Crossings project (proposed project) includes the construction of a regional shopping center on approximately 55.1 acres at the southeast corner of Interstate-80 and Sierra College Boulevard. The property is proposed to be subdivided into 18 parcels. A variety of retail uses are proposed for the center, including major tenants (expected to be a Wal-Mart Supercenter and a Home Depot), smaller retail tenants and restaurants. Other traveler-serving uses could also be developed within the project site. Preliminary plans call for approximately 21 buildings totaling a maximum of 543,500 square feet with approximately 2,463 parking stalls.

A detailed description of the project components is included in Chapter 3, Project Description, of this document.

2.3 SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Pursuant to State CEQA Guidelines Section 15382, a significant effect on the environment is defined as "a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance". Chapter 4 of this Draft EIR describes in detail the significant environmental impacts that would result from implementation of the proposed project. Chapter 6 provides a discussion of cumulative and growth-inducing impacts. As identified in more detail in Table 2-1, the proposed project could result in significant impacts to the following resource areas:

- Traffic and Circulation
- Air Quality
- Noise
- Public Services and Utilities
- Aesthetics
- Public Health and Hazards
- Hydrology and Water Quality
- Biological Resources
- Cultural Resources
- Global Climate Change

2.4 SIGNIFICANT AND UNAVOIDABLE ENVIRONMENTAL IMPACTS

Detailed mitigation measures have been identified throughout Chapters 4 and 6 of this report that are intended to mitigate project effects to the extent feasible. All of these mitigation measures are identified in Table 2-1. After implementation of the proposed mitigation measures, most of the adverse effects associated with the proposed project would be reduced to a less-than-significant level. However, some impacts would remain significant and unavoidable following the implementation of identified mitigation measures. These impacts include the following:

2.4.1 CONTRIBUTION TO LONG-TERM OPERATIONAL (REGIONAL) CRITERIA AIR POLLUTANTS

Based on the modeling conducted, project operations would result in worst-case maximum unmitigated daily emissions of approximately 196 lb/day of ROG, 311 lb/day of NO_X, 281 lb/day of PM_{10}, and 2,196 lb/day of CO. Daily unmitigated operational emissions would exceed PCAPCD's significance thresholds of 82 lb/day for ROG, NO_X, and PM_{10}, or 550 lb/day for CO during both the winter and summer periods. Due to the large size of the project and large number of vehicle trips generated, it is not anticipated that implementation of the identified mitigation measures would reduce emissions to below the applicable thresholds; however, these measures would likely substantially reduce the level of emissions. In addition, because of existing nonattainment conditions of the project area for ozone and $PM_{10,}$ project implementation could still contribute substantially to an existing or projected violation of ambient air quality standards following implementation of the identified mitigation measures. As a result, this impact would remain significant and unavoidable. This conclusion is consistent with the 1991 City of Rocklin General Plan EIR, which concluded that mobile-source emissions associated with General Plan buildout would result in significant and unavoidable regional air quality impacts.

2.4.2 CHANGES IN THE SITE'S VISUAL RESOURCES

The conversion of the project site to urban uses was anticipated in the Environmental Impact Report prepared for the 1991 City of Rocklin General Plan (City of Rocklin 1991). The General Plan EIR stated that the conversion of open grasslands and hill areas to mixed urban development with implementation of the General Plan land uses would result in a significant and unavoidable visual impact. The project would extend this ongoing visual conversion of the Interstate 80 corridor. Based on the visual resource impact conclusions of the General Plan EIR, the visual prominence of the site from Interstate 80 and Sierra College Boulevard, and the potential for the change in the project's visual resources to be considered adverse by motorists and occupants of adjacent land uses, this impact would be considered significant and unavoidable.

2.4.3 SHORT-TERM LOSS OF NATIVE OAK AND HERITAGE TREES

Implementation of the proposed project would result in the removal of native oak trees on the site including two heritage trees. Mitigation measures have been included in this document that require the replacement of all oak trees removed with site development at a minimum 2:1 ratio. Because the removed trees would not be immediately replaced with an mature oak tress, the short-term loss of native oak trees is considered a significant and unavoidable impact. However, this impact would be reduced to a less-than-significant level in the long-term once replanted trees become established and mature.

2.4.4 CUMULATIVE CONTRIBUTION TO LONG-TERM OPERATIONAL (REGIONAL) CRITERIA AIR POLLUTANTS

All new development within the Sacramento Valley Air Basin that results in an increase in air pollutant emissions above those assumed in regional air plans contributes to cumulative air quality impacts. The increase is considered significant if the project requires a change in the existing land use designation (e.g., plan amendment,

rezone) and associated emissions (i.e., ROG and NO_X) are greater than buildout of the site under the existing approved land use designations. The proposed project would require the amendment of the City's existing General Plan land use designations on approximately 1.23 acres of the project site from Medium Density Residential (MDR) to Retail Commercial (RC). Due to the relatively small area of the change in land use, it would not substantially conflict with the existing land uses assumed for the site.

However, based on the modeling conducted, project operations would result in worst-case maximum unmitigated daily emissions of approximately 196 lb/day of ROG, 311 lb/day of NO_X, 281 lb/day of PM_{10}, and 2,196 lb/day of CO. Daily unmitigated operational emissions would exceed PCAPCD's significance thresholds of 82 lb/day for ROG, NO_X, and PM_{10}, or 550 lb/day for CO during both the winter and summer periods. These threshold exceedances would represent a substantial contribution of pollutants to the regional air basin that would not be reduced below the significance thresholds with implementation of identified mitigation measures. Therefore, the project's contribution to this cumulative impact would be considered significant and unavoidable.

2.4.5 CUMULATIVE CHANGES IN LOCAL VIEWSHED

Implementation of the proposed project would substantially alter the visual character of the project site through the conversion of relatively undeveloped land to developed urban uses, resulting in a significant aesthetic impact related to the degradation of visual character. The EIR for the City of Rocklin General Plan concluded that development in accordance with the General Plan would substantially alter viewsheds and vistas in the region as open grasslands and hill areas are replaced in part by mixed urban development and as new sources of light and glare are generated in the region. Based on these anticipated changes in the regional visual resources, the General Plan EIR concluded that this impact would be significant and unavoidable. The project would considerably contribute to this cumulative significant and unavoidable regional change in visual resources.

2.4.6 CUMULATIVE LOSS OF BIOLOGICAL RESOURCES

The proposed project would result in significant impacts related to the loss of wetlands, the loss of native oaks and heritage trees, the loss of valley elderberry longhorn beetle habitat, the disturbance of raptors and migratory birds, and degradation of fish habitat. As identified in the EIR for the City of Rocklin General Plan, the impacts on biological resources due to cumulative development within western Placer County would be significant and unavoidable. The General Plan EIR concluded that implementation of General Plan policies, the existing tree protection ordinances, and ongoing wetlands preservation practices, would not be adequate to reduce the loss of vegetation and wildlife habitat associated with cumulative development. The project would considerably contribute to this cumulative significant and unavoidable regional loss of biological resources.

2.5 SUMMARY OF PROJECT ALTERNATIVES

State CEQA Guidelines Section 15126.6, as amended, mandates that all EIRs include a comparative evaluation of the proposed project with alternatives to the project that are capable of attaining most of the project's basic objectives, but would avoid or substantially lessen any of the significant effects of the project. CEQA requires an evaluation of a "range of reasonable" alternatives, including the "no project" alternative. Chapter 7, Alternatives, of this Draft EIR provides an analysis of the comparative impacts anticipated from six alternatives to the proposed project: 1) the No-Project Alternative, which assumes the development of the site consistent with its current land use and zoning designations; 2) the Reduced Size Alternative, which would reduce the total square footage of commercial space by approximately 50% and would reduce the development footprint to approximately 30 acres; 3) the Building Realignment Alternative, which includes a relocation of large tenants to directly adjacent to Interstate 80 in order to minimize the exposure of existing and future residents to delivery truck noise and air pollutant emissions; and 4) three offsite alternatives within the City of Rocklin. One additional offsite alternative was also considered but was rejected from further analysis because it was determined to be infeasible.

2.6 AREAS OF CONTROVERSY, ISSUES RAISED, AND AREAS RESOLVED IN THE EIR

Section 15123 of the State CEQA Guidelines requires the summary section of a Draft EIR to identify areas of controversy known to the Lead Agency, including issues raised by agencies and the public. The following provides a brief summary of the issues raised by agencies and the public in comment letters received on the Notice of Preparation. The comment letters received on the Notice of Preparation are included in Appendix A of this document.

- Concern about overnight camping in campers/trailers at Wal-Mart stores;
- Increased traffic congestion on regional roadways:
- Impacts on regional air quality;
- Loss of sensitive biological resources including oak trees;
- Increased congestion on Interstate 80 and Highway 65, and its effects on law enforcement;
- Citizen involvement in land use decision making;
- Loss of Rocklin's rural character;
- Need for the proposed project;
- Project's effects on roads, schools, fire protection and recreation;
- Project's effects on Secret Ravine Creek; and
- Sewer connection requirements of the proposed project.

All of the substantive environmental issues raised in the Notice of Preparation comment letters have been addressed in this Draft EIR.

2.7 CITY APPROVAL PROCESS

The City, in its review of the proposed project, will consider the entire environmental assessment contained in this Draft EIR. Upon completion of the environmental review process, the City will have the option to certify that the Final EIR: (1) has been completed in compliance with CEQA; (2) was presented to the decision-making body of the lead agency (i.e., the Planning Commission or City Council) and was reviewed and considered by the decision-making body prior to approving the project; and (3) reflects the lead agency's independent judgment and analysis (State CEQA Guidelines Section 15090). If the EIR is certified, the Planning Commission or City Council will make a decision in a separate action whether the proposed project will be denied, approved, or conditionally approved.

The City can approve or conditionally approve the proposed project, if it chooses, even if significant impacts are identified. When significant effects are identified and the lead agency wishes to approve or conditionally approve the project, CEQA Section 21081(a) requires that one of three specific findings be made for each significant effect. The possible findings include the following:

- Changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the final EIR.

- Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency.

- Specific economic, legal, social, technological, or other considerations, including provisions of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the final EIR.

The City, as the lead agency, must also adopt a “statement of overriding considerations,” in accordance with CEQA Section 21081(b), if the proposed project is approved with unavoidable significant effects to the environment. The statement of overriding considerations is a statement by the decision makers acknowledging that significant unavoidable environmental impacts are acceptable when balanced against certain economic, legal, social, technological, or other benefits of the project.

Table 2-1
Summary of Environmental Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
4.1 Land Use			
4.1-1 Consistency with Applicable Plans. The proposed project would not conflict with an applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. Therefore, no impacts associated with plan consistency would be anticipated.	NI	No mitigation measures would be necessary.	NI
4.1-2 Physically Divide an Established Community. The proposed project would not be expected to physically divide an established community. Therefore, no impact on an established community would occur with project implementation.	NI	No mitigation measures would be necessary.	NI
4.2 Traffic and Circulation			
4.2-1 Rocklin Road/I-80 Westbound Ramps. The addition of project-related traffic to baseline traffic volumes would degrade traffic operations at the westbound ramps of the Rocklin Road/I-80 intersection during the p.m. peak hour. Because this intersection already operates unacceptably and the project's contribution would be greater than 5 percent, this impact would be considered significant.	S	**Mitigation Measure 4.2-1 Rocklin Road/I-80 Westbound Ramps** ▸ Prior to the issuance of any building permits for the project, the project applicant shall pay the City's traffic impact fee in an amount that constitutes the project's fair share contribution to the construction of improvements necessitated in part by project impacts, as reflected in a comparison between Exhibit 4.2-2 (Existing Geometrics and Traffic Control) and Exhibit 4.2-15 (Existing Plus Approved Project (Baseline) Plus Project Condition – Mitigations), consistent with the City's CIP and the SPRTA programs.	LTS
4.2-2 Rocklin Road/I-80 Eastbound Ramps. The addition of project-related traffic to baseline traffic volumes would degrade traffic operations at the eastbound ramps of the Rocklin Road/I-80 intersection from LOS E to LOS F during the p.m. peak hour. Because this intersection already operates unacceptably and the project's contribution would be greater than 5 percent, this impact would be considered significant.	S	**Mitigation Measure 4.2-2 Rocklin Road/I-80 Eastbound Ramps** ▸ Implement Mitigation Measure 4.2-1 described above in order to reduce westbound through traffic at the intersection of Rocklin Road/I-80 eastbound ramps and improve operations at this intersection to acceptable levels.	LTS
4.2-3 Sierra College Boulevard/Rocklin Road Intersection. The addition of project-related traffic to baseline traffic volumes would degrade traffic operations at the Sierra College Boulevard/Rocklin Road intersection during the p.m. peak hour. Because this intersection already operates unacceptably and the	S	**Mitigation Measure 4.2-3 Sierra College Boulevard/Rocklin Road Intersection** ▸ The project applicant shall build an additional northbound left-turn lane (resulting in dual left-turn lanes) at this intersection. There is an approved, not-yet-built project that is obligated to	LTS

LTS = Less Than Significant NI = No Impact PS = Potentially Significant S = Significant SU = Significant and Unavoidable

Table 2-1
Summary of Environmental Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
project's contribution would be greater than 5 percent, this impact would be considered significant.		construct this same improvement, and if that project completes this improvement prior to the proposed project, then this project's obligation to construct the improvement is no longer necessary.	
4.2-4 Rocklin Road/Pacific Street Intersection. The addition of project-related traffic to baseline traffic volumes would degrade traffic operations at the Rocklin Road/Pacific Street intersection during the p.m. peak hour. Although this intersection already operates unacceptably, the project's contribution would represent less than a 5 percent decrease in the volume/capacity ratio. Therefore, this impact would be considered less than significant.	LTS	No mitigation measures would be necessary.	LTS
4.2-5 Taylor Road/Horseshoe Bar Road (Loomis) Intersection. The addition of project-related traffic to baseline traffic volumes would degrade traffic operations at the Taylor Road/Horseshoe Bar Road (Loomis) intersection during the p.m. peak hour. Although this intersection already operates unacceptably, the project's contribution would represent less than a 5 percent decrease in the volume/capacity ratio. Therefore, this impact would be considered less than significant.	LTS	No mitigation measures would be necessary.	LTS
4.2-6 Sierra College Boulevard/Taylor Road (Loomis) Intersection. The addition of project-related traffic to baseline traffic volumes would degrade traffic operations at the Sierra College Boulevard/Taylor Road (Loomis) intersection during the p.m. peak hour from LOS C to LOS D. Based on the City of Loomis significance threshold, this impact would be considered significant.	S	**Mitigation Measure 4.2-6 Sierra College Boulevard/Taylor Road Intersection (Loomis)** ▸ Prior to the issuance of building permits for the project, the project applicant shall pay the SPRTA fee.	LTS
4.2-7 Roadway Segments. The proposed project would cause six roadway segments to exceed the threshold of daily capacity. However, in both the a.m. and p.m. peak hours, the traffic on all six roadway segments are forecast to operate with satisfactory volume/capacity ratios in both peak hours with project conditions. Therefore, the project's impacts on roadway segments would be considered less than significant.	LTS	No mitigation measures would be necessary.	LTS

LTS = Less Than Significant NI = No Impact PS = Potentially Significant S = Significant SU = Significant and Unavoidable

Table 2-1
Summary of Environmental Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
4.2-8 Entrance Vehicle Stacking. The project's main access roadway has adequate length to avoid entrance vehicle stacking. Therefore, the project's effects on entrance vehicle stacking would be considered less than significant.	LTS	No mitigation measures would be necessary.	LTS
4.2-9 Right Turns from Unsignalized Driveway. Northbound vehicles exiting from the project's unsignalized driveway would be required to cross two lanes of traffic. Sufficient gaps in the traffic stream would occur along Sierra College Boulevard to allow right turns from the project's unsignalized driveway to the northbound through lanes. Therefore, this impact would be considered less than significant.	LTS	No mitigation measures would be necessary.	LTS
4.2-10 Bicycle/Pedestrian Circulation Policy Consistency. The proposed project would include design components that are intended to allow safe pedestrian/bicycle access and movement to and through the site consistent with City policies. Therefore, this impact would be considered less than significant.	LTS	No mitigation measures would be necessary.	LTS
4.3 Air Quality			
4.3-1 Short-Term Construction-Generated Criteria Air Pollutant and Precursor Emissions. The short-term construction-generated emissions of PM10 would exceed PCAPCD's significance threshold of 82 lb/day. This would be considered a significant impact.	S	**Mitigation Measure 4.3-1 Short-Term Construction-Generated Criteria Air Pollutant and Precursor Emissions.** In accordance with the PCAPCD, the applicant shall comply with all applicable rules and regulations as discussed previously, in addition to implementation of the following recommended mitigation measures during construction of the proposed project (Backus, pers. comm., 2006b). ▸ The applicant shall submit to the City Engineer and the PCAPCD and receive approval of a Construction Emission / Dust Control Plan prior to groundbreaking. This plan must address how the project meets the minimum requirements of sections 300 and 400 of Rule 228-Fugitive Dust. ▸ The applicant shall suspend all grading operations when fugitive dust emissions exceed District Rule 228-Fugitive Dust limitations. ▸ Fugitive dust emissions shall not exceed 40% opacity and not go beyond the property boundary at any time. If lime or other drying agents are utilized to dry out wet grading areas, the project	LTS

LTS = Less Than Significant NI = No Impact PS = Potentially Significant S = Significant SU = Significant and Unavoidable

Table 2-1
Summary of Environmental Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		applicant shall ensure such agents are controlled as to not to exceed District Rule 228-Fugitive Dust limitations. ▸ The project applicant shall ensure that construction equipment exhaust emissions shall not exceed Rule 202-Visible Emission limitations. ▸ The project applicant shall ensure compliance with all of PCAPCD's minimum dust requirements. ▸ Water shall be applied to control fugitive dust, as needed, to prevent impacts offsite. Operational water trucks shall be onsite to control fugitive dust. Construction vehicles leaving the site shall be cleaned to prevent dust, silt, mud, and dirt from being released or tracked off-site. ▸ PCAPCD-approved chemical soil stabilizers, vegetative mats, or other appropriate best management practices, in accordance with manufacturers' specifications, shall be applied to all-inactive construction areas (previously graded areas which remain inactive for 96 hours). ▸ Soil binders shall be spread on unpaved roads and employee/equipment parking areas, and streets shall be washed (e.g., wet broom) if silt is carried over to adjacent public thoroughfares. ▸ Open burning of any kind shall be prohibited. ▸ Idling time shall be minimized to five minutes or less for all diesel-fueled equipment. ▸ ARB diesel fuel shall be used for all diesel-powered equipment. ▸ The project applicant, or the prime contractor, shall submit to the District a comprehensive inventory (i.e., make, model, year, emission rating) of all the heavy-duty off-road equipment (50 horsepower or greater) that will be used an aggregate of 40 or more hours for the construction project prior to groundbreaking. The project applicant shall provide the District with the anticipated construction timeline including start date, name, and phone number of the project manager and onsite foreman prior to groundbreaking. The project applicant shall provide a plan for approval by the District demonstrating that the heavy-duty (> 50	

LTS = Less Than Significant NI = No Impact PS = Potentially Significant S = Significant SU = Significant and Unavoidable

Table 2-1
Summary of Environmental Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		horsepower) off-road vehicles to be used in the construction project, including owned, leased, and subcontractor vehicles, will achieve a project-wide fleet-average 20 percent NOX reduction and 45 percent particulate reduction compared to the most recent ARB fleet average. Acceptable options for reducing emissions may include use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, and/or other options as they become available. Contractors can contact PCAPCD to determine it their off-road fleet meets the requirements listed in this measure.	
4.3-2 Long-Term Operational (Regional) Criteria Air Pollutant and Precursor Emissions. The proposed project would increase criteria air pollutant and precursor emissions in the region above significance thresholds. Because feasible mitigation measures are not available to reduce these emissions below the significance thresholds, this impact would be considered significant and unavoidable.	SU	**Mitigation Measure 4.3-2 Long-Term Operational (Regional) Criteria Air Pollutant and Precursor Emissions.** The City shall require that emission control measures be incorporated into project design and operation. Such measures may include, but are not limited to, the following items: ▸ The project applicant shall provide transit enhancing infrastructure that includes transit shelters, benches, street lighting, route signs and displays, and/or bus turnouts/bulbs. ▸ The project applicant shall provide bicycle enhancing infrastructure that includes secure bicycle parking. ▸ The project applicant shall provide electric maintenance equipment, use solar, low-emissions, or central water heaters, increase wall and attic insulation beyond Title 24 requirements, and orient buildings to take advantage of solar heating and natural cooling, use passive solar designs, energy efficient windows (double pane and/or Low-E), highly reflective roofing materials, cool paving (high albedo pavement) and parking lot tree shading above that required by code, install photovoltaic cells, programmable thermostats for all heating and cooling systems, awnings or other shading mechanisms for windows and walkways, utilize day lighting systems such as skylights, light shelves, interior transom windows. ▸ Parking lot design shall include clearly marked pedestrian pathways between transit facilities and building entrances included in the design.	SU

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Table 2-1
Summary of Environmental Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		▸ The project applicant shall require that all diesel engines be shut off when not in use for longer than 5 minutes on the premises to reduce idling emissions.	
4.3-3 Exposure of Sensitive Receptors to Toxic Air Contaminant Emissions. The delivery trucks associated with the proposed commercial uses have the potential to expose proposed residents (in the proposed Rocklin 60 project) along the site's eastern boundary to elevated diesel PM emissions, which are categorized as a toxic air contaminant. However, these emission levels would not exceed established significance thresholds. Therefore, this would be considered a less-than-significant impact.	LTS	No mitigation measures would be necessary.	LTS
4.3-4 Long-Term Operational (Local) Mobile-Source Carbon Monoxide Emissions. The proposed project would increase mobile-source carbon monoxide emissions in the local area. However, this increase would not cause local mobile-source CO emissions to exceed applicable standards. Therefore, this impact would be considered less than significant.	LTS	No mitigation measures would be necessary.	LTS
4.3-5 Exposure of Sensitive Receptor to Odorous Emissions. The proposed project would introduce new odor sources into the area (e.g., trash receptacles). However, these odor sources would not be expected to adversely affect adjacent land uses. Therefore, this impact would be considered less than significant.	LTS	No mitigation measures would be necessary.	LTS
4.4 Noise			
4.4-1 Construction-Generated Temporary Increases in Ambient Noise Levels. Construction activities would result in temporary increases in ambient noise levels for existing and, potentially, for proposed residents (if approved and occupied prior to project construction) directly adjacent to the eastern site boundary. However, these construction noise levels would be intermittent and would be attenuated with the installation of the eastern perimeter wall. As a result, this impact is considered less than significant.	LTS	No mitigation measures would be necessary.	LTS

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Table 2-1
Summary of Environmental Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
4.4-2 Construction Blasting Noise. If construction activities include blasting, the intermittent noise levels could be considered excessive for adjacent land uses, if the blasting activities are unexpected. As a result, this impact is considered significant.	S	**Mitigation Measure 4.4-2 Construction Blasting Noise** a. If blasting activities are to occur in conjunction with the improvements, the contractor shall conduct the blasting activities in compliance with state and local regulations. The contractor shall obtain a blasting permit from the City of Rocklin prior to commencing any on-site blasting activities. The permit application shall include a description of the work to be accomplished and a statement of the necessity for blasting as opposed to other methods considered including avoidance of hard rock areas and safety measures to be implemented such as blast blankets. The contractor shall coordinate any blasting activities with Police and Fire Departments to insure proper site access and traffic control, and public notification including media, nearby residents and businesses, as determined appropriate by the Rocklin Police and Fire Departments. Blasting specifications and plans shall include a schedule that outlines the time frame in which blasting will occur in order to limit noise and traffic inconvenience. b. Construction blasting activities shall be subject to the City of Rocklin Construction Noise Guidelines, including limiting construction-related noise generating activities within or near residential areas to the less noise sensitive daytime hours (between 7:00 a.m. and 7:00 p.m. on weekdays, and between 8:00 a.m. and 7:00 p.m. on weekends).	LTS
4.4-3 Traffic-Generated Permanent Increases in Ambient Noise Levels. The proposed project would not result in a noticeable increase in traffic noise levels at off-site sensitive receptors. Therefore, this impact is considered less than significant.	LTS	No mitigation measures would be necessary.	LTS
4.4-4 Exposure of Sensitive Receptors to Excessive Stationary- or Area-Source Noise Levels. The truck deliveries associated with the proposed commercial uses would generate substantial noise levels, which could affect the proposed residential uses immediately to the east of the project site. Therefore, this impact would be considered significant.	S	**Mitigation Measure 4.4-4 Exposure of Sensitive Receptors to Excessive Stationary- or Area-Source Noise Levels** ▸ The noise barrier proposed to be constructed along the site's eastern boundary shall be constructed of masonry block, pre-cast concrete panels, or other massive materials. ▸ The height of the noise barrier along the entire eastern boundary shall be sufficient to ensure that the proposed project is consistent	LTS

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Table 2-1
Summary of Environmental Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		with City's exterior and interior noise levels of 60 dBA Ldn and 45 dBA Ldn, respectively, for residential uses exposed to noise sources. ▸ Solid noise barriers shall extend along the cold food unloading area of the large retail/grocery store loading dock to further shield refrigeration trucks while being unloaded. Refrigeration trucks shall be required to park within those shielded loading dock areas while on the site. ▸ All rooftop mechanical equipment shall be completely screened from view of existing or proposed residences by the proposed building parapet. ▸ The noise mitigation measures shall be designed by an acoustical engineer consistent with the Noise Element's acceptable noise levels for residential land uses.	
4.4-5 Exposure of Sensitive Uses to Vibration Levels. The vibration levels generated by the proposed construction activities would not expose adjacent future residences to excessive vibration levels and the project's operations would not generate any vibration sources. Therefore, this impact is considered less than significant.	LTS	No mitigation measures would be necessary.	LTS
4.4-6 Land Use Compatibility with On-Site Noise Levels. The project would not result in exposure of sensitive land uses to noise levels in excess of the applicable land-use compatibility noise standards. In addition, the project site is not located near an airport and would not expose people to excessive aircraft-generated noise. Therefore, land use compatibility impacts associated with on-site noise levels would be less than significant.	LTS	No mitigation measures would be necessary.	LTS
4.5 Population and Housing			
4.5-1 Increase in Housing Demand during Construction. Project implementation would increase construction employment within the City of Rocklin for the duration of the project's construction activities. Because an adequate labor force is available in the local region, this temporary increase in employment would not be expected to substantially increase the	LTS	No mitigation measures would be necessary.	LTS

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Summary of Environmental Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
local demand for housing. This impact is considered less than significant.			
4.5-2 Increase in Housing Demand during Operations. The proposed project could directly and indirectly induce population growth in Rocklin by generating employment for approximately 800 people. However, adequate housing is available within the City and the surrounding region to accommodate this population growth. Therefore, the project's contribution to population growth and its effect on the available housing supply would be considered a less-than-significant impact.	LTS	No mitigation measures would be necessary.	LTS
4.6 Public Services and Utilities			
4.6-1 Increased Demand for Water Supply, Treatment, and Conveyance Facilities. PCWA has sufficient water supplies to meet existing and projected future uses in addition to the proposed project's demands under all water year types (e.g., normal, single-dry, and multiple-dry years). The project site would be served by the Foothill WTP and the proposed project's estimated maximum daily water treatment demands would not exceed the plant's permitted capacity. This impact would be **less than significant**. However, the project would require the construction of water conveyance facilities to ensure adequate water conveyance to the site. The construction of these conveyance facilities could cause short-term environmental impacts. These short-term impacts would be considered **significant**.	LTS / S	**Mitigation Measure 4.6-1 Increased Demand for Water Supply, Treatment, and Facilities** The mitigation measures recommended in Chapter 4 of this Draft shall be applied (where applicable) to mitigate any water conveyance construction impacts, if significant, to less-than-significant levels. For example, PCAPCD measures shall be implemented to minimize fugitive dust and construction equipment emissions, and construction equipment shall be effectively muffled and limited to daytime operations. As part of any necessary encroachment permits for work within the roadway, construction traffic control plans shall be prepared and implemented in order to minimize construction traffic hazards.	LTS / LTS
4.6-2 Demand for Wastewater Treatment and Conveyance Facilities. Implementation of the project would increase the demand for wastewater treatment and conveyance facilities. Existing wastewater treatment facilities and the planned wastewater conveyance facilities currently under construction would be adequate to serve the project. This impact is considered less than significant.	LTS	No mitigation measures would be necessary.	LTS

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Summary of Environmental Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
4.6-3 Increased Generation of Solid Waste. The proposed project would incrementally increase the amount of solid waste generated in the City. However, adequate long-term landfill disposal capacity is available at the Western Regional Sanitary Landfill, which would receive the solid waste generated from the project site. Therefore, the project's impacts on solid waste disposal would be considered less than significant.	LTS	No mitigation measures would be necessary.	LTS
4.6-4 Increased Demand for Electricity. Implementation of the proposed project would increase the demand for electricity and electrical infrastructure. The project area would be supplied with electrical services by PG&E. Electrical services are currently being provided adjacent to the project site and extension of these services to the site would not cause any physical disturbances beyond that already anticipated at the project site. For these reasons, the provision of electrical services to the project site would result in less-than-significant impacts.	LTS	No mitigation measures would be necessary.	LTS
4.6-5 Increased Demand for Natural Gas. Implementation of the proposed project would increase the demand for natural gas. PG&E would provide natural gas to the project site through existing utility easements. Therefore, this impact would be less than significant.	LTS	No mitigation measures would be necessary.	LTS
4.6-6 Required Extension of Telecommunications Services. Implementation of the proposed project would require extension of existing telecommunication services. Pacific Bell and Wave Broadband Services would provide telephone and cable services, respectively, to the project site and upgrade existing facilities, as necessary, to serve the project. This impact would be less than significant.	LTS	No mitigation measures would be necessary.	LTS

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Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
4.6-7 Increased Demand for Fire Protection and Emergency Medical Services. Development of the proposed project would increase the demand for fire protection and emergency medical services. The proposed project would be required to be designed and constructed consistent with the Uniform Fire Code requirements and the project applicant would be required to pay impact fees to offset the increased demand. Therefore, this impact would be less than significant.	LTS	No mitigation measures would be necessary.	LTS
4.6-8 Increased Demand for Police Protection Services. Development of the proposed project would increase the demand for police protection services. The City would add personnel to the police department on an as-needed basis to meet service goals and the project includes the implementation of site security measures to minimize new demands on law enforcement. Therefore, this impact would be less than significant.	LTS	No mitigation measures would be necessary.	LTS
4.6-9 Increased Demand for Public School Facilities and Services. The proposed project is not expected to result in substantial population growth or new student generation. The project would be subject to development impact fees that would provide the legal maximum required level of funding under State law. The payment of school impact fees is deemed to be full and adequate mitigation under CEQA (Government Code Section 65996). As a result, the project would have a less-than-significant impact on school services and facilities.	LTS	No mitigation measures would be necessary.	LTS
4.7 Aesthetics			
4.7-1 Impacts on Scenic Vistas. Views on or near the project site are not considered scenic vistas. Therefore, development of the project site would not alter or obscure a scenic vista. This impact would be less than significant.	LTS	No mitigation measures would be necessary.	LTS
4.7-2 Damage to Scenic Resources within a State Scenic Highway. The project site is not visible from a State Scenic Highway and would not damage scenic resources. The project would result in no impacts to scenic resources within a scenic highway.	NI	No mitigation measures would be necessary.	NI

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Summary of Environmental Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
4.7-3 Changes in Visual Character. The project would convert views of an approximately 50-acre grassland/woodland landscape to urban development. Conversion from an open grassland/oak woodland landscape to urban development would substantially alter the visual character of the project area. This change would result in a significant and unavoidable impact to the visual character of the area.	SU	**Mitigation Measure 4.7-3 Changes in Visual Character** ▸ The project applicant shall comply with the requirements of the City's design review process in order to ensure that development of the site is of a high quality and does not create visual incompatibilities. ▸ The project applicant shall submit for City review and approval a detailed site landscaping plan that softens views of the site from Interstate 80 and Sierra College Boulevard by creating a visual transition between passing vehicle traffic and the project site and minimizes the scale of the proposed commercial buildings. The landscape plan shall effectively screen parking areas, service zones, trash enclosures and mechanical equipment. The landscape plan shall also ensure that the City's parking lot shade requirements are met. ▸ The project's landscaping plan includes the planting of trees on the site's eastern perimeter. This planting shall extend along the entire eastern perimeter and shall consist of a continuous row of evergreen trees. This row of trees shall have sufficient density to create a continuous visual screen between the project site and the adjacent rural residential land uses to the east (or the Rocklin 60 residential subdivision, if it is constructed in the future). The trees shall be capable of growing a sufficient height above the project's proposed sound wall (i.e., 20- to 25-foot tall trees) to effectively screen views of the project site from the adjacent land uses.	SU
4.7-4 Impacts from Lighting and Reflective Surfaces. The project would require new lighting throughout the project site and could construct facilities with reflective surfaces that could inadvertently cause light and glare for motorists on Interstate 80 and Sierra College Boulevard, and adjacent land uses under day and nighttime conditions. In addition, the degree of darkness in the City of Rocklin and on the project site would diminish as a result of development, potentially diminishing the visibility of stars and other features of the night sky. This impact is considered significant.	S	**Mitigation Measure 4.7-4 Impacts from Lighting and Reflective Surfaces.** ▸ All exterior lighting fixtures shall be aimed downward and shall include shielding to prevent offsite light spillover. ▸ The project applicant shall submit a detailed lighting and photometric plan to the City as part of the design review process. This lighting plan shall ensure that proposed exterior lighting prevents unnecessary glare or reflection and that the lighting does not cause any nuisance, inconvenience, or hazard of any kind on adjoining streets or properties.	LTS

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Summary of Environmental Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		▸ The project applicant shall adhere to the Rocklin Crossings General Development Guidelines and all City of Rocklin design review requirements, as applicable, regarding the appropriate use of building materials, lighting, and signage to prevent light and glare from adversely affecting motorists and adjacent land uses.	
4.8 Public Health and Hazards			
4.8-1 Exposure to Known and Unknown Hazardous Materials. No recognized environmental conditions have been identified to date on the project site. However, excavation and construction activities in the area could result in the exposure of construction workers and the general public to hazardous materials, including petroleum hydrocarbons, pesticides, herbicides, and fertilizers; contaminated debris; elevated levels of chemicals that could be hazardous; or hazardous substances that could be inadvertently spilled or otherwise spread. This impact is considered significant.	S	**Mitigation Measure 4.8-1 Exposure to Known and Unknown Hazardous Materials** a. If during site preparation and construction activities previous undiscovered or unknown evidence of hazardous materials contamination is observed or suspected through either obvious or implied measures (e.g., stained or odorous soil, unknown storage tanks, etc.), construction activities shall immediately cease in the area of the find. Placer County Environmental Health Department staff shall be immediately consulted and the project applicant shall contract with a qualified consultant registered in DTSC's Registered Environmental Assessor Program to assess the situation. If necessary, risk assessments shall include a DTSC Preliminary Endangerment Assessment or no further action determination, or equivalent. Any required remediation shall include a DTSC Remedial Action Work Plan or equivalent. Based on consultation between the Registered Environmental Assessor and DTSC, remediation of the site shall be conducted consistent with all applicable regulations. b. Prior to issuance of grading permits, the project applicant shall provide to the City of Rocklin an assessment conducted by or on behalf of PG&E pertaining to the contents of the existing pole mounted transformers located on and nearby the project site. The assessment shall determine whether the existing pole mounted transformer on the site and the pole mounted transformers adjacent to the site contain PCBs and whether there are any records of spills from such equipment. If PCB containing equipment is identified, the maintenance and/or disposal of the transformers shall be subject to the regulations of the Toxic Substances Control Act (TSCA) under the authority of the Placer	LTS

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Summary of Environmental Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		County Environmental Health Department. If the electrical transformers are determined not to contain PCBs, they shall be labeled as such and no further mitigation shall be required.	
4.8-2 Exposure to Hazardous Materials during Project Construction. Use of various paints, solvents, cements, glues, and fuels is expected during construction of the proposed project. Construction workers could be exposed to hazardous materials as a result of improper handling or use; accident; environmentally unsound disposal methods; or fire, explosion, or other emergencies, resulting in adverse health effects. However, all allowable uses would be subject to compliance with federal, state, and local hazardous materials regulations, and would be monitored by the state (e.g., Cal/OSHA, DTSC, CHP) and/or local jurisdictions. Therefore, the potential for human exposure to hazardous materials during construction would be considered a less-than-significant impact.	LTS	No mitigation measures would be necessary.	LTS
4.8-3 Exposure to Hazardous Materials during Project Operations. The proposed project would use many materials, some of which are considered hazardous, during the course of its daily operations. Compliance with federal, State, and local hazardous materials regulations, which would be monitored by the State and/or local jurisdictions, would reduce impacts associated with the use, transport, and storage of hazardous materials during operation of the project. Therefore, impacts related to creation of significant hazards to the public or the environment would be less than significant.	LTS	No mitigation measures would be necessary.	LTS
4.8-4 Potential for Public Health Hazards from Mosquitoes. The proposed project would include a detention basin, which could attract mosquitoes and other water-borne vectors, thereby potentially creating a public health hazard. The detention basin would be designed to not retain storm water for long periods. Therefore, it would not create a location that would facilitate mosquito breeding. This impact would be less than significant.	LTS	No mitigation measures would be necessary.	LTS

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Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
4.8-5 Exposure of People or Structures to Wildland Fires. The project site is not located in a designated wildland fire area, a High Fire Hazard Severity Zone, or a State Responsibility Area. In addition, the project applicant would be required to incorporate Uniform Fire Code requirements into the project designs and operations. Therefore, the project would not expose people or structures to significant risk of loss or injury involving wildland fires. This impact would be less than significant.	LTS	No mitigation measures would be necessary.	LTS
4.9 Geology, Soils and Paleontology			
4.9-1 Risks to People and Structures from Seismic Hazards. The project site is not located within an earthquake fault zone as designated by the Alquist-Priolo Earthquake Fault Zone Act and no known faults are located on the project site. Based on the site topography, soil profiles, and the groundwater table, the potential for soil expansion, slope instability/failure, and liquefaction was determined to be low. However, ground shaking, as a result of seismic activity from nearby or distant earthquake faults, could cause seismic-related ground failure. Thus, development of the project site for commercial uses has the potential to expose people to adverse effects from seismic hazards, including strong seismic ground shaking. This impact would be significant.	S	**Mitigation Measure 4.9-1 Risks to People and Structures from Seismic Hazards** a. Before issuance of a grading permit, the project design plans and specifications, including grading and foundation plans, shall be reviewed by a licensed geotechnical engineer, to ensure that the recommendations in the geotechnical report have been appropriately integrated and comply with Rocklin Municipal Code Chapter 15.28, Grading and Erosion and Sedimentation Control. This review shall also assess the extent to which the recommendations in the geotechnical report are appropriate and sufficient for construction of the buildings described in the final project design plans. b. During project design and construction, all recommendations outlined in the geotechnical report for the project (Wallace Kuhl & Associates 2006) shall be implemented, at the direction of the City engineer, to prevent significant impacts associated with seismic activity. These recommendations specifically identify actions to be taken related to: site clearing, site preparation and engineered fill construction, final subgrade preparation, trench backfilling, foundation design, interior floor slab support and moisture penetration resistance, exterior flatwork, retaining wall design, light pole and entry sign foundations, erosion and slope winterization, surface drainage, pavement design, and geotechnical engineering observation and testing during earthwork. As identified in these recommendations, a geotechnical engineer shall be present on-site during appropriate	LTS

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Summary of Environmental Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		earthmoving and construction activities to ensure that requirements outlined in the geotechnical report are adhered to for proper fill and compaction of soils. c. Should the construction schedule require continued work during the wet weather months (e.g., October through April), the project applicant shall consult with a licensed civil engineer and implement any additional recommendations provided, as conditions warrant. These recommendations would include but not be limited to (1) implementing aeration, to allow site soils to reach a proper moisture content to attain the specified degree of compaction to be achieved; and (2) implementing aeration or lime treatment, to allow any low-permeability surface clay soils intended for use as engineered fill to reach a moisture content that would permit the specified degree of compaction to be achieved (Wallace Kuhl & Associates 2006).	
4.9-2 Construction-Related Erosion Hazards. Excavation and grading of soil could result in localized erosion during project construction. This would be a significant impact.	S	**Mitigation Measure 4.9-2 Construction-Related Erosion Hazards** a. A grading and erosion control plan shall be prepared by a California Registered Civil Engineer retained by the applicant(s) and submitted to the City of Rocklin for approval prior to issuance of grading permits. The plan shall comply with the City of Rocklin Grading and Erosion and Sedimentation Control (Municipal Code Title 15, Chapter 15.28), the erosion control recommendations in the project's geotechnical report (Wallace Kuhl & Associates 2006), and the California Building Standards Code grading requirements. The plan shall include the site-specific grading proposed for the new development. All grading shall be balanced on the site, where feasible. b. To ensure grading activities do not directly or indirectly discharge sediments into surface waters as a result of construction activities, the project applicant shall develop a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP shall identify Best Management Practices that would be used to protect stormwater runoff and minimize erosion during construction.	LTS

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Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
4.10 Hydrology and Water Quality			
4.10-1 Increased Runoff and Potential for Localized or Downstream Flooding. Implementation of the proposed project would result in an increase in impervious surfaces on the project site, which would lead to an increase in stormwater runoff compared to existing conditions. The increased surface runoff could result in a greater potential for on- and off-site flooding. The proposed project includes a stormwater runoff collection and detention system pursuant to the guidelines set forth in the Stormwater Management Manual that would reduce the post-project peak flows to pre-project levels. This impact would be less than significant.	LTS	No mitigation measures would be necessary.	LTS
4.10-2 Potential for Short-Term Construction-Related Water Quality Degradation. Implementation of the proposed project could cause short-term water quality degradation associated with construction activities. Construction activities (grading, excavation, etc.) could result in substantial stormwater discharges of suspended solids and other nonpoint source pollutants, which could drain to off-site areas, potentially degrading local surface water quality. Further, areas of exposed or stockpiled soils could be subject to sheet erosion during rain events. This impact would be considered potentially significant.	PS	**Mitigation Measure 4.10-2 Potential for Short-Term Construction-Related Water Quality Degradation** a. The project applicant shall demonstrate compliance, through its erosion control plan and SWPPP, with all requirements of the City's Stormwater Runoff Pollution Control Ordinance (Title 8, Chapter 8.30 of the City Code) and the Grading and Erosion and Sedimentation Control Ordinance (Title 15, Chapter 15.28 of the City Code), which regulate stormwater and prohibit non-stormwater discharges except where regulated by an NPDES permit. This includes preparing erosion, sediment, and pollution control plans for the entire construction site. The project's grading plans shall be approved by the City of Rocklin, Engineering Department prior to the initiation of site grading activities. The project applicant shall implement measures including the use of soil stabilizers, fiber rolls, inlet filters, and gravel bags to prevent pollutants from being carried off-site in stormwater generated on the project site. These measures shall be designed to accommodate stormwater discharges associated with proposed measures that would be implemented to control on-site dust generation (e.g., wheel washing, active watering). b. Prior to the issuance of a grading permit or any construction activity, the project applicant shall obtain from the Central Valley RWQCB the appropriate regulatory approvals for project construction including a Section 401 water quality certification,	LTS

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Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		and an NPDES stormwater permit for general construction activity, including construction dewatering activities. c. As required under the NPDES stormwater permit for general construction activity, the project applicant shall prepare and submit the appropriate Notice of Intent and prepare the SWPPP and the erosion control plan for pollution prevention and control prior to initiating site construction activities. The SWPPP shall identify and specify the use of erosion sediment control BMPs, means of waste disposal, implementation of approved local plans, nonstormwater management controls, and inspection and maintenance responsibilities. The SWPPP shall also specify the pollutants that are likely to be used during construction and that could be present in stormwater drainage and nonstormwater discharges. A sampling and monitoring program shall be included in the SWPPP that meets the requirements of SWRCB Order 99-08-DWQ to ensure the BMPs are effective. d. Construction techniques shall be identified that would reduce the potential runoff and the SWPPP shall identify the erosion and sedimentation control measures to be implemented. The SWPPP shall also specify spill prevention and contingency measures, identify the types of materials used for equipment operation, and identify measures to prevent or clean up spills of hazardous materials used for equipment operation and hazardous waste. Emergency procedures for responding to spills shall also be identified. BMPs identified in the SWPPP shall be used in subsequent site development activities. The SWPPP shall identify personnel training requirements and procedures that would be used to ensure that workers are aware of permit requirements and proper installation and performance inspection methods for BMPs specified in the SWPPP. The SWPPP shall also identify the appropriate personnel responsible for supervisory duties related to implementation of the SWPPP. All construction contractors shall retain a copy of the approved SWPPP on the construction site.	

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4.10-3 Potential Long-Term Degradation of Water Quality. The conversion of the site from vacant to commercial uses would introduce new stormwater pollutant sources. These pollutant sources would include oils and greases, petroleum hydrocarbons (gas and diesel fuels), nitrogen, phosphorus, and heavy metals. Pesticides, herbicides, and other landscape maintenance products typically used in landscape maintenance also could be present. These pollutants could adversely affect the site's stormwater discharges. The potential water quality degradation associated with site operations would be considered significant.	S	**Mitigation Measure 4.10-3 Potential Long-Term Degradation of Water Quality** Before issuance of a grading permit for the site, the project applicant shall obtain from the Central Valley RWQCB a general NPDES permit and shall comply with all of the permit requirements in order to minimize storm water discharges associated with site operations. In addition, the project applicant shall prepare a SWPPP and implement Best Management Practices designed to minimize sedimentation and release of products used during site operations. Before approval of the final project design, the project applicant shall identify storm water runoff BMPs selected from the Storm Water Quality Task Force's California Storm Water Best Management Practices Handbook (American Public Works Association 1993), the Bay Area Stormwater Management Agencies Association's (1999) Start at the Source: Design Guidance Manual for Stormwater Quality Protection, or similar documents. Typical BMPs that could be used on the project site shall include, but are not limited to, catchbasin inserts, compost storm water filters, sand filters, vegetated filter strips, biofiltration swales, oil/water separators, biodetention basins, or other equally effective measures. Other BMPs shall include, but would not be limited to, administrative controls such as signage at inlets to prevent illicit discharges into storm drains, parking lot and other pavement area sweeping, public education, and hazardous waste management and disposal programs. BMPs shall identify and implement mechanisms for the routine maintenance, inspection, and repair of pollution control mechanisms. In addition, the BMPs shall be reviewed for adequacy by the City of Rocklin, Engineering Department prior to issuance of a grading permit for the site to ensure that they will effectively remove pollutants from the site's stormwater runoff.	LTS

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4.11 Agriculture			
4.11-1 Farmland Conversion. The project would not convert important farmlands to non-agricultural land uses and would not conflict with lands zoned for agricultural uses. Therefore, no impact on agricultural resources would be anticipated with project implementation.	NI	No mitigation measures would be necessary.	NI
4.12 Biological Resources			
4.12-1 Loss of Wetlands. Implementation of the proposed project would result in the fill of jurisdictional waters of the United States, including wetlands. This impact is considered significant.	S	**Mitigation Measure 4.12-1: Loss of Wetlands.** On May 16, 2007, the project applicant secured authorization for the fill of approximately 0.426 acres of jurisdictional waters of the United States (Nationwide Permit No. 39). Prior to commencing any construction activities associated with the proposed project, the project applicant shall comply with all of the terms and conditions of the Nationwide Permit. In addition, the project applicant shall obtain water quality certification pursuant to Section 401 of the Clean Water Act for the project. Any measures required as part of the issuance of water quality certification shall be implemented. If the proposed project is constructed before the proposed Rocklin 60 residential development is approved, a buffer area shall be established between the detention basin and the wetland resources to the north and east prior to the commencement of construction activities on the project site. Temporary construction fencing shall be installed around these wetland resources for the duration of construction period to ensure construction vehicles and personnel are restricted from entering the wetland areas. This mitigation will not be necessary if the proposed Rocklin 60 residential subdivision is developed prior to construction of the proposed project because the Rocklin 60 project would remove and mitigate for the loss of this wetland habitat.	LTS

LTS = Less Than Significant NI = No Impact PS = Potentially Significant S = Significant SU = Significant and Unavoidable

Table 2-1
Summary of Environmental Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
4.12-2 Disturbance of Common Plant and Wildlife Species. Implementation of the proposed project would result in the removal of common plant and wildlife species. These effects would not substantially reduce the habitat of any common species, cause a species to drop below self-sustaining levels, or threaten to eliminate a plant or animal community. Therefore, this impact is considered less than significant.	LTS	No mitigation measures would be necessary.	LTS
4.12-3 Loss of Native Oak and Heritage Trees - Short Term. Implementation of the proposed project would result in the removal of all of the native oak trees on the site, including two heritage trees. This impact would be considered significant and unavoidable in the short-term because the removed trees would not be immediately replaced with mature oak trees.	SU	**Mitigation Measure 4.12-3: Loss of Native Oak and Heritage Trees - Short Term.** Prior to any grading or construction activity, the project applicant must obtain a tree permit from the City that will include provisions for replacing lost trees and an oak tree restoration plan will be developed and implemented. This plan will provide for the replacement of as many oaks as feasible within the project area. If adequate locations cannot be found, as determined by the Development Services Manager, to replace all removed oak trees, then the remaining mitigation requirement may be met through payment into the existing City of Rocklin Tree Preservation Fund. Payments shall be calculated using the following formula: **Step 1:** Trunk Diameter at Breast Height (TDBH) of all Surveyed Trees on the Site X 20% = Discount Diameter **Step 2:** TDBH of all Surveyed Trees on the Site to be Removed - Discount Diameter = Total Number Inches of TDBH of Replacement Trees Required Such payments shall be made prior to the issuance of building permits, with review and approval by the City Engineer. The protection of oak trees not scheduled for removal must comply with pertinent sections of the City's Oak Tree Preservation Ordinance.	SU
4.12-4 Loss of Native Oak and Heritage Trees - Long Term. Implementation of the proposed project would result in the removal of all of the native oak trees on the site, including two heritage trees. This impact would be considered potentially significant in the long-term.	PS	Implement Mitigation Measure 4.12-3.	LTS

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Table 2-1
Summary of Environmental Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
4.12-5 Disturbance or Removal of Special-Status Plant Species. Implementation of the proposed project would not result in the loss or disturbance of special-status plant species. This would be considered a less-than-significant impact.	LTS	No mitigation measures would be necessary.	LTS
4.12-6 Disturbance of Valley Elderberry Longhorn Beetle Habitat. Implementation of the proposed project would result in the loss of elderberry shrubs, which provide potential habitat for the valley elderberry longhorn beetle. The loss of valley elderberry longhorn beetle habitat would be considered a significant impact.	S	**Mitigation Measure 4.12-6: Disturbance of Valley Elderberry Longhorn Beetle Habitat.** The project applicant shall comply with the terms and conditions of the Biological Opinion issued by USFWS on March 10, 2006.	LTS
4.12-7 Disturbance of California Red-Legged Frog Habitat. Implementation of the proposed project would not be expected to adversely affect California red-legged frog due to the marginal habitat on the site and distance to known populations. Therefore, the project's potential impacts on this species would be considered less than significant.	LTS	No mitigation measures would be necessary.	LTS
4.12-8 Disturbance of Western Pond Turtle Habitat. Implementation of the proposed project would not be expected to adversely affect western pond turtle due to the marginal habitat on the site. Therefore, the project's potential impacts on this species would be considered less than significant.	LTS	No mitigation measures would be necessary.	LTS
4.12-9 Disturbance of Burrowing Owl Habitat. Implementation of the proposed project would not be expected to adversely affect burrowing owls because it is rare to find them nesting in the foothills as far east as the project site and there are no documented records of burrowing owls within five miles of the project area. Therefore, the project's potential impacts on this species would be considered less than significant.	LTS	No mitigation measures would be necessary.	LTS
4.12-10 Disturbance of Raptors and Migratory Birds. Loss of nests of special-status species would result in substantial adverse effects to local populations. This would be considered a significant impact.	S	**Mitigation Measure 4.12-10: Disturbance of Raptors and Migratory Birds.** a. Removal of nesting habitat for raptors and migratory birds shall be timed to avoid the nesting season. b. If vegetation removal and/or project construction occurs during the nesting season for raptors and migratory birds,	LTS

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Table 2-1
Summary of Environmental Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		preconstruction surveys shall be conducted by a qualified biologist approved by the City. The surveys shall cover all areas of suitable nesting habitat within 500 feet of project activity and shall be conducted within 14 days prior to commencement of project activity. The surveys shall be valid for one construction season. If no active nests are found, no further mitigation shall be required. c. If active nests are found, impacts shall be avoided by establishment of appropriate buffers. No project activity shall commence within the buffer area until a qualified biologist confirms that the nest is no longer active. DFG guidelines recommend implementation of 500 foot buffers, but the size of the buffer may be adjusted if a qualified biologist determines through consultation with CDFG and/or USFWS that construction activities would not be likely to adversely affect the nest. Monitoring of the nest by a qualified biologist may be required if the activity has potential to adversely affect the nest.	
4.12-11 Degradation of Chinook Salmon and Steelhead Trout Habitat. Project development would not be expected to directly affect Central Valley fall/late fall-run Chinook salmon or Central Valley steelhead trout. No habitat is present on the project site and the nearest habitat within Secret Ravine Creek is located approximately 300 feet to the southeast at its closest point. However, if uncontrolled, soil erosion generated during project construction and urban pollutants generated from the site during site operations could indirectly affect fish habitat by degrading the water quality within Secret Ravine Creek. Therefore, potential impacts on these species are considered significant.	S	**Mitigation Measure 4.12-11: Degradation of Chinook Salmon and Steelhead Trout Habitat.** Implement Mitigation Measures 4.10-2 and 4.10-3 identified in Section 4.10, Hydrology and Water Quality of this report in order to ensure water quality within Secret Ravine Creek is not substantially degraded with project construction and operation.	LTS
4.13 Cultural Resources			
4.13-1 Damage or Destruction of Significant Documented Cultural Resources. No significant cultural resources have been identified within or immediately adjacent to the project site. Therefore, the proposed project would result in no impacts to CRHR-listed or eligible resources.	NI	No mitigation measures would be necessary.	NI

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Table 2-1
Summary of Environmental Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
4.13-2 Potential Impacts to Undocumented Cultural Resources. There is the possibility that previously undiscovered and undocumented resources could be adversely affected or otherwise altered by ground disturbing activities during construction of the project. Disturbance of undocumented resources would be a potentially significant impact.	PS	**Mitigation Measure 4.13-2 Potential Impacts to Undocumented Cultural Resources.** If an inadvertent discovery of cultural materials (e.g., unusual amounts of shell, charcoal, animal bone, bottle glass, ceramics, burned soil, structure/building remains) is made during project-related construction activities, ground disturbances in the area of the find shall be halted and a qualified professional archaeologist shall be notified regarding the discovery. The archaeologist shall determine whether the resource is potentially significant as per CEQA (i.e., whether it is an historical resource, a unique archaeological resource, or a unique paleontological resource) and shall develop specific measures to ensure preservation of the resource or to mitigate impacts to the resource if it cannot feasibly be preserved in light of costs, logistics, technological considerations, the location of the find, and the extent to which avoidance and/or preservation of the find is consistent or inconsistent with the design and objectives of the project. Specific measures for significant or potentially significant resources could include, but are not necessarily limited to, preservation in place, in-field documentation, archival research, subsurface testing, and excavation. The specific type of measure necessary would be determined according to evidence indicating degrees of resource integrity, spatial and temporal extent, and cultural associations, and would be developed in a manner consistent with CEQA guidelines for preserving or otherwise mitigating impacts to archaeological and cultural artifacts.	LTS
4.13-3 Potential to Uncover Human Remains. Subsurface disturbances associated with construction activities could potentially uncover unmarked historic-era and prehistoric Native American burials, resulting in their alteration or damage. This would be a potentially significant impact.	PS	**Mitigation Measure 4.13-3 Potential to Uncover Human Remains** In the event of the accidental discovery or recognition of any human remains, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains, until compliance with the provisions of Section 15064.5 (e)(1) and (2) of the CEQA Guidelines, as well as Public Resources Code Section 5097.98, has occurred. If any human remains are discovered, all work shall stop in the immediate vicinity of the find and the County Coroner shall be notified, according to Section 7050.5 of the California Health and	LTS

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Table 2-1
Summary of Environmental Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		Safety Code. The City's Community Development Director shall also be notified. If the remains are Native American, the Coroner will notify the Native American Heritage Commission, which in turn will inform a most likely descendant. The descendant will then recommend to the landowner appropriate disposition of the remains and any grave goods, and the landowner shall comply with the requirements of AB 2641.	
4.14 Energy			
4.14-1 Increased Energy Demand. Project implementation would increase energy demand during both construction and operation of the proposed project. Construction and operation of the proposed buildings on the site would be required to comply with the energy efficiency standards included in Title 24 and with air quality mitigation measures identified in Section 4.3, Air Quality (Mitigation Measure 4.3-2) that would effectively reduce the project's energy demands. Therefore, the project would not be expected to cause the inefficient, wasteful or unnecessary consumption of energy. This impact is considered less than significant.	LTS	No mitigation measures would be necessary.	LTS
5 Economic Impact and Urban Decay Analysis			
5-1 Urban Decay. Implementation of the proposed project would result in some diverted sales and some closures of primary market area stores may occur. However, these diverted sales and possible closures are unlikely to result in urban decay. This would be considered a less-than-significant impact.	LTS	No mitigation measures would be necessary.	LTS
6 Cumulative Impacts			
6-1 Rocklin Road/I-80 Westbound Ramps Without Dominguez Road. The addition of project-related traffic to cumulative traffic volumes would degrade traffic operations at the westbound ramps of the Rocklin Road/I-80 intersection during the p.m. peak hour from LOS E to LOS F. This impact would be considered significant.	S	**Mitigation Measure 6-1 Rocklin Road/I-80 Westbound Ramps Without Dominguez Road** Implement Mitigation Measure 4.2-1.	LTS

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Table 2-1
Summary of Environmental Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
6-2 Rocklin Road/I-80 Eastbound Ramps Without Dominguez Road. The addition of project-related traffic to cumulative traffic volumes would degrade traffic operations at the eastbound ramps of the Rocklin Road/I-80 intersection from LOS D to LOS E during the p.m. peak hour. This impact would be considered significant.	S	**Mitigation Measure 6-2 Rocklin Road/I-80 Eastbound Ramps Without Dominguez Road** Implement Mitigation Measure 4.2-1 in order to reduce westbound through traffic at the intersection of Rocklin Road/I-80 eastbound ramps and improve operations at this intersection to acceptable levels.	LTS
6-3 Barton Road/Brace Road Intersection Without Dominguez Road. The addition of project-related traffic to cumulative traffic volumes would degrade traffic operations at the Barton Road/Brace Road intersection during the a.m. and p.m. peak hour. Because this intersection already operates unacceptably and the project's contribution would be greater than 5 percent, this impact would be considered significant.	S	**Mitigation Measure 6-3 Barton Road/Brace Road Intersection Without Dominguez Road** The project applicant shall pay their fair share to the signalization of this intersection. The project applicant shall pay a traffic impact fee in an amount that constitutes the project's fair share contribution to the construction of the proposed improvement as part of the City's development review process, consistent with the City's CIP program, SPRTA program, or other applicable funding program.	LTS
6-4 Barton Road/Rocklin Road Intersection Without Dominguez Road. The addition of project-related traffic to cumulative traffic volumes would degrade traffic operations at the Barton Road/Rocklin Road intersection during the a.m. and p.m. peak hour. Because this intersection already operates unacceptably and the project's contribution would be greater than 5 percent, this impact would be considered significant.	S	**Mitigation Measure 6-4 Barton Road/Rocklin Road Intersection Without Dominguez Road** The project applicant shall pay their fair share to the signalization of this intersection. The project applicant shall pay a traffic impact fee in an amount that constitutes the project's fair share contribution to the construction of the proposed improvement as part of the City's development review process, consistent with the City's CIP program, SPRTA program, or other applicable funding program.	LTS
6-5 Sierra College Boulevard/English Colony Way Intersection Without Dominguez Road. The addition of project-related traffic to baseline traffic volumes would degrade traffic operations at the Sierra College Boulevard/English Colony Way intersection during the a.m. and p.m. peak hour and during Saturday conditions. Because this intersection already operates unacceptably and the project's contribution would be greater than 5 percent, this impact would be considered significant.	S	**Mitigation Measure 6-5 Sierra College Boulevard/English Colony Way Intersection Without Dominguez Road** The project applicant shall pay their fair share to the signalization of this intersection. The project applicant shall pay a traffic impact fee in an amount that constitutes the project's fair share contribution to the construction of the proposed improvement as part of the City's development review process, consistent with the City's CIP program, SPRTA program, or other applicable funding program.	LTS

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Table 2-1
Summary of Environmental Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
6-6 Taylor Road /Horseshoe Bar Road Intersection Without Dominguez Road. The addition of project-related traffic to cumulative traffic volumes would degrade traffic operations at the Taylor Road/Horseshoe Bar Road intersection. Although this intersection already operates unacceptably, the project's contribution would represent less than a 5 percent decrease in the volume/capacity ratio. Therefore, this impact would be considered less than significant.	LTS	No mitigation measures would be necessary.	LTS
6-7 Taylor Road/King Road Intersection Without Dominguez Road. The addition of project-related traffic to cumulative traffic volumes would degrade traffic operations at the Taylor Road/King Road intersection. Although this intersection already operates unacceptably, the project's contribution would represent less than a 5 percent decrease in the volume/capacity ratio. Therefore, this impact would be considered less than significant.	LTS	No mitigation measures would be necessary.	LTS
6-8 Roadway Segments Without Dominguez Road. The proposed project would cause four roadway segments to exceed the threshold of daily capacity. However, in both the a.m. and p.m. peak hours, the traffic on all four roadway segments are forecast to operate with satisfactory volume/capacity ratios in both peak hours with project conditions. Therefore, the project's impacts on roadway segments would be considered less than significant.	LTS	No mitigation measures would be necessary.	LTS
6-9 Rocklin Road/I-80 Westbound Ramps With Dominguez Road. The addition of project-related traffic to cumulative traffic volumes would degrade traffic operations at the westbound ramps of the Rocklin Road/I-80 intersection during the p.m. peak hour from LOS E to LOS F. This impact would be considered significant.	S	**Mitigation Measure 6-9 Rocklin Road/I-80 Westbound Ramps with Dominguez Road** Implement Mitigation Measure 4.2-1.	LTS

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Table 2-1
Summary of Environmental Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
6-10 Dominguez Road/Granite Drive Intersection With Dominguez Road. The addition of project-related traffic to cumulative traffic volumes would degrade traffic operations at the Dominguez Road/Granite Drive intersection. Because this intersection already operates unacceptably and the project's contribution would be greater than 5 percent, this impact would be considered significant.	S	**Mitigation Measure 6-10 Dominguez Road/Granite Drive Intersection With Dominguez Road** The project applicant shall pay their fair share to changing the stop control from a two-way unsignalized stop to a four-way unsignalized stop. The project applicant shall pay a traffic impact fee in an amount that constitutes the project's fair share contribution to the construction of the proposed improvement as part of the City's development review process, consistent with the City's CIP program, SPRTA program, or other applicable funding program.	LTS
6-11 Sierra College Boulevard/Dominguez Road Intersection With Dominguez Road. The addition of project-related traffic to cumulative traffic volumes would cause this intersection to operate unacceptably with the current roadway striping. This impact would be considered significant.	S	**Mitigation Measure 6-11 Sierra College Boulevard/ Dominguez Road Intersection With Dominguez Road** The project applicant shall pay their fair share to restriping this intersection to accommodate one exclusive left turn lane, one shared left/through lane, one exclusive through lane, and one exclusive right turn lane on the eastbound leg of Dominguez Road at the time of its construction. The project applicant shall pay a traffic impact fee in an amount that constitutes the project's fair share contribution to the construction of the proposed improvement as part of the City's development review process, consistent with the City's CIP program, SPRTA program, or other applicable funding program.	LTS
6-12 Barton Road/Brace Road Intersection With Dominguez Road. The addition of project-related traffic to cumulative traffic volumes would degrade traffic operations at the Barton Road/Brace Road intersection during the a.m. and p.m. peak hour. Because this intersection already operates unacceptably and the project's contribution would be greater than 5 percent, this impact would be considered significant.	S	**Mitigation Measure 6-12 Barton Road/Brace Road Intersection With Dominguez Road** The project applicant shall pay their fair share to the signalization of this intersection. The project applicant shall pay a traffic impact fee in an amount that constitutes the project's fair share contribution to the construction of the proposed improvement as part of the City's development review process, consistent with the City's CIP program, SPRTA program, or other applicable funding program.	LTS

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Table 2-1
Summary of Environmental Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
6-13 Barton Road/Rocklin Road Intersection With Dominguez Road. The addition of project-related traffic to cumulative traffic volumes would degrade traffic operations at the Barton Road/Rocklin Road intersection during the a.m. peak hour. Because this intersection already operates unacceptably and the project's contribution would be greater than 5 percent, this impact would be considered significant.	S	**Mitigation Measure 6-13 Barton Road/Rocklin Road Intersection With Dominguez Road** The project applicant shall pay their fair share to the signalization of this intersection. The project applicant shall pay a traffic impact fee in an amount that constitutes the project's fair share contribution to the construction of the proposed improvement as part of the City's development review process, consistent with the City's CIP program, SPRTA program, or other applicable funding program.	LTS
6-14 Sierra College Boulevard/English Colony Way Intersection With Dominguez Road. The addition of project-related traffic to baseline traffic volumes would degrade traffic operations at the Sierra College Boulevard/English Colony Way intersection during the a.m. and p.m. peak hour and during Saturday conditions. Because this intersection already operates unacceptably and the project's contribution would be greater than 5 percent, this impact would be considered significant.	S	**Mitigation Measure 6-14 Sierra College Boulevard/English Colony Way Intersection With Dominguez Road** The project applicant shall pay their fair share to the signalization of this intersection. The project applicant shall pay a traffic impact fee in an amount that constitutes the project's fair share contribution to the construction of the proposed improvement as part of the City's development review process, consistent with the City's CIP program, SPRTA program, or other applicable funding program.	LTS
6-15 Taylor Road /Horseshoe Bar Road Intersection With Dominguez Road. The addition of project-related traffic to cumulative traffic volumes would degrade traffic operations at the Taylor Road/Horseshoe Bar Road intersection during the weekday peak hour. Although this intersection already operates unacceptably, the project's contribution would represent less than a 5 percent decrease in the volume/capacity ratio. Therefore, this impact would be considered less than significant.	LTS	No mitigation measures would be necessary.	LTS
6-16 Taylor Road/King Road Intersection With Dominguez Road. The addition of project-related traffic to cumulative traffic volumes would degrade traffic operations at the Taylor Road/King Road intersection during the a.m. peak hour. Although this intersection already operates unacceptably, the project's contribution would represent less than a 5 percent decrease in the volume/capacity ratio. Therefore, this impact would be considered less than significant.	LTS	No mitigation measures would be necessary.	LTS

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Table 2-1
Summary of Environmental Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
6-17 Roadway Segments With Dominguez Road. The proposed project would cause four roadway segments to exceed the threshold of daily capacity. However, in both the a.m. and p.m. peak hours, the traffic on all four roadway segments are forecast to operate with satisfactory volume/capacity ratios in both peak hours with project conditions. Therefore, the project's impacts on roadway segments would be considered less than significant.	LTS	No mitigation measures would be necessary.	LTS
6-18 Interstate 80/Sierra College Boulevard Interchange. The proposed project would not degrade the Interstate 80/Sierra College Boulevard Interchange during the cumulative scenario. Therefore, the project's cumulative impacts on this interchange would be considered less than significant.	LTS	No mitigation measures would be necessary.	LTS
6-19 Freeway Mainlines. The freeway mainlines would operate acceptably during the cumulative scenario with the addition of project traffic. Therefore, the project's cumulative impacts on the freeway mainlines would be considered less than significant.	LTS	No mitigation measures would be necessary.	LTS
6-20 Cumulative Regional Air Quality Emissions. The project would contribute to cumulative regional air pollutant emissions. This would be considered a significant and unavoidable impact.	SU	**Mitigation Measure 6-20 Cumulative Regional Air Quality Emissions.** In accordance with the PCAPCD recommendations, the applicant shall implement the following mitigation measures during construction and operation of the proposed project (Backus, pers. comm., 2006b). Implement Mitigation Measures 4.3-1 and 4.3-2. The project shall implement an offsite mitigation program, coordinated through the PCAPCD, to offset the project's long-term ozone precursor emissions. The project's offsite mitigation program must be approved by PCAPCD. The project's offsite mitigation program provides monetary incentives to sources of air pollutant emissions within the SVAB that are not required by law to reduce their emissions. Therefore, the emission reductions are real, quantifiable and implement provisions of the SIP. The offsite mitigation program reduces emissions within the SVAB that would not otherwise be eliminated.	SU

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Summary of Environmental Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		In lieu of the applicant implementing their own offsite mitigation program, the applicant can choose to participate in the PCAPCD Offsite Mitigation Program by paying an equivalent amount of money into the program. The actual amount of emission reductions needed through the Offsite Mitigation Program would be calculated when the project's average daily emissions have been determined.	
6-21 Cumulative Toxic Air Contaminant Emissions. The project would contribute to localized cumulative toxic air contaminant emissions. However, because other cumulative developments in the region are not located directly adjacent to the proposed project, the combined emissions from the proposed project and other cumulative developments would not be expected to exceed established significance thresholds for sensitive receptors in the local area. This would be considered a less-than-significant impact.	LTS	No mitigation measures would be necessary.	LTS
6-22 Cumulative Visual Impacts. The project would contribute to cumulative changes in the local viewshed by converting undeveloped land to urban uses. This would be considered a significant and unavoidable impact.	SU	**Mitigation Measure 6-22 Cumulative Visual Impacts.** Implement the mitigation measures identified in Section 4.7, Aesthetics.	SU
6-23 Cumulative Biological Resource Impacts. The project would contribute to the cumulative loss of biological resources in the region. This would be considered a significant and unavoidable impact.	SU	**Mitigation Measure 6-23 Cumulative Biological Resource Impacts.** Implement the mitigation measures identified in Section 4.12, Biological Resources.	SU
6-24 Cumulative Climate Change. The proposed project would generate greenhouse gas emissions during project construction and operations. Because the proposed project would incrementally contribute to global greenhouse gas emissions, its global climate change impacts would be considered potentially cumulatively significant.	PS	**Mitigation Measure 6-24 Cumulative Climate Change** The project applicant shall implement the mitigation measures identified in Section 4.3, Air Quality, in order to reduce GHG emissions. These measures are summarized as follows: Mitigation Measure 4.3-1 identified in Section 4.3, Air Quality of this Draft EIR addresses short-term construction generated emissions and includes a listing of individual measures that are intended to reduce and minimize construction generated emissions. Included in the listing of the individual measures are several measures that would help to reduce greenhouse gas emissions. Such measures include 1) idling time for all diesel-fueled equipment shall be minimized to five minutes or less; 2) ARB	LTS

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Summary of Environmental Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		diesel fuel shall be used for all diesel-powered equipment, and 3) preparation of a plan for Placer County Air District approval that would demonstrate that heavy-duty off-road vehicles to be used in the construction project will achieve a project-wide fleet average 20 percent NOx reduction and a 45% particulate matter reduction compared to the most recent ARB fleet average. Mitigation Measure 4.3-2 identified in Section 4.3, Air Quality of this Draft EIR addresses long-term operational generated emissions and includes a listing of individual measures that are intended to reduce and minimize operational generated emissions. Included in the listing of the individual measures are several measures that would help to reduce greenhouse gas emissions. Such measures may include, but are not limited to: 1) providing transit enhancing infrastructure that include transit shelters, benches, street lighting, route signs and displays, and/or bus turnouts/bulbs; 2) providing bicycle enhancing infrastructure that includes secure bicycle parking; 3) providing electric maintenance equipment, using solar, low-emissions or central water heaters, increasing wall and attic insulation beyond Title 24 requirements, orienting of buildings to take advantage of solar heating and natural cooling, using passive solar designs, energy efficient windows (double pane and/or Low-E), highly reflective roofing materials, cool paving (high albedo pavement) and parking lot shading above that required by code, installing photovoltaic cells, programmable thermostats for all heating and cooling systems, awnings or other shade mechanisms for window and walkways, and utilizing day lighting systems such as skylights, light shelves and interior transom windows; 4) including in the parking lot design clearly marked pedestrian pathways between transit facilities and building entrances, and 5) requiring all diesel engines to be shut off when not in use for longer than 5 minutes on the premises to reduce idling emissions. Furthermore, the City has determined that in addition to the project features identified in Table 6-17, the following mitigation measures would be appropriate for the proposed project and shall be required with project implementation. 1) All dock and delivery areas shall be posted with signs informing truck drivers of the California Air Resources Board	

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Summary of Environmental Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		regulations including the following: ▸ Truck drivers shall turn off engines when not in use. ▸ All diesel delivery trucks servicing the project shall not idle more than five minutes, consistent with Mitigation Measure 4.3-2. ▸ Restrict idling emissions by using auxiliary power units and electrification in the docking areas if provided by the operator. 2) Auxilary power shall be provided for TRUs, as feasible, at all docking facilities to minimize emissions from these units while on the project site. 3) Implement carpool/vanpool program such as carpool ride matching for employees, assistance with vanpool formation, and provisions of vanpool vehicles. 4) Provide preferential employee parking for carpool and vanpool vehicles. 5) Provide transit incentives (e.g., transit subsidies for employees, implement a parking cash-out program for employees, provide transit route maps, fares, and schedules posted at the worksite in a conspicuous location [e.g., employee breakroom]. 6) Restroom sinks within individual buildings on the site shall use sensor-activated, low-flow faucets. The low-flow faucets, because they regulate flow, reduce water usage by 84 percent, while the sensors, which regulate the amount of time the faucets flow, save approximately 20 percent in water usage over similar, manually operated systems.	

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3 PROJECT DESCRIPTION

3.1 PROJECT OVERVIEW

The Rocklin Crossings project (proposed project) includes the construction of a regional shopping center on approximately 55.1 acres (approximately 49.5-acre development site and 5.6-acre detention basin site) at the southeast corner of Interstate-80 and Sierra College Boulevard. A variety of retail uses are proposed for the center, including major tenants (expected to be a Wal-Mart Supercenter and a Home Depot), smaller retail tenants and restaurants. Other traveler-serving uses could also be developed within the project site. Preliminary plans call for approximately 21 buildings totaling a maximum of 543,500 square feet with 2,463 parking stalls. The number of parking stalls provided would be required to conform with the requirements set forth in the Rocklin Crossings General Development Guidelines.

3.2 PROJECT LOCATION

The project site is located in the City of Rocklin, south of Interstate 80 and east of Sierra College Boulevard (Exhibit 3-1). The City of Rocklin is located within the western portion of Placer County and is approximately 25 miles northeast of the City of Sacramento. The project site is comprised of the following Assessor's Parcel Numbers: 045-043-022, 024, 049, 053 and 051 (portions of); 045-053-031, 032, 033 and 034, and a portion of 045-043-050. Exhibit 3-2 identifies the site plan for the proposed project.

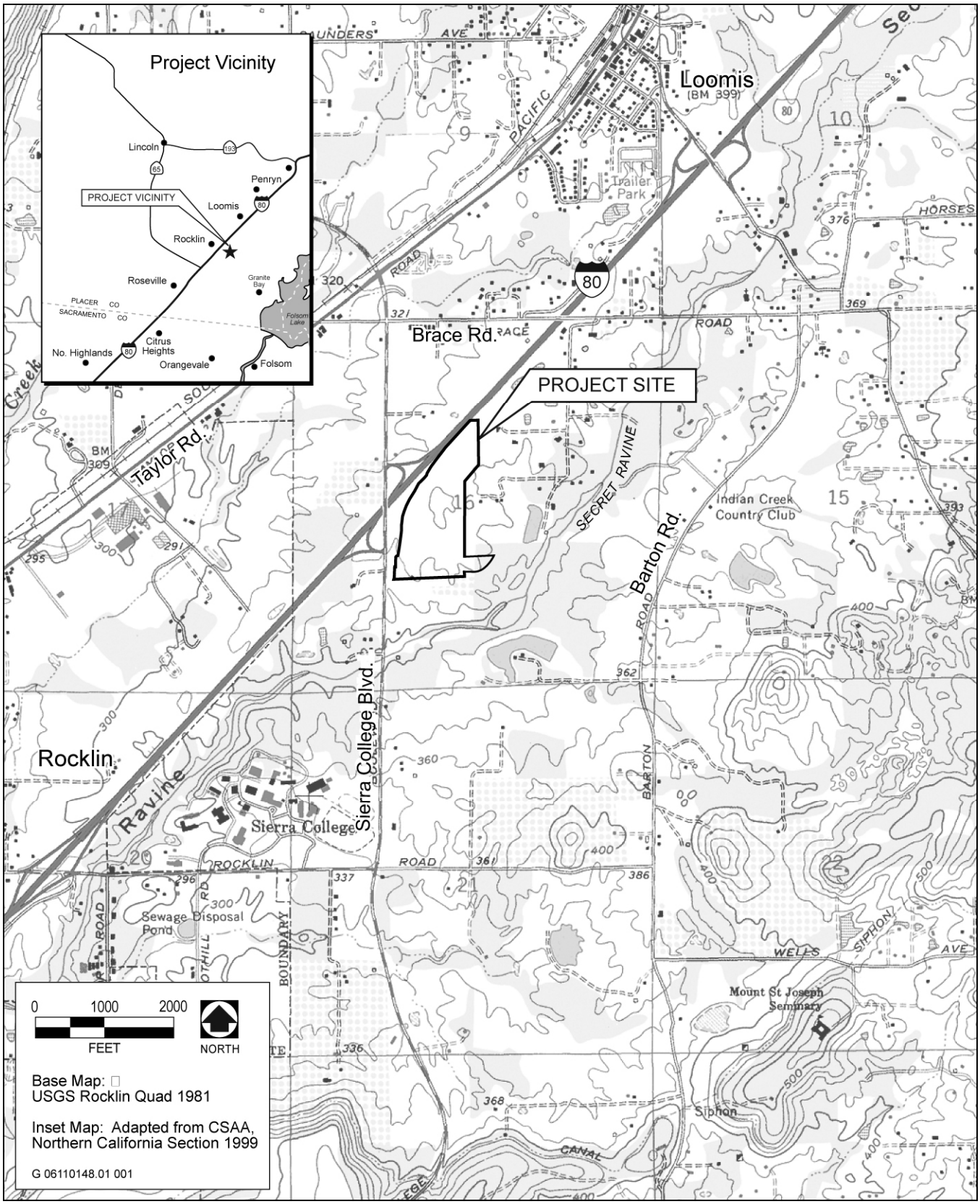
The City of Rocklin General Plan designates the majority of the land uses on the site as Retail Commercial (RC) with a 1.23-acre area designated as Medium Density Residential (MDR). The site is zoned UN (Unclassified), C-2 (Retail Business), and PD-C (Planned Development – Commercial).

3.3 EXISTING SETTING

In accordance with CEQA Guidelines Section 15125(a), the environmental baseline, as analyzed in this EIR, is the environmental setting as it existed at the time the Notice of Preparation was published, November 16, 2006. Therefore, the following discussion describes the site's existing setting as it was on November 16, 2006. However, it should be noted that the Interstate 80/Sierra College Boulevard Interchange Improvement Project was initiated following release of the Notice of Preparation and extensive grading and excavation work has been initiated along the western and northern portions of the project site to accommodate the interchange project's lane construction and soil borrow requirements. These changes have altered the topographic character of the project site's northern and western boundaries.

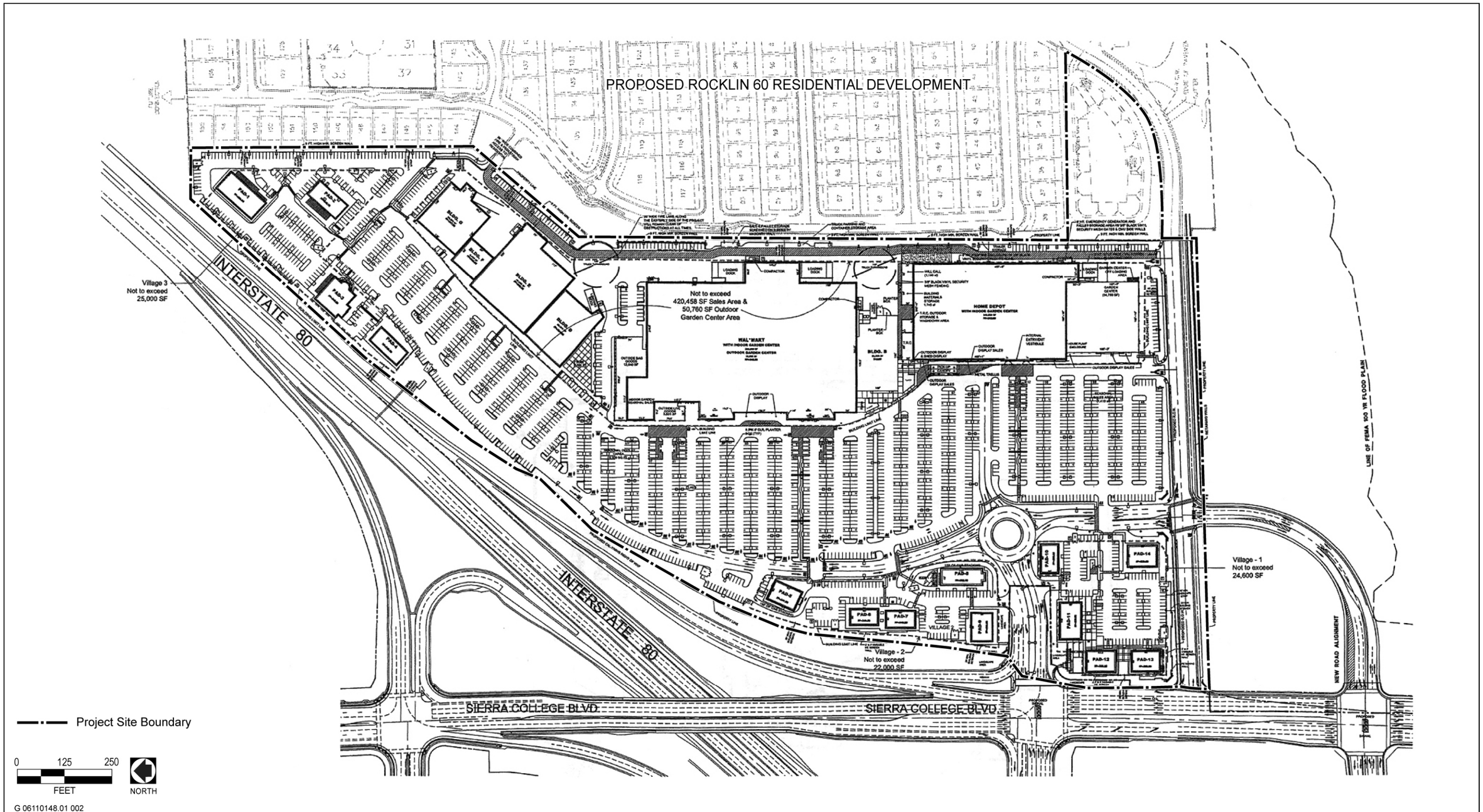
The undeveloped project site contains rolling terrain with elevations ranging from 320 to 360 feet above mean sea level. The site contains primarily annual grassland dotted with rock outcroppings, boulders, several seasonal wetland features, and scattered trees and shrubs. The project site and vicinity are predominantly large undeveloped areas historically used for orchard production.

Interstate 80 borders the project site directly to the northwest. Adjacent to the project site, Interstate 80 is a 6-lane highway. Areas north and east of Interstate 80 consist of retail-commercial uses along Sierra College Boulevard and a residential subdivision along Hunters Drive. The residential subdivision is located within the incorporated boundaries of the Town of Loomis. In general, areas north of the project site include pockets of development interspersed within open grasslands and scattered oak woodlands.



Source: EDAW 2007

Project Site Location and Vicinity **Exhibit 3-1**



Source: RSC Engineering

Project Site Plan **Exhibit 3-2**

Areas east of the project site consist of large expanses of relatively undeveloped land interspersed with rural residences, oak woodlands and Secret Ravine Creek. A development application has been submitted on the land within the City of Rocklin located directly east of the project site. Identified as the Rocklin 60 residential development, it includes the subdivision of approximately 57 acres to accommodate a maximum of 179 single-family residential units (Exhibit 3-2). East of this proposed residential development is the Town of Loomis, which in this area includes rural-scale residential areas and the Indian Creek Golf Course.

Areas south of the project site consist of large areas of open grasslands and dense oak woodlands with Secret Ravine Creek ranging between 300 and 800 feet south of the project site. A small abandoned residence is located approximately 400 feet south of the project site and 100 feet east of Sierra College Boulevard. To the south and southwest of the project site is the Rocklin campus of Sierra College.

Sierra College Boulevard borders the project site to the west. The Sierra College Boulevard/Interstate 80 interchange, which is in the process of being reconstructed, is located along the site's northwestern corner. Areas west of Sierra College Boulevard consist of grasslands and oak woodlands interspersed with rural residences, the Lifehouse Church, and Interstate 80.

3.4 PROJECT OBJECTIVES

The proposed development includes the following project objectives:

- To develop regional shopping facilities on commercially-designated land within the City consistent with City of Rocklin General Plan policy,
- To create a high-quality commercial development near a major transportation corridor within the City of Rocklin serving western Placer County in order to meet the growing regional demand for commercial retail services,
- To develop a property of sufficient size to accommodate two major anchor tenants and sufficient to support smaller tenants to create a regional shopping destination,
- To provide a shopping facility that maximizes visibility from Interstate 80 for all buildings and tenants,
- To construct a facility near a major freeway interchange in order to minimize traffic generation on local streets,
- To construct a facility with access to adequate existing or anticipated utility infrastructure to support planned operations,
- To create a new net public fiscal benefit for the City of Rocklin,
- To maximize the economic benefit to the City of Rocklin by attracting patronage from both within and outside of the City, and
- To provide new employment opportunities to the residents of the City of Rocklin and the surrounding areas.

3.5 PROJECT CHARACTERISTICS

The proposed project includes the construction of a regional shopping center on approximately 55.1 acres. The property is proposed to be subdivided into 18 parcels. A variety of retail uses are proposed for the center, including major tenants (expected to be a Wal-Mart Supercenter and a Home Depot), smaller retail and restaurants. Other traveler-serving uses could also be developed within the project site. Preliminary plans call for

approximately 21 buildings totaling a maximum of 543,500 square feet with 2,463 parking stalls. The site is anticipated to employ approximately 800 people at full buildout. Some tenants would require drive-throughs, outside storage, outdoor display, outdoor vendor sales and/or outside seasonal sales. These uses and structures would be permitted and controlled through a set of design guidelines that would be subject to City approval and would be applicable to the entire shopping center. Parking and signage would be governed by project-specific program guidelines and criteria. Signage is proposed in multiple locations adjacent to I-80 and Sierra College Boulevard.

The project site is divided into two primary building districts identified as the Retail Promenade District and the Retail Village Clusters District. These distinct districts are described in detail below.

3.5.1 RETAIL PROMENADE DISTRICT

The Retail Promenade District includes the buildings located along the eastern property line that contain the primary major tenants (Wal-Mart Supercenter and Home Depot) and the buildings for remaining tenants (tenants occupying less than 80,000 square feet but more than 10,000 square feet). The characteristics of these building uses are described below.

WAL-MART SUPERCENTER

The Wal-Mart Supercenter is proposed to be located within an approximately 222,000 square-foot building identified in Exhibit 3-2. This total square footage includes approximately 16,000 square feet dedicated to an outdoor garden center.

The Supercenter would combine full grocery lines and general merchandise under a single roof and would include a variety of specialty shops that could include vision centers, fast food restaurants, portrait studios, one-hour photo centers, hair salons, banks, a medical clinic, and employment agencies. The Supercenter is anticipated to employ approximately 400 people and would operate 24 hours a day, seven days a week.

The building would face directly to the west with the garden center located on the northwestern side of the building. All loading dock operations would occur on the eastern side of the building. Two below-grade truck loading docks are proposed for the Supercenter, each with three individual side-by-side loading bays. The bay doors are equipped with sealed gaskets to minimize noise generation from off-loading trailers. All loading/unloading activities would occur within the building area. Two bale and pallet storage areas measuring 12 feet by 45 feet are proposed to be located along the rear property line adjacent to the loading docks. Both would be surrounded on three sides by a minimum 10-foot high, 8-inch thick masonry wall.

Delivery Schedule

Merchandise is expected to be delivered to the Supercenter seven days a week. Approximately five to seven 18-wheeler trucks would deliver merchandise to the Supercenter per day. These trucks would be split between the two loading docks. For the grocery-loading dock, a delivery truck would pull into the well and unload. While the truck is unloading, the refrigeration unit would be running and the trailer would not be dropped off. The refrigerator unit would cycle every 20 to 30 minutes. For general merchandise, a delivery consists of dropping off a full trailer and picking up an empty trailer.

In addition, 10 to 12 smaller vendor trucks would make deliveries 5 days a week (generally, they do not deliver on Wednesday and Sunday). These trucks would typically arrive between 7:00 a.m. and 4:00 p.m. and unload at an at-grade, roll-up door rather than a loading dock.

Security Measures

Wal-Mart has committed to implementing the following security measures at the proposed Supercenter:

- Conduct a risk analysis (crime survey) of the area to evaluate the security needs for the store and implement a security plan based upon this analysis.
- Install closed-circuit camera systems (surveillance cameras) inside and outside the stores.
- Establish a parking lot patrol for store area. The patrol would assist customers, ensure safety and take action to identify and prevent any suspicious activity (such as loitering and vandalism) both during the day and nighttime hours.
- Establish a plainclothes patrol inside the stores to ensure safety and security.
- Establish a Risk Control Team, which is a team of associates responsible and trained to identify and correct safety and security issues at the site.
- Provide adequate lighting in the parking areas to ensure public safety.

HOME DEPOT

Home Depot is a retailer of building materials, home improvement supplies, and lawn and garden products. The proposed Home Depot would be located within a 141,038 square-foot building (inclusive of the building, garden center, vestibules and attached storage and staging areas) and would operate 24 hours a day, 7 days a week. Additional fenced/covered areas would be provided for customer pick-up and loading, outdoor lumber off-loading, sales/display, and storage. The Home Depot building is identified in Exhibit 3-2. In addition to the main building and garden center, Home Depot includes the following components:

Outdoor Sales and Storage Areas

- Seasonal Sales Area: A temporary fenced Seasonal Sales area of approximately 7,500 square feet would be located in the parking area near the southern boundary road. It would be for holiday/seasonal sales events and other miscellaneous vendor sales events. These events may include a Christmas season sale (Christmas trees, etc.), spring sale, Memorial Day sale, 4th of July sale, and Labor Day sale, and other sales events. Approximately 3 to 5 times a year, special events may also be held, such as tool and NASCAR promotions. For these seasonal and special vendor sales, tents and awnings may be erected when appropriate to the sale and conditions.
- Pro Will Call and Building Materials Storage (Staging): This area, located to the rear northeast corner of the store, would be used to service professional contractors where pre-ordered items would be staged for customer pick-up.
- Tool Rental Center Storage and Washdown Area: The tool rental center storage and washdown area would be located at the northwestern corner of the store. This area is used to clean and store the tool rental center's larger equipment.
- Sidewalk Display/Sales Areas: Merchandise for display and sale would be located outside at various areas along the front of the store.
- Utility Shed Display: Utility sheds would be displayed near the southern boundary road.

- Load and Go area: Trucks are available for customers to rent to take home large items. Two trucks would typically be parked in designated stalls in front of the store near the pick-up canopy.

- Emergency Generator and Pallet/Propane Storage: The emergency generator and pallet/propane storage enclosure would be located in the rear/southeast corner of the store. This area also serves as a temporary holding area for pallets.

- Customer Pick-Up Canopy: The customer pick-up canopy is a covered, drive-up area that would be located in front of the lumber vestibule for bulk material loading by store associates for both regular customers and professional contractors.

- Lumber Off-Loading: The Lumber Off-Loading area is a temporary staging area for the delivery of long and large lumber products and supplies. It would be located behind the store near the Will Call area.

Additional Services/Activities

Educational workshops may be held at designated outdoor areas to teach do-it-yourself skills and tool safety.

Propane Exchange

Customers may bring their empty propane cylinders to the store and exchange them for full cylinders. This service occurs at the propane exchange area outside near the front of the store.

Delivery Schedule

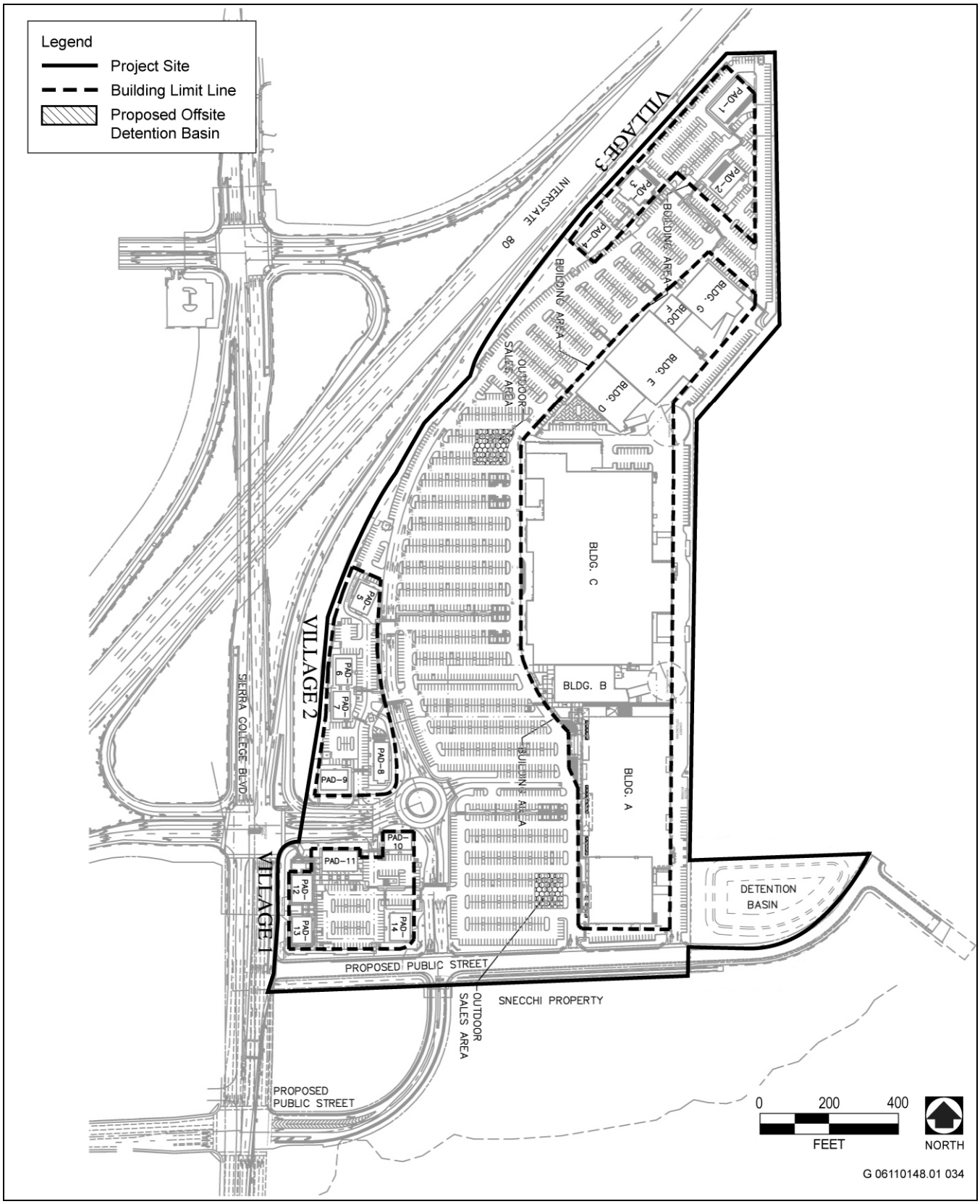
Truck deliveries and off-loading would occur throughout the day and night. Loading of delivery trucks and restocking the additional sales and storage areas would occur 24 hours a day. These deliveries and off-loading areas include the main loading area, the lumber off-loading area, the pro will call area, the garden center, and the pick-up canopy area.

BUILDINGS FOR REMAINING TENANTS

The identity of the remaining tenants, as well as the location and size of the remaining tenant buildings has not yet been determined. The total size of the remaining tenants, combined with the Wal-Mart Supercenter and Home Depot, would not, in any event, exceed 543,500 square feet. It is currently anticipated that the remaining tenants would be primarily located directly north of the proposed Wal-Mart Supercenter, although a single building may be located between the Supercenter and the proposed Home Depot building. Some of the remaining tenant buildings may have separate loading docks located in the rear of the buildings.

3.5.2 RETAIL VILLAGE CLUSTERS DISTRICT

The Retail Village Clusters District includes the building areas immediately adjacent to Interstate 80 and Sierra College Boulevard. Three separate Village Clusters are located within this district. The total size of the three villages, combined with the Wal-Mart Supercenter and Home Depot, would not, in any event, exceed 543,500 square feet. The number of buildings within each village is subject to change, but the total square footage cap of 543,500 square feet for the entire site would remain constant. The buildings would be contained within designated building envelopes, as identified in Exhibit 3-3. Village 1 is currently anticipated to consist of five buildings located within the southwestern corner of the project site. Access to this village would be provided by



Source: RSC Engineering

Building Envelopes **Exhibit 3-3**

way of a right turn directly off of the main entry road and from the southern boundary road. Village 2 is currently anticipated to consist of five buildings located directly north of the main entry road along the western site boundary. To access this village, vehicles would generally be required to travel through the traffic circle of the main entrance. Four separate driveways provide access to this village along its eastern boundary and an additional driveway provides right turn in and out only access from the main entrance road. Village 3 is currently anticipated to consist of four buildings located within the northern portion of the project site. Access to this village would be provided either from the main entrance road or from the access points along the site's southern boundary via an on-site driveway.

3.5.3 PROJECT SCHEDULE

Market conditions may impact the schedule of construction of the site. Currently, the first phase would include the mass grading of the entire site and completion of major site work (including, but not limited to, the eastern perimeter wall, the offsite detention basin and other necessary offsite infrastructure improvements) and would likely include construction of the major anchor tenant facilities, additional buildings, and the majority of the parking field and access aisles. That entire phase is likely to conclude within two years of initiation. The remaining construction schedule would consist of building the remaining retail building square footage available within the Retail Promenade District, as well as remaining unconstructed pad buildings adjacent to the freeway.

3.5.4 FREEWAY SYSTEM IMPROVEMENTS AND SITE ACCESS

The interchange of Interstate 80 and Sierra College Boulevard provides the primary access for the project site to the regional roadway network. Adjacent to the project site, the freeway has six lanes, three lanes in each direction. The interchange type is the simplest cloverleaf configuration according to the California Department of Transportation (Caltrans) Design Manual, with eastbound ramps in the southwest quadrant and westbound ramps in the northeast quadrant. The two intersections of the Interstate 80 ramps with Sierra College Boulevard have fully actuated traffic signals.

Sierra College Boulevard is a north-south arterial that begins at Interstate 50 to the south, where it is named Hazel Avenue. It extends 14 miles north to Interstate 80 and then an additional six miles to State Route 193. In the vicinity of the site, this arterial has two lanes and paved shoulders with additional lanes at intersections.

Substantial improvements to the Sierra College Boulevard/Interstate 80 interchange have been approved and are currently under construction. Although this interchange reconstruction project is not part of the proposed project description, this project will significantly improve access to the project site. The Sierra College Boulevard/Interstate 80 interchange project will widen the bridge over Interstate 80, reconstruct the on- and off-ramps, and include full widening of Sierra College Boulevard across the westerly portion of the project's frontage. The main access into the project will be constructed as part of the Sierra College Boulevard over-crossing project and dedicated as a City right-of-way.

Three access locations to the project site are proposed to be provided from Sierra College Boulevard. The northernmost project access would form the east leg of the Interstate 80 eastbound/Sierra College Boulevard ramp currently under construction. This access would provide the main entrance to the project site. The middle access would provide right turns into and out of the project only from the southern boundary road. The southernmost access point would align with the future extension of Dominguez Road over Interstate 80. This southernmost road is being constructed as an access roadway for the approved Croftwood Subdivision development located southeast of the project site and west of Barton Road. The proposed project would connect to this access roadway, which is to be constructed as part of the Croftwood Subdivision project improvements. This access roadway is planned to be completed prior to project implementation.

The project includes four on-site access locations and one emergency vehicle/pedestrian access road. These include the main entrance roadway between Village 1 and Village 2, a secondary access roadway directly east of

Village 1 along the southern boundary road, and two driveways along the southern boundary road. The eastern-most driveway access is intended for service vehicles/delivery trucks accessing the rear of the larger commercial buildings. The emergency vehicle/pedestrian access would be located on the eastern site boundary near the northern terminus of the large commercial buildings.

3.5.5 INFRASTRUCTURE PLANS

The project's water supply would be provided from the 20-inch pipeline in Taylor Road via the 20-inch pipeline in Sierra College Boulevard and the 16-inch pipeline in the Croftwood Access Road. The Taylor Road pipeline currently has a large demand placed upon it from existing development and the water demands of the proposed project and other zoned and planned development cannot be served solely from this pipeline under Placer County Water Agency (PCWA) pressure and velocity criteria. To provide adequate water conveyance to the project site, some or all of the following off-site conveyance facilities within existing roadway rights-of-ways may need to be constructed or partially funded by the project (subject to reimbursement):

- Installation of a 16-inch water main in Barton Road that would begin its connection from the existing 16-inch water main near La Vista Road and travel south to connect with the existing 12-inch water main in Barton Road at Rutherford Canyon Road;
- Installation of a 12-inch water main in Wells Avenue that would begin its connection from the existing 12-inch water main in Barton Road and travel east to connect with the existing 12-inch water main in Wells Avenue at Rickety-Rack Road;
- Installation of a parallel 12-inch water main in Rutherford Canyon Road that would begin its connection from the proposed 16-inch water main in Barton Road and travel east to connect with the proposed parallel 12-inch water main in Laird Road;
- Installation of a parallel 12-inch water main in Laird Road that would begin its connection from the proposed parallel 12-inch water main in Rutherford Canyon Road and travel south to connect with the proposed parallel 12-inch water main in Wells Avenue;
- Installation of a parallel 12-inch water main in Wells Avenue that would begin its connection from the existing 12-inch water main in Wells Avenue from Morgan Place and travel east to connect with the proposed 12-inch water main at Laird Road;
- Installation of a parallel 12-inch water main in Wells Avenue that would begin its connection from the proposed parallel 12-inch water main in Laird Road and travel east to connect with the proposed parallel 18-inch water main in Val Verde Road;
- Installation of a parallel 18-inch water main in Val Verde Road that would begin its connection from the proposed parallel 12-inch water main in Wells Avenue and travel north to connect to a proposed pressure reducing station in Val Verde and then connect to the existing 24-inch water main in Val Verde Road at Dick Cook Road; or
- Installation of other improvements intended to accomplish the same purpose (supplying water with adequate pressure to the project site).

The project's wastewater conveyance system would connect to the wastewater trunk lines being constructed south of the project site for the Croftwood Subdivision (The Planning Center 1991 and South Placer Municipal Utility District 2005). Wastewater generated by the project would be treated at the Dry Creek Wastewater Treatment Plant.

The project's storm water drainage system would be designed consistent with the requirements of the City's Stormwater Management Program. The site's drainage system would convey collected storm water to an off-site detention basin that would be constructed within the proposed Rocklin 60 residential development to the east (Exhibit 3-2). The detention basin would be located on a 5.6-acre area directly adjacent to the southeast corner of the proposed project. The detention basin would be constructed whether or not the Rocklin 60 project is developed.

All storm water flows from the project's commercial development and the proposed residential development within the Rocklin 60 residential development would be routed to the detention basin, which would be sized to reduce post-project peak flows to pre-project levels. The estimated detention volume of the basin is approximately 4.8 acre-feet. The detention basin would be designed to completely drain after storm events. The detention basin would discharge into a 60-inch diameter culvert that would flow into an existing swale connected to Secret Ravine Creek.

In the project area, Pacific Gas & Electric (PG&E) has existing 12-kilovolt overhead power lines that would provide the project's electrical service. No new off-site electrical lines would be required for development of the proposed project. In addition, PG&E would provide natural gas and associated infrastructure to the project site from nearby existing service lines.

Telecommunications infrastructure is currently located in the vicinity of the project site. Telephone service would be provided by SBC through an existing underground telephone cable on the east side of Sierra College Boulevard. Cable service for the proposed project would be provided by Wave Broadband Services from an underground conduit that runs parallel to Interstate 80.

3.5.6 General Plan Amendment and Zone Change

The project would require the amendment of the City's existing general plan land use designations on approximately 1.23 acres of the project site from Medium Density Residential (MDR) to Retail Commercial (RC). The project also includes a zone change to Planned Development - Commercial (PD-C) for those areas of the site currently zoned Unclassified (UN) and Retail Business (C-2).

The project includes the adoption of a General Development Plan, which would guide development of the project; a Tentative Parcel Map, which would subdivide the project into 18 parcels; a Development Agreement; a Conditional Use Permit; and an Oak Tree Preservation Plan Permit. The project would also be subject to design review approval for the site design concepts including the site improvements, architecture, landscaping, lighting plans and signage.

3.5.7 General Development Plan

The General Development Plan identifies the Development Guidelines that would establish and control the design character for the entire project. The Development Guidelines address site planning, landscaping, architecture, exterior lighting and signage. All development at the site would be required to comply with the guidelines.

The objective of the site plan is to establish the functional and organizational character of all of the site buildings, the circulation corridors, and the parking and service areas. The objective of the landscape plan is to create an urban environment that complements the site plan and building architecture, enhances building frontages, softens parking areas, screens service areas and maintains street continuity at points of ingress and egress to the project. The architectural design is intended to create distinctive buildings while maintaining a consistent overall character. The objective of the exterior lighting design is to provide a safe environment during nighttime hours while limiting light spillage onto adjacent land uses. The objective of the exterior signage design is to communicate tenant identity while limiting visual blight.

3.5.8 SITE PLANNING

The site planning component of the Development Guidelines identifies the principal permitted uses for the project site. These uses are identified in Table 3-1.

Table 3-1
Principal Permitted Uses

Retail	Accessory Uses	Hotel/Motel	Food	Other
- Antique Shop - Apparel Store - Appliance Sales & Repair - Art Supply Store - Audio Visual Equipment - Auto Supply Store - Banks & Financial Institutions - Barber Shop - Bicycle Sales & Repair Book & Stationary Store - Clothing and Costume - Dry Cleaning - Electronic Appliances - Exterior Storage and Display of Materials in approved designated areas only - Florist - Furniture Store - Garden Supply Store - General Merchandise - Hardware Store - Hobby, Stamps, and Coin - Home Improvement - Hunting/Fishing Supply - Interior Decorating Supply - Jewelry and Metal Craft - Leather Goods and Luggage - Lock and Key Shop - Lumber Yard - Mail Order Catalog Store - Medical/Dental Clinic - Medical Dental Appliances - Music Sales & Repair - Office Supply and Equipment - Pet Store and Supplies	- Alcoholic Beverage Sales for Off-premises Consumption - Food Sales - Indoor and Outdoor - Exterior Staging and Temporary Storage of Materials - Outdoor Display Sales from Designated Display Areas only including Christmas Trees - 24 Hour Convenience Market - Office		- Bakery - Fast Food with Drive Through - Convenience Food Store - Delicatessen - Grocery Store - Restaurant	- Fuel Service Stations - Animal Hospital

Uses not otherwise specified herein may be approved or conditionally permitted at the discretion of the Community Development Director. The General Development Plan identifies Fuel/Service Stations and Hotels/Motels as permitted uses; however, these uses have since been removed from the proposed project application.
Source: Donahue Schriber Realty Group L.P., Rocklin Crossings General Development Plan, May 25, 2007.

The site planning component of the Development Guidelines also identifies the parking design criteria for the site. The purpose of the parking design criteria is to provide a sufficient number of stalls to accommodate the demands of the shopping center and the allowable uses throughout the site. The parking design allows shared parking and cross access within the site. For single tenant retail commercial buildings with 60,000 square feet or greater, four parking spaces would be required for every 1,000 gross square feet of floor area. For office and multi-tenant retail commercial with 60,000 square feet or greater and retail commercial, restaurant, and office buildings with less

than 60,000 square feet, five parking spaces would be required for every 1,000 gross square feet of floor area. Uncovered sales areas are required to provide 10 parking spaces for the first 5,000 square feet of unconditioned sales area plus one additional space for each additional 1,000 square feet up to a maximum of 20 spaces. Compact parking would be restricted to 30% or less of the total required parking and handicap parking would be provided consistent with the City of Rocklin Building Codes and the Americans with Disabilities Act (ADA) requirements.

3.5.9 LANDSCAPING

The objectives of the landscape plan include providing for human scale and visual organization in the proposed parking lots; screening loading areas, service yards and utility equipment; buffering proposed residential uses to the east; providing for hardscape shading; and reinforcing major vehicular/pedestrian systems within the project. The selection of shrubs, ground cover and tree species would be in accordance with the Development Guidelines. Shading in the parking area would be achieved by including one tree planting per every five parking stalls. The landscape guidelines have been developed to meet the following goals:

- Screening of parking areas, service zones, trash enclosures and/or mechanical equipment.
- Meeting parking lot shade requirements.
- Accenting main entry monuments or pole signage or walkways.
- Framing views of building entrance or signage.
- Re-routing traffic.
- Specifying plant material for erosion control.
- Specifying shrubs and perennials hardy enough to survive the pedestrian and vehicular traffic and to soften the geometric design of the parking lot.

Specific landscape zone concepts have been identified for individual zones within the project site. For the project frontage east of Sierra College Boulevard and south of Interstate 80, the purpose of the landscaping is to soften and create a visual transition between passing vehicle traffic and the project site. For the project frontage along Interstate 80, the landscaping is intended to create view corridors into the site from the freeway and Sierra College Boulevard. For the area directly adjacent to the eastern boundary, the landscaping is intended to provide a buffer from the proposed residential uses within the Rocklin 60 development. This zone is proposed to be densely planted with evergreen trees to provide a screen between the properties. The interior landscaping is intended to facilitate pedestrian and vehicle traffic patterns, provide a shade canopy, and enhance the visual character of the development.

3.5.10 ARCHITECTURE

The primary architectural influence for the project's building designs is intended to draw from Craftsman and Prairie Style influences. These design styles tend to use natural looking materials, low-pitched and gable roof elements, battered pilasters of natural or manufactured stone, and a strong horizontal compositional emphasis. Individual buildings are proposed to be grouped into one of two distinct design districts. The Retail Promenade District would be located adjacent to the eastern property line and would contain the largest retail spaces and components of the project. The architecture of buildings within this District would accommodate a hierarchy of retailers with the largest tenants commanding the largest presence in terms of wall height, sign height, aggregate sign area and size of the entry statement. Smaller tenants would have reduced architectural massing and presence when compared to the primary tenants. The Retail Village Cluster District would include the areas immediately adjacent to the freeway and/or at the primary entrance into the project. The architecture of the buildings within this district is proposed to reflect the characteristics of the building's primary components (specialty retail and food) while adhering to the overall themes of the site architecture. All colors and materials used in the site's architecture would be selected from an approved material legend. Exhibits 3-4 and 3-5 identify conceptual elevations for the Retail Promenade buildings.

Retail Promenade - Partial West Elevation North - Building A-C

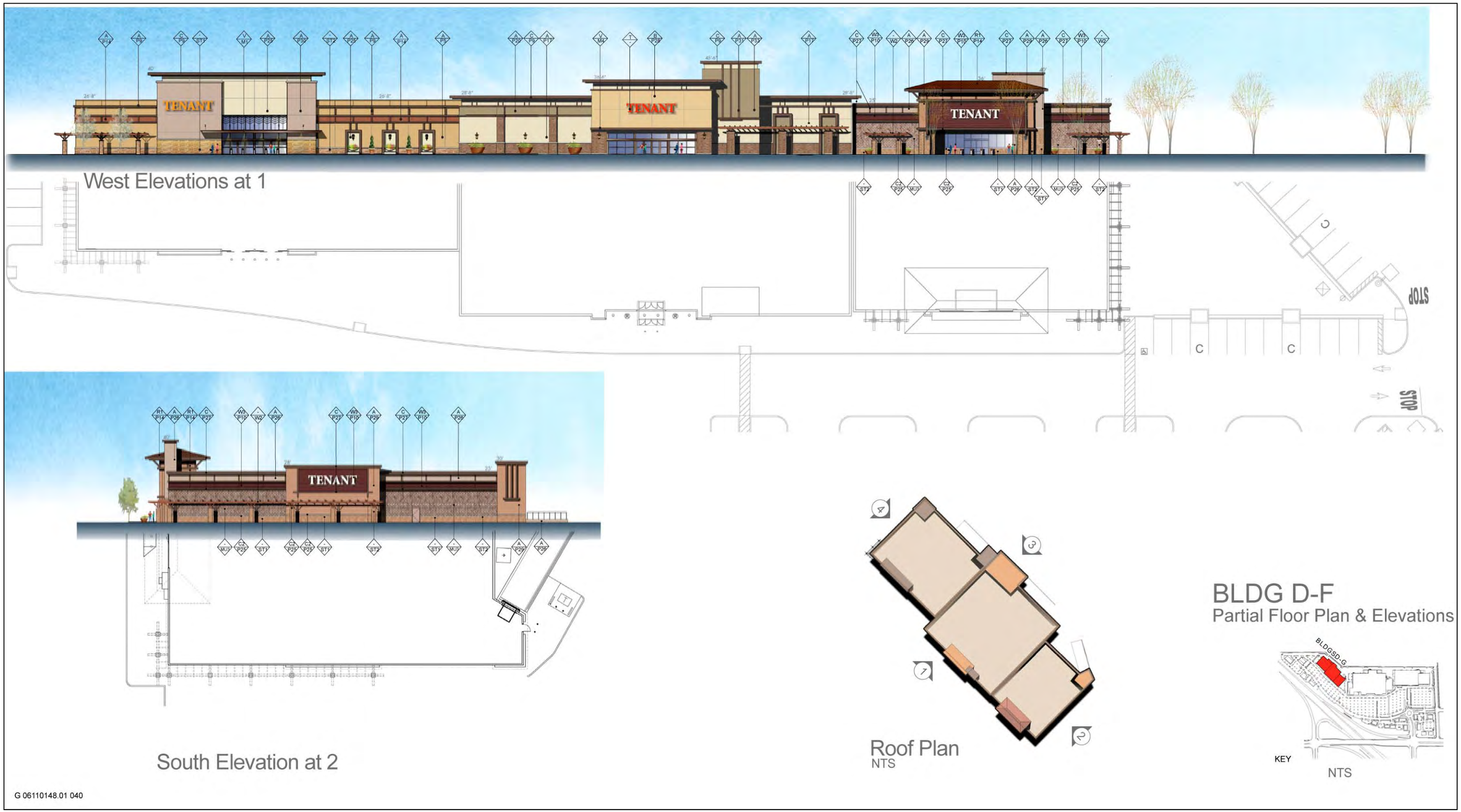
Retail Promenade - Partial West Elevation South - Building A-C

NORTH

06110148.01 036

Source: Donahue Schriber, Perkowitz + Ruth Architects 2007

Retail Promenade Elevations **Exhibit 3-4**



Source: Donahue Schriber, Perkowitz + Ruth Architects 2007

Buildings D through G Elevations **Exhibit 3-5**

3.5.11 SITE LIGHTING

The exterior lighting concept is intended to provide sufficient lighting to ensure the safe operation of the facility while minimizing offsite glare. The parking lot lighting is proposed to include 27.5-foot light poles throughout with decorative fixtures. Along the property line, lighting would have a 20-foot mounting height with shoe box cutoff fixtures with 250-watt metal halide lamps. Ornamental wall washing light fixtures may be used to highlight feature wall areas. All exterior lighting would be shielded to prevent offsite glare.

3.5.12 EASTERN PERIMETER WALL

A 9-foot high masonry block or pre-cast concrete wall, measured from the pad elevation of the nearest commercial building, is proposed to be constructed along the length of the site's eastern boundary in order to provide a visual screen and also to reduce noise impacts from the loading dock activities of the larger commercial buildings on the adjacent property to the east. A break in the wall is proposed to provide an emergency vehicle/pedestrian access to the property to the east. The emergency vehicle/pedestrian access would be located near the northern terminus of the large commercial buildings.

3.6 REQUIRED DISCRETIONARY ACTIONS/PROCESS

Project approval requires the lead agency (and responsible agencies) to approve the project or project components, issue required permits, or affirm compliance with agency requirements. The City of Rocklin is the lead agency for the Rocklin Crossings project. A lead agency, as defined in Section 15367 of the State CEQA Guidelines, is "the public agency that has the principal responsibility for carrying out or approving a project." Described below is the environmental review process for the project and the discretionary actions sought by the project applicant for the Rocklin Crossings project that the City will consider during its review.

- The DEIR will be circulated for public review and comment, as described in Chapter 1, "Introduction."
- The City may hold a public hearing during the public review period at which time individuals and public agencies may comment on the adequacy of the DEIR.
- After the close of the public review period for the DEIR, the Final EIR, consisting of all comments received on the DEIR together with responses to those comments and necessary changes to the EIR text will be prepared.
- The City's Planning Commission will hold a public hearing at which it will consider the adequacy of the Final EIR, the project's Mitigation Monitoring and Reporting Program, and the merits of the project. Individuals and representatives of public agencies and other organizations will have the chance to offer testimony on any and all of these items.
- If, after closing the public hearing, the Planning Commission is satisfied that the Final EIR is legally adequate and complete, it will recommend that the City Council certify the Final EIR as being adequate according to CEQA requirements.
- The Planning Commission will then consider the merits of the project and determine whether to recommend that the City Council approve, conditionally approve, or deny the project applications.

- Entitlement actions under consideration by the Planning Commission during its review of the project merits will include whether to:
  - recommend approval of a General Plan Amendment to amend the City's existing general plan land use designation of Medium Density Residential (MDR) applicable to approximately 1.23 acres on the site to Retail Commercial (RC) (GPA-2005-01);[1]
  - recommend approval of a change in the site's zoning from Unclassified (UN), Retail Business (C-2), and Planned Development - Commercial (PD-C) to PD-C (Z-2005-01);
  - recommend approval of the project's General Development Plan (PDG-2005-03);
  - recommend approval of the project's Tentative Parcel Map (DL-2005-06);
  - recommend approval of the project's Development Agreement;
  - recommend approval of the project's Design Review (DR-2005-19);
  - recommend approval of the project's Conditional Use Permit (U-2005-01);
  - recommend approval of the project's Oak Tree Preservation Plan Permit (TRE-2005-27);
- After the Planning Commission completes its process, the City Council would then hold a public hearing at which time it will hear testimony from individuals and representatives of public agencies and other organizations regarding whether the Council should certify the Final EIR, adopt the project's Mitigation Monitoring and Reporting Program, CEQA Findings and a Statement of Overriding Considerations, and approve, conditionally approve, or deny the project.
- After closing the public hearing, the Council will determine whether to certify the Final EIR, to adopt the Mitigation Monitoring and Reporting Program, CEQA Findings, and a Statement of Overriding Considerations, and to approve, conditionally approve, or deny the Rocklin Crossings project.

[1] This general plan amendment is sought in part in anticipation of the Rocklin 60 project, a proposed residential project on the adjacent property to the east. The conversion to RC-designated uses on the Rocklin Crossings site represents a swap of commercial and residential uses with the Rocklin 60 development, which would require a similar conversion of an equivalently-sized parcel from RC to MDR. At the time this Draft EIR was released for the Rocklin Crossings project, the City and its consultants were still working on the administrative draft EIR for the Rocklin 60 project. If the City Council were to approve that amendment, the effect of approving the general plan amendments sought by both Rocklin Crossings and Rocklin 60 would be to avoid any net increase in commercially designated property within the City compared with what exists today. For purposes of this analysis, the approval of the Rocklin 60 project by the City is assumed to occur. However, the outcome of the Rocklin 60 project is not guaranteed. Therefore, it is theoretically possible that implementation of the Rocklin Crossings project would result in a small net increase in commercially planned and zoned property within the City. Because RC-designated lands would tend to represent a more intensive use of property than MDR-designated land, the theoretical increase of 1.23 acres of commercial property within the City could increase associated environmental impacts. For example, for traffic, commercial development on approximately 1.23 acres would generate approximately 50 vehicles during the p.m. peak hour while residential development on the same property would generate approximately 10 vehicles during the same period. Commercial development would also potentially increase air pollutant emissions and localized noise levels when compared to commercial development. However, for traffic impacts, the roadway improvement measures required of the proposed Rocklin Crossings project would substantially improve traffic conditions at local intersections. Due to these improvements, the contribution of 40 (50 commercial trips minus 10 residential trips) additional p.m. peak hour trips would not be expected to adversely affect roadway conditions following their implementation. Also, for air quality, the increase in air emissions would be less than 3 percent of those generated by the proposed Rocklin Crossings project. Therefore, within the City of Rocklin, the theoretical conversion of 1.23 acres of residentially-zoned land to commercial uses would represent a relatively negligible change in City land uses and would not be expected to result in significant adverse environmental impacts. For this reason, the impact analyses in this document will assume that the Rocklin 60 amendment will be granted and will not specifically address a separate scenario in which it is denied. The differences in the environmental consequences under the two scenarios are too trivial to merit specific mention.

- If the City Council chooses to approve or conditionally approve the project or one of the alternatives addressed in this EIR, other responsible agencies would consider the project and associated entitlements when considering permitting or other related actions. Such other project approvals may include, but are not limited to:
  - a Section 401 Certification from the Regional Water Quality Control Board (RWQCB);
  - a construction activity stormwater permit from the RWQCB;
  - a National Pollutant Discharge Elimination System permit from the RWQCB;
  - approval from the Town of Loomis of an encroachment permit or similar approval to build various road improvements (see Chapter 4.2 - Traffic and Circulation);
  - approval from the Town of Loomis of an encroachment permit or similar approval as may be required for off-site water line extensions to be constructed;
  - approval from the South Placer Municipal Utility District for sewer facility extensions; and
  - approval from the Placer County Water Agency for water line extensions

Although this EIR takes account of and addresses the environmental consequences of the offsite water improvements that would serve the proposed project, which would be constructed, operated, and maintained by PCWA, these improvements will also receive independent environmental review conducted by PCWA.

The applicant has already obtained from the U.S. Army Corps of Engineers a Nationwide Permit allowing them to fill the small amount of wetlands found on site, subject to approval of a grading permit by the City of Rocklin and a Section 401 certification from the RWQCB.

If a use is proposed on the project site that is not identified in the General Development Plan, additional entitlements from the City of Rocklin may be required. No such use is currently being proposed.

4 ENVIRONMENTAL SETTING, ENVIRONMENTAL IMPACTS, AND MITIGATION MEASURES

INTRODUCTION TO ENVIRONMENTAL ANALYSIS

The preparation of this environmental impact report (EIR) is in conformance with the California Environmental Quality Act (CEQA) of 1970 and the State CEQA Guidelines. Sections 4.1 through 4.14 contain discussions of the environmental setting, thresholds of significance, environmental impacts, mitigation measures, and levels of significance after mitigation. The issues evaluated in these sections consist of the significant and potentially significant environmental issue areas identified for review in the Notice of Preparation (NOP), found in Appendix A. These sections are organized into the following major components.

EXISTING CONDITIONS

The "Existing Setting" subsection presents the existing regional and local environmental conditions, in accordance with State CEQA Guidelines Section 15125. The subsection describes the baseline conditions against which the environmental impacts associated with the proposed project and the potential future development of the property are assessed. In accordance with CEQA Guidelines Section 15125(a), the environmental baseline, as analyzed in this EIR, is the environmental setting as it existed at the time the NOP was published, November 16, 2006. However, it should be noted that the Interstate 80/Sierra College Boulevard Interchange Improvement Project was initiated following release of the Notice of Preparation and extensive grading and excavation work has been initiated along the western and northern portions of the project site to accommodate the interchange project's lane construction and soil borrow requirements. These changes have altered the topographic character of the project site's northern and western boundaries. These changes are discussed in impact sections that follow, when relevant.

In addition, the traffic impact analysis examines the traffic impacts expected to result from the addition of vehicle traffic generated by the proposed project to baseline conditions consisting of existing conditions altered by approved projects. The traffic analysis properly uses the "existing plus approved projects" as the environmental baseline because the new I-80/Sierra College Boulevard interchange will be in place before the proposed project is completed and because the City wants traffic levels to reflect traffic from projects already approved.

ENVIRONMENTAL IMPACTS

This subsection presents thresholds of significance used in the Draft EIR (DEIR) and discusses significant effects associated with the proposed project on the existing environmental conditions, in accordance with State CEQA Guidelines Sections 15126(a) and 15143. The thresholds of significance are presented at the beginning of each subsection. Project impacts are numbered sequentially by section and impact number throughout these sections. That is, impacts in Section 4.2 are numbered 4.2-1, 4.2-2, 4.2-3; and impacts in Section 4.3 are numbered 4.3-1, 4.3-2, and so on. A bold font impact statement precedes the discussion of each impact and provides a summary of each impact and its level of significance. The discussion that follows the impact statement includes the substantial evidence upon which a conclusion is made as to whether the impact would be significant or less than significant. A discussion of cumulative impacts is provided in Chapter 6, "Cumulative and Growth-Inducing Impacts."

MITIGATION MEASURES

Following the individual impact discussions, mitigation measures are identified to reduce potentially significant effects associated with the proposed project to the extent feasible, in accordance with State CEQA Guidelines Sections 15002(a)(3), 15021(a)(2), and 15091(a)(1). The mitigation measures are numbered corresponding to the impacts that they address. For example, Mitigation Measure 4.2-1 would mitigate Impact 4.2-1.

LEVEL OF SIGNIFICANCE AFTER MITIGATION

Following the individual mitigation measures, a conclusion is provided regarding whether mitigation measures would or would not reduce an impact to a less-than-significant level. The conclusion is presented in accordance with State CEQA Guidelines Section 15126(b), which requires identification of significant and unavoidable impacts. Significant and unavoidable impacts are also summarized in Chapter 2, “Executive Summary,” of this document.

4.1 LAND USE

4.1.1 ENVIRONMENTAL SETTING

This section contains a discussion of the existing land use and planning setting for the project site and surrounding area. An analysis of potential land use and planning impacts associated with the proposed project is also provided.

ON-SITE LAND USE

The project site is located in the City of Rocklin, south of Interstate 80 and east of Sierra College Boulevard. The undeveloped project site contains gently sloping terrain, covered with annual grasses and dotted with rock outcroppings, seasonal wetland features and scattered trees and shrubs. The project site and vicinity are predominantly large open spaces historically used for orchard production.

SURROUNDING LAND USE

Interstate 80 borders the project site directly to the northwest. Adjacent to the project site, Interstate 80 is a 6-lane highway. Areas north and east of Interstate 80 consist of retail-commercial uses along Sierra College Boulevard and a residential subdivision along Hunters Drive (Exhibit 4.1-1). The residential subdivision is located within the incorporated boundaries of the Town of Loomis. In general, areas north of the project site include pockets of development interspersed within open grasslands and scattered oak woodlands.

Areas east of the project site consist of large areas of relatively undeveloped land interspersed with rural residences, oak woodlands and Secret Ravine Creek [1]. A development application has been submitted on the land within the City of Rocklin located directly east of the project site. Identified as the Rocklin 60 residential development, this proposed project includes the subdivision of approximately 57 acres to accommodate a maximum of 179 single-family residential units. East of this proposed Rocklin 60 development is the Town of Loomis, which in this area includes rural-scale residential areas and the Indian Creek Golf Course.

Areas south of the project site consist of large areas of open grasslands and dense oak woodlands with Secret Ravine Creek ranging between 300 and 800 feet south of the project site. A small abandoned residence is located approximately 400 feet south of the project site and 100 feet east of Sierra College Boulevard (Exhibit 4.1-1). To the south and southwest of the project site is the Rocklin campus of Sierra College.

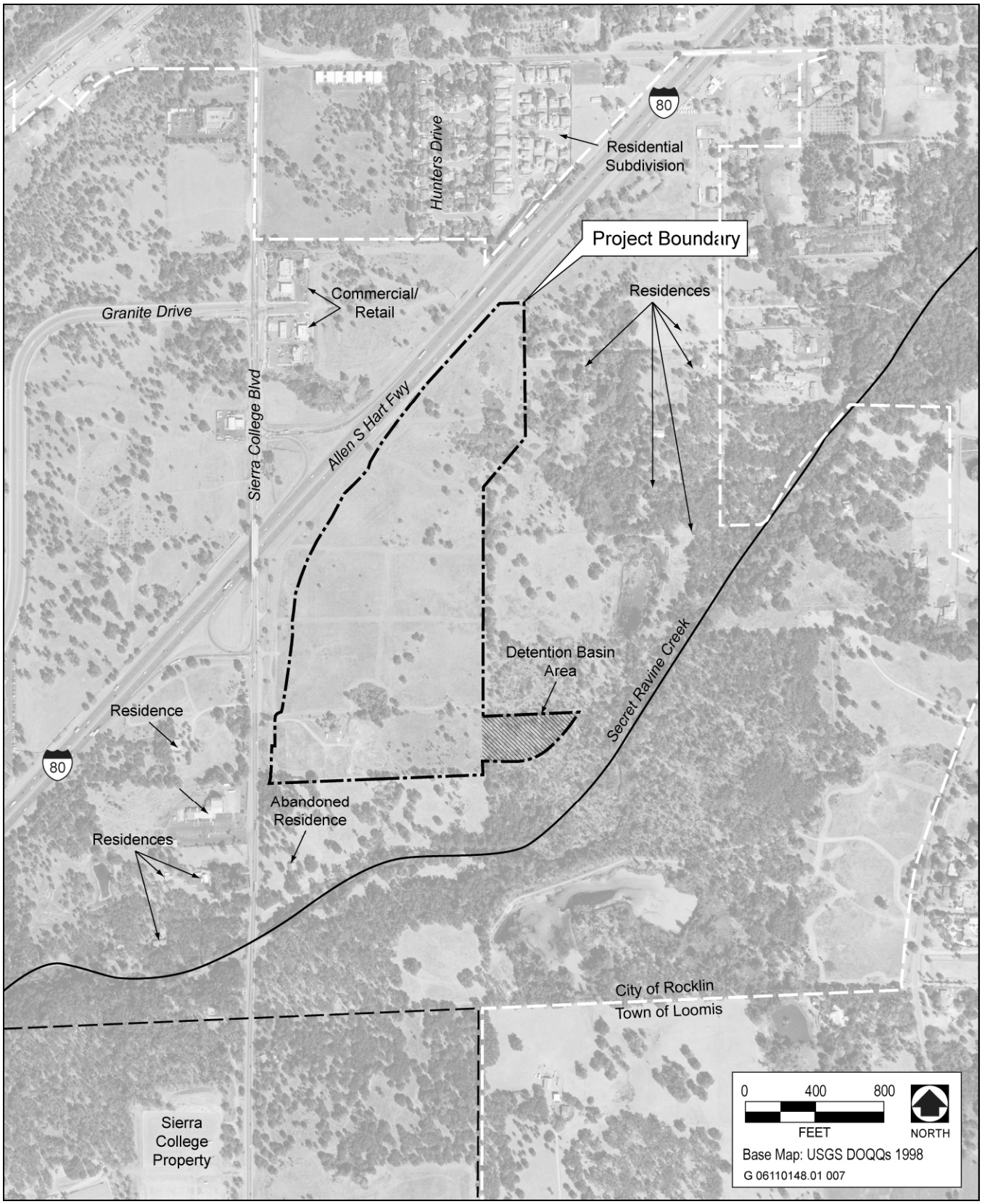
Sierra College Boulevard borders the project site to the west. The Sierra College Boulevard/Interstate 80 interchange, which as of this writing (Fall 2007) is in the process of being reconstructed, is located along the site's northwestern corner. Areas west of Sierra College Boulevard consist of grasslands and oak woodlands interspersed with rural residences, the Lifehouse Church, and Interstate 80 (Exhibit 4.1-1).

EXISTING GENERAL PLAN LAND USE DESIGNATIONS

On-site Land Use Designations

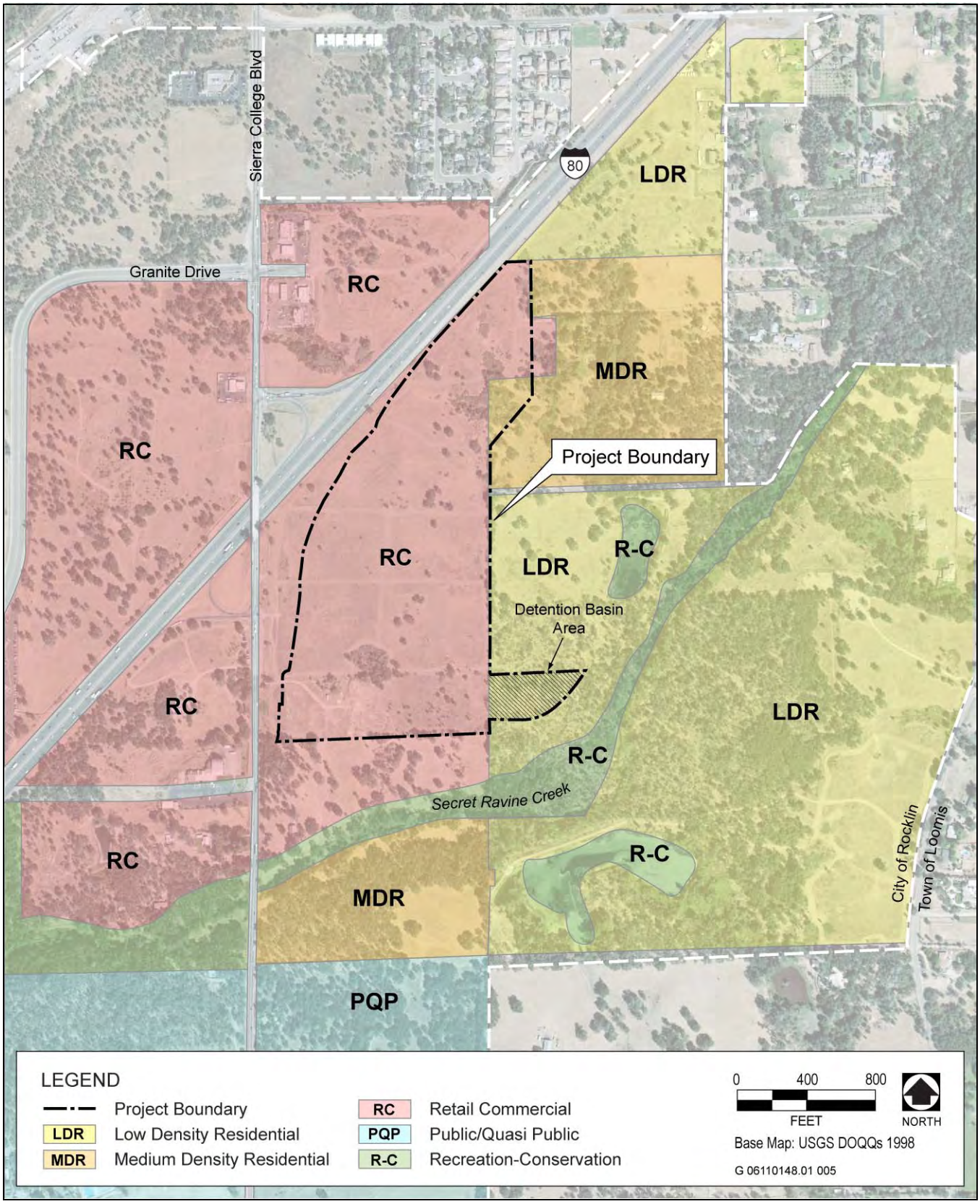
The City of Rocklin General Plan (1991) designates land uses within the City. The General Plan includes two designations for the project site, Retail Commercial (RC) and Medium Density Residential (MDR). The majority of the project site is designated RC with approximately 1.23 acres along the site's eastern boundary designated as MDR (Exhibit 4.1-2). The Land Use Element of the General Plan identifies RC lands as those designated for retail commercial uses, including business and professional uses. The Land Use Element identifies MDR lands as those designated exclusively for single family residential development, with a minimum 6,000 square foot lot area

[1] For a detailed discussion of Secret Ravine Creek, see page 4.10-3 in Section 4.10 of this Draft EIR.



Source: EDAW 2007

Surrounding Land Uses **Exhibit 4.1-1**



Source: City of Rocklin 2007, Adapted by EDAW in 2007

Land Use Map **Exhibit 4.1-2**

per dwelling unit, except in a Planned Development zone where clustered housing can be considered or in the designated old town area.

The General Plan further defines these land use designations as follows:

Retail Commercial

The purpose of the Retail Commercial land use designation is defined in Table 5 (page 44) of the General Plan (1991) as follows:

- To provide appropriately located areas for retail stores, professional offices, supportive commercial uses and amusement uses in a concentrated area for the convenience of the public and in mutually beneficial relationships to each other.

- To provide areas for retail and service establishments intended to meet daily convenience needs of residential areas.

- To provide areas for highway traveler services and uses normally associated with travelers and vacationers.

Table 5 further defines the character, density and compatible zoning for the Retail Commercial land use designation as follows:

Character: Retail trade services that should be grouped for comparison shopping. Easily accessible, compatible and geared for the neighborhood local and regional needs. Also, highway commercial uses geared for tourist or highway travel.

Density: Minimum lots from 10,000 square feet with a floor area yield equal to 25% of the lot area.

Compatible Zoning: Commercial (C-1, C-2, C-4, C-H), Historic District (H-D), Business Professional (B-P), and Planned Development (PD).

Medium Density Residential

The purpose of the Medium Density Residential land use designation is defined in Table 5 (page 43) of the General Plan (1991) as follows:

- Provide areas for single family homes on urban lots, including town-houses and condominiums.
- To allow for accessory uses and non-residential uses which compliment single family neighborhoods.
- To discourage non-residential uses which are incompatible with single family neighborhoods.

Table 5 further defines the character, density, population per acre and compatible zoning for the Medium Density Residential land use designation as follows:

Character: Areas where single family residential structures do not exceed 2 stories in height or cover more than 40% of the site.

Density: Minimum lots from 5,000 square feet to 12,500 square feet with 3.5 to 8.4 dwelling units per acre.

Population Per Acre: 9 to 21 persons (assuming an average population per household of 2.5).

Compatible Zoning: Residential (R1-5, R1-6, R1-7.5, R1-10, R1-12.5) and Planned Development (PD).

Surrounding Land Use Designations

The General Plan land use designation for properties to the north, west and south of the project site is Retail Commercial. The land use designations to the northeast and east include Medium Density Residential and Low Density Residential. A strip of Recreation-Conservation designated land associated with Secret Ravine Creek extends from east of the project site to the southwest. Low Density Residential designated land is located east of Secret Ravine Creek and Medium Density Residential designated land is located south of Secret Ravine Creek.

Existing Zoning Designations

On-site Zoning Designations

The City of Rocklin Zoning Ordinance identifies the zoning designations within the City. The City's Zoning Map identifies the zoning on the project site as Retail Business (C-2), Planned Development - Commercial (PD-C), and Unclassified (UN) (Exhibit 4.1-3). The Retail Business zoning allows retail business establishments with all uses to be conducted entirely within a building and no outside storage or display permitted. The Planned Development - Commercial zoning is intended to provide the means for greater creativity and flexibility in environmental design than is provided under the strict application of the zoning and subdivision ordinances, while at the same time protecting the public health, safety and welfare and property values. The specific purposes of the PD zone are to:

- Promote and encourage cluster development on large sites to avoid sensitive areas of property;
- Encourage creative and innovative design on large sites by allowing flexibility in property development standards;
- Encourage the preservation of open space;
- Accommodate various types of large scale, complex and phased developments;
- Establish a procedure for the development of large tracts of land in order to reduce or eliminate the rigidity, delays, and conflicts that otherwise would result from application of zoning standards designed primarily for small lots.

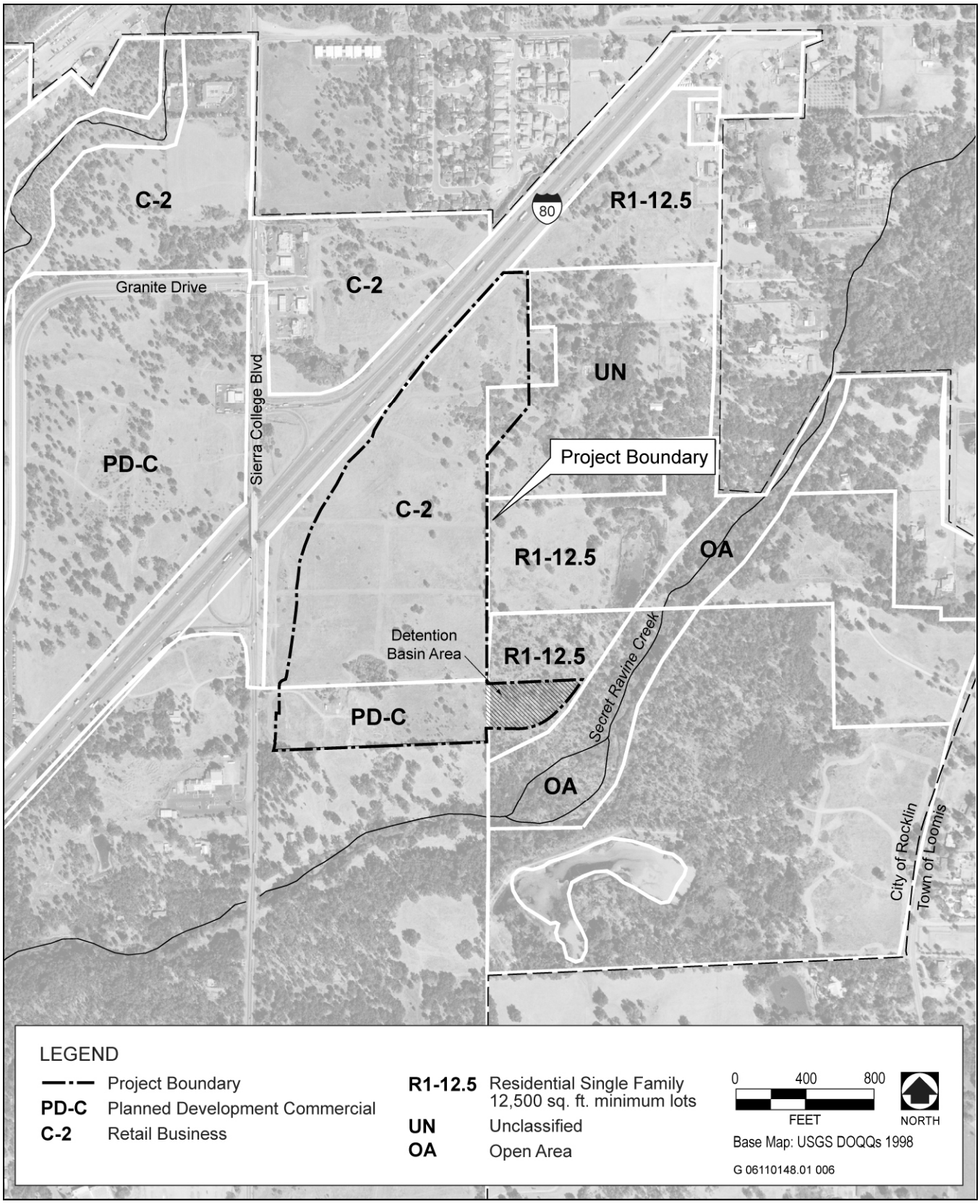
Development within a PD-C zone requires the submittal of a general development plan that identifies the proposed pattern of land uses and a list of permitted uses. The detailed components of the general development plan submittal are identified in the Zoning Ordinance (Chapter 17.60). The Unclassified zoning designation is discussed in Section 17.06.120 of the Zoning Ordinance.

Surrounding Zoning Designations

Land uses to the west and north, respectively, of Interstate 80 are zoned Planned Development - Commercial (PD-C) and Retail Business (C-2). Land northeast and east of the project site is zoned Residential with a 12,500 square-foot net minimum lot size (R1-12.5) and Unclassified (UN). Along Secret Ravine Creek to the east and to the south the land is designated Open Area (OA). To the south and southwest of the project site is the Sierra College Campus, which has a zoning designation of Planned Development-Community College (PD-CC).

4.1.2 REGULATORY SETTING

The Planning and Zoning Law of the California Government Code mandates that each city and county planning agency prepare and adopt a general plan for the physical development of the lands within that city or county's jurisdictional boundaries. The general plan is required to address and establish policies for specific planning issues or elements. By establishing these policies, codes, and ordinances, the local governing body is provided a tool by which to measure and regulate the future development and planning decisions that face the community.



Source: City of Rocklin 2007, Adapted by EDAW in 2007

Zoning Map **Exhibit 4.1-3**

Zoning is generally considered to be the primary tool for implementing the General Plan. Because of this, State law requires that the zoning ordinance be consistent with the General Plan. This means the land uses allowed by the zoning ordinance must be compatible with the goals, policies and land use designations specified in the General Plan. To further strengthen the consistency requirements, the State Subdivision Map Act requires that tentative and final subdivision maps cannot be approved unless the design and improvements are found to be consistent with the General Plan.

CITY OF ROCKLIN GENERAL PLAN

The City of Rocklin's General Plan is designed to identify the direction the City will take concerning its future development and to serve as a long-term guide for the orderly growth and development of the City of Rocklin. It forms the basis for zoning, subdivision regulation, and other planning decisions on the location, intensity and design of public facilities and land use.

The primary tool for implementation of the General Plan is through what is known as the consistency requirement. All discretionary land use approvals must be found to be consistent with the goals and policies contained in the General Plan, as well as the General Plan Land Use and Circulation Map. The consistency requirement is enforced by denying projects that are inconsistent or by redesigning and/or conditioning projects to bring them into conformance with the General Plan. In this manner, the provisions of the General Plan are applied and implemented in the design and construction of development projects.

The General Plan goals and policies were largely developed to address and minimize the potentially significant environmental impacts of development under the General Plan Land Use Map. These goals and policies seek to preserve and enhance the special environmental amenities of the City of Rocklin while providing for new development to serve the housing, economic, and social needs of the community and the region. It is expected that the goals and policies will operate to avoid significant environmental impacts of development in most cases. Nevertheless, some environmental impacts were found in the EIR prepared for the General Plan to be significant and unavoidable. These included potential impacts on regional air quality, visual impacts associated with the loss of open space, and the cumulative regional impacts on traffic circulation and biological resources.

The Land Use Element plays a central role in the General Plan. It provides a description of the existing pattern of land use and establishes a pattern for future land use. It also sets City policy on population density and intensity of development, is the basis for determining service requirements, and establishes policy on annexation and development phasing. The Land Use Element identifies specific goals and policies for residential, commercial, and industrial uses as well as goals and policies for land outside of the City, for land use consistency and for land use coordination. The goal and policies for commercial land uses would be applicable to the proposed project. The specific commercial land use policies applicable to the proposed project are identified below under the goal for commercial land use.

Goal for Commercial Land Use

To retain and renew existing commercial land uses and designate sufficient new commercial areas to meet future City needs.

Policies

18. To approve designation of sufficient commercial land to meet the future needs of the City.

19. To ensure that adequate parking and access are included in approved commercial development plans.

20. To avoid "strip commercial" land uses in newly developing areas by encouraging the "village concept" of grouping commercial land use in village core areas.

21. To minimize conflicts between new commercial land uses and other land uses, especially residential, park, and recreational uses.

22. To require that commercial land uses be buffered from incompatible land uses and protected from encroachment by residential or other incompatible uses through the use of techniques including, but not limited to, landscaping, soundwalls, berms, fencing, open space setbacks, greenbelts, and building orientation.

23. To promote flexibility and innovation in commercial land use through the use of planned unit developments, developer agreements, specific plans and other innovative development and planning techniques.

29. To encourage the development of a Regional Mall and other regional shopping facilities, within the City of Rocklin.

The other elements of the General Plan include Open Space, Conservation and Recreation; Circulation; Community Safety; Noise; Public Services and Facilities; and Housing. The goals and policies included within these elements are described in the individual sections of this EIR, as appropriate (e.g., the policies included in the Noise Element are described in Section 4.4, Noise).

Rocklin Municipal Code

Title 17 of the Rocklin Municipal Code constitutes the zoning ordinance of the City of Rocklin. The zoning ordinance regulates land uses on individual parcels. In addition to zoning, other ordinances in the Rocklin Municipal Code regulate land development and are relevant to the proposed project. The Rocklin Subdivision Ordinance specifies the content of a tentative parcel map and accompanying application materials. The Rocklin Subdivision Ordinance also establishes the review and approval process for subdivision applications filed within the City of Rocklin. The Rocklin Tree Ordinance seeks to protect oak trees in excess of six inches in diameter. Any activity that results in the removal or disturbance of such oak trees on undeveloped property requires a permit from the City. The Flood Plain Development Ordinance requires that all new construction on parcels partially or completely within a flood plain, be constructed outside of the 100-year floodplain. The finished floor elevation must be certified by a civil engineer or licensed land surveyor to be two feet above the 100-year flood elevation. And finally, the Grading and Erosion and Sediment Control Ordinance and the Stormwater Runoff Pollution Control Ordinance regulate stormwater and prohibit non-stormwater discharges except where regulated by a National Pollution Discharge Elimination System permit.

POLICY CONSISTENCY DETERMINATION

Consistency with Land Use and Zoning Designations

The City of Rocklin General Plan designates the majority of the land uses on the site as Retail Commercial (RC) with a 1.23-acre area designated as Medium Density Residential (MDR) (Exhibit 4.1-2). The project's proposed commercial uses would be inconsistent with the site's Medium Density Residential land use designation. However, the proposed project includes a general plan amendment that would convert the Medium Density Residential land use designation to Retail Commercial.

The City of Rocklin Zoning Ordinance identifies the site zoning as Retail Business (C-2), Planned Development - Commercial (PD-C), and Unclassified (UN). The proposed project may be inconsistent with the Retail Business zoning, although it would not conflict with the Unclassified zoning designation because no definition is provided in the Zoning Ordinance for this designation. The proposed project includes a rezone of the entire site to PD-C (Planned Development Commercial). With implementation of the general plan amendment and rezone, the proposed project would not conflict with the site's land use or zoning designations.

Consistency with General Plan Goals and Policies

The City of Rocklin General Plan identifies a variety of goals and policies applicable to the proposed project. The focus of this analysis is on the proposed project's consistency with the specific goal and policies related to commercial development. Other project-applicable General Plan goals and policies are described in the individual sections of this EIR, as appropriate (e.g., the policies included in the Noise Element are described in Section 4.4, Noise).

Goal for Commercial Land Use

To retain and renew existing commercial land uses and designate sufficient new commercial areas to meet future City needs.

The proposed project would include the development of commercially-designated land. Therefore, the proposed project would be consistent with this goal.

Policies

18. To approve designation of sufficient commercial land to meet the future needs of the City.

The proposed project includes a general plan amendment that would convert a 1.23-acre area designated as Medium Density Residential (MDR) to Retail Commercial. The approval of this general plan amendment would provide additional commercially-designated land within the City, consistent with this policy.

19. To ensure that adequate parking and access are included in approved commercial development plans.

The site planning component of the Development Guidelines identifies the parking design criteria for the site. The purpose of the parking design criteria is to provide a sufficient number of stalls to accommodate the demands of the shopping center and the allowable uses throughout the site. The parking design allows shared parking and cross access within the site. For single tenant retail commercial buildings with 60,000 square feet or greater, four parking spaces would be required for every 1,000 gross square feet of floor area. For office and multi-tenant retail commercial with 60,000 square feet or greater and retail commercial, restaurant, and office buildings with less than 60,000 square feet, five parking spaces would be required for every 1,000 gross square feet of floor area. Uncovered sales areas are required to provide 10 parking spaces for the first 5,000 square feet of unconditioned sales area plus one additional space for each additional 1,000 square feet up to a maximum of 20 spaces. Compact parking would be restricted to 30% or less of the total required parking and handicap parking would be provided consistent with the City of Rocklin Building Codes and the Americans with Disabilities Act (ADA) requirements. Adequate disabled-person access between the handicap parking stalls and the proposed buildings, and access into and within the buildings would be required per ADA requirements. With the implementation of these parking design criteria and compliance with applicable ADA requirements, the proposed project would be consistent with this policy.

20. To avoid "strip commercial" land uses in newly developing areas by encouraging the "village concept" of grouping commercial land use in village core areas.

The proposed project would not properly be considered "strip commercial" because the project incorporates the "village concept" by grouping multiple commercial land uses in one core area. The project site is divided into two primary building districts identified as the Retail Promenade District and the Retail Village Clusters District. The Retail Promenade District includes the large retail tenants along the site's eastern property line while the Retail Village Clusters District includes three separate Village Clusters immediately adjacent to Interstate 80 and Sierra College Boulevard. In addition, the project includes the implementation of Development Guidelines that would establish and control the design character for the entire project. The Development Guidelines address site planning, landscaping, architecture, exterior lighting and signage. All development at the site would be required

to comply with the guidelines. By implementing the village concept and consistent development guidelines throughout the project site, the proposed project would be consistent with this policy.

21. *To minimize conflicts between new commercial land uses and other land uses, especially residential, park, and recreational uses.*

As described above, the proposed project includes the implementation of Development Guidelines that would establish and control the design character for the entire project. These Development Guidelines address the compatibility of the proposed project with the adjacent land uses through the implementation of landscape buffering and the construction of screening walls along the eastern property line to shield existing and proposed future residential uses from the project's commercial operations. With the implementation of these development guidelines, the proposed project would be consistent with this policy.

22. *To require that commercial land uses be buffered from incompatible land uses and protected from encroachment by residential or other incompatible uses through the use of techniques including, but not limited to, landscaping, soundwalls, berms, fencing, open space setbacks, greenbelts, and building orientation.*

As addressed above, the project includes measures to ensure compatibility with adjacent uses. Therefore, the proposed project would be consistent with this policy.

23. *To promote flexibility and innovation in commercial land use through the use of planned unit developments, developer agreements, specific plans and other innovative development and planning techniques.*

The proposed project includes implementation of a General Development Plan that includes detailed Development Guidelines for the project site. With the implementation of the General Development Plan, the proposed project would be consistent with this policy.

29. *To encourage the development of a Regional Mall and other regional shopping facilities, within the City of Rocklin.*

The proposed project includes the development of a regional shopping center. Therefore, the proposed project would be consistent with this policy.

Consistency with Retail Commercial Density Requirements

With implementation of the proposed general plan amendment, the entire site would have a land use designation of Retail Commercial. The City of Rocklin General Plan identifies the density for this land use as a floor area yield equal to 25% of the lot area. Based on the approximately 55.1-acre project site, this would equate to a floor area yield of 600,365 square feet. The total site acreage includes the approximately 49.5-acre development site and the approximately 5.6-acre detention basin. The project proposes a total of 543,500 square feet of building space. This would represent a floor area yield of 22.63%. The project's floor area yield would be less than allowed on the site. Therefore, the proposed project would be consistent with the allowable density identified in the General Plan for the project site.

4.1.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with State CEQA Guidelines Appendix G, an impact to land use is considered significant if the proposed project would:

- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, a specific plan, the zoning ordinance, a habitat conservation plan or a natural community conservation plan) adopted for the purpose of avoiding or mitigating an environmental effect; or

- Physically divide an established community.

IMPACTS AND MITIGATION MEASURES

IMPACT 4.1-1 Consistency with Applicable Plans. *The proposed project would not conflict with an applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. Therefore, no impacts associated with plan consistency would be anticipated.*

The City of Rocklin General Plan identifies policies that are intended to avoid or mitigate adverse environmental effects. These policies are identified in the applicable resource sections throughout this document and are identified as follows:

Several policies in the City of Rocklin General Plan (1991) address natural resource protection. Specific action plans and policies included in the Open Space, Conservation and Recreation Element of the General Plan that apply to the preservation of natural resources include the following:

Action Plan

- *The City will apply open space designations to all lands located within 50 feet from the edge of the bank of all perennial and intermittent streams and creeks providing natural drainage, adjacent to areas consisting of riparian habitat. The City will designate a buffer area greater than 50 feet for perennial streams when it is determined that such a buffer area is necessary to adequately protect drainage and habitat areas. In designating these areas as open space, the City is preserving natural resources and protecting these areas from development.*

The City has established the Recreation-Conservation (R-C) zoning designation along Secret Ravine Creek. The creek is located approximately 300 feet south of the project site at its closest point. The project development is located completely outside of the R-C designated area. Therefore, the proposed project would not conflict with this Action Plan policy.

- *The City will require a restricted easement recorded over any property that contains areas designated for preservation, including wetlands, vernal pools, and rare, threatened and endangered species habitat. Such easements would restrict the use and type of structures located within them, when such action does not conflict with the permitting requirements of other agencies.*

The project site does not include any areas designated for preservation and does not include any development within the R-C designated area along Secret Ravine Creek. Therefore, the proposed project would not conflict with this Action Plan policy.

Policies

- *Policy 1. To encourage the protection of natural resource areas, scenic areas, hilltops, open space areas and parks from encroachment or destruction by incompatible development through the use of conservation easements, buffers, setbacks or other measures. Developments shall be required to provide usable land areas outside of conservation easements or established natural resource buffers.*

The project site is set back approximately 200 feet from the R-C designated area along Secret Ravine Creek. Therefore, the proposed project would not encroach upon the natural resources within this R-C designated area and would not conflict with this policy.

- *Policy 2. To encourage the protection of wetlands, vernal pools, and rare, threatened and endangered species of both plants and animals through either avoidance of these resources or implementation of appropriate mitigation measures where avoidance is not feasible, as determined by the City of Rocklin.*

Mitigation measures have been identified in Section 4.12, Biological Resources, of this Draft EIR to minimize the project's impacts on wetlands and rare, threatened and endangered species. These measures include the avoidance and/or replacement of sensitive resources affected by project implementation. With the implementation of these mitigation measures, the proposed project would be consistent with this policy.

- *Policy 4. To encourage the protection of oak trees, including heritage oaks, and other significant vegetation from destruction.*

Mitigation measures have been identified in Section 4.12, Biological Resources, of this Draft EIR to minimize the project's impacts on oak tress. These measures include the replacement of lost oak trees consistent with the City of Rocklin Tree Ordinance Requirements. With the implementation of these mitigation measures, the proposed project would be consistent with this policy.

- *Policy 15. To provide adequate yard areas and building setbacks from creeks, riparian habitat, hilltops, and other natural resources.*

The project site is set back approximately 200 feet from the R-C designated area along Secret Ravine Creek. Therefore, the proposed project would not encroach upon the natural resources within this R-C designated area and would not conflict with this policy.

- *Policy 19. To minimize the degradation of water quality through requiring implementation of techniques such as, but not limited to, the prohibition of grading, placement of fill or trash or alteration to vegetation within designated stream setback buffer areas, and requiring the installation of measures which minimize runoff waters containing pollutants and sediments from entering surface waters. Measures for minimizing pollutants and sediments from entering watercourses may include oil/grit separators, detention basins and flow reduction devices.*

Mitigation measures have been identified in Section 4.10, Hydrology and Water Quality, of this Draft EIR to minimize the project's impacts on surface water quality. These measures include the implementation of Best Management Practices. With the implementation of these mitigation measures, the proposed project would be consistent with this policy.

The following goal is included in the City of Rocklin General Plan Noise Element:

- *Goal: To protect residents from health hazards and annoyance associated with excessive noise levels.*

Noise mitigation measures have been identified in Section 4.4, Noise, of this Draft EIR to ensure that project-generated noise levels do not exceed applicable noise standards for residential uses. With the implementation of these mitigation measures, the proposed project would be consistent with this goal.

Because the proposed project would not conflict with an applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect, **no impacts** associated with plan consistency would be anticipated.

Mitigation Measure 4.1-1 Consistency with Applicable Plans

No mitigation measures would be necessary.

Level of Significance After Mitigation

The project would not cause any plan consistency impacts.

IMPACT 4.1-2 Physically Divide an Established Community. *The proposed project would not be expected to physically divide an established community. Therefore, no impact on an established community would occur with project implementation.*

The proposed project includes the development of an undeveloped site. The project site is not located within an established community and does not include any physical links (i.e., roads) connecting Sierra College Boulevard to the established rural residences to the east. Therefore, the development of the project site would not physically divide an established community and **no impact** on an established community would occur with project implementation.

Mitigation Measure 4.1-2 Physically Divide an Established Community

No mitigation measures would be necessary.

Level of Significance After Mitigation

The project would not physically divide an established community.

4.2 TRAFFIC AND CIRCULATION

This section summarizes the results of the traffic report prepared by LSA Associates, Inc. (LSA) for the proposed project (March 2007). A technical review of the traffic report was conducted by the traffic engineering firm, DKS Associates, for the City. This analysis examines the traffic impacts expected to result from the addition of vehicle traffic generated by the proposed project to baseline conditions consisting of existing conditions as altered by approved projects in the study area. "Approved projects," in this context, are land use and infrastructure projects, including a new interchange at Interstate 80 and Sierra College Boulevard (under construction at the time this Draft EIR was released), that have received all discretionary approvals requiring environmental review. Potential mitigation measures for facilities significantly affected by the project are also identified in this analysis.

4.2.1 EXISTING SETTING

STUDY AREA

The study area for the traffic analysis was developed in consultation with the City and is based on input received on the project's Notice of Preparation. Arterial street intersections that were most likely to be affected by travel to and from the project were included in the study area. Existing travel patterns in the project area that the project could affect were considered, including intersections located north of the Rocklin city limits within the Town of Loomis. Segments of I-80 and SR-65 were included in the study area at the request of Caltrans.

Of the 21 study area intersections, 12 are located within 0.5 mile from direct access to an interstate freeway. The City's level of service criteria for intersections located within 0.5 mile from direct access to an interstate freeway is LOS D, while the threshold for other intersections within the City is LOS C. (See City of Rocklin General Plan Circulation Element Policy 13.)

Levels of service are analyzed at the following study area intersections for the a.m., p.m., and Saturday peak hours for each development scenario. The traffic analysis took into consideration the 24-hour operations of the proposed project. Intersections within 0.5 mile from a freeway access location (where the LOS D standard would apply) are noted with an asterisk (*). The jurisdiction of intersections located outside of the City of Rocklin is indicated in parentheses after the intersection name.

- Pacific Street/Rocklin Road
- Granite Drive/Rocklin Road*
- I-80 westbound ramp/Rocklin Road*
- I-80 eastbound ramp/Rocklin Road*
- Dominguez Road (Del Mar Avenue)/Pacific Street
- Granite Drive/Dominguez Road
- Sierra College Boulevard/Taylor Road* (Loomis)
- Sierra College Boulevard/Brace Road* (Loomis)
- Sierra College Boulevard/Granite Drive*
- Sierra College Boulevard/I-80 Westbound Ramp*
- Sierra College Boulevard/I-80 Eastbound Ramp*
- Sierra College Boulevard/Dominguez Road* (Future Intersection)
- Sierra College Boulevard/Rocklin Road
- Horseshoe Bar Road/Taylor Road* (Loomis)
- Horseshoe Bar Road/I-80 Westbound Ramp* (Loomis)
- Horseshoe Bar Road/I-80 Eastbound Ramp* (Loomis)
- Barton Road/Brace Road (Loomis)
- Barton Road/Rocklin Road (Loomis)
- Sierra College Boulevard/King Road (Loomis)
- Sierra College Boulevard/English Colony Way (Placer County)
- Taylor Road/King Road (Loomis)

The following roadway segments were included in the study area. Roadway segments located within 0.5 mile of direct access to an interstate freeway, where LOS D is considered satisfactory, are noted with an asterisk (*).

- Taylor Road between King Road and Horseshoe Bar Road (Loomis)
- Taylor Road between Horseshoe Bar Road and Sierra College Boulevard (Loomis)
- Pacific Street between Sierra College Boulevard and Dominguez Road
- Pacific Street between Dominguez Road and Rocklin Road
- Rocklin Road between Pacific Street and Granite Drive *
- Rocklin Road between I-80 and Sierra College Boulevard *
- Rocklin Road between Sierra College Boulevard and Barton Road (Loomis)
- Barton Road between Rocklin Road and Brace Road (Loomis)
- Horseshoe Bar Road between I-80 and Brace Road * (Loomis)
- Brace Road between I-80 and Barton Road (Loomis)
- Brace Road between I-80 and Sierra College Boulevard (Loomis)
- Sierra College Boulevard between English Colony Way and King Road (Placer County)
- Sierra College Boulevard between King Road and Taylor Road (Loomis)
- Sierra College Boulevard between Taylor Road and I-80 *
- Sierra College Boulevard between I-80 and Dominguez Road *
- Sierra College Boulevard between Dominguez Road and Rocklin Road
- Granite Drive between Dominguez Road and Sierra College Boulevard
- Granite Drive between Dominguez Road and Rocklin Road
- Dominguez Road between Taylor Road and Granite Drive
- King Road between Sierra College Boulevard and Taylor Road (Loomis)

In addition to the analysis of daily capacities, an analysis of the a.m. and p.m. peak-hour directional volumes, for both weekdays and Saturdays, is included for roadway segments to determine if a segment is forecast to operate beyond the LOS C or D threshold. The a.m. and p.m. peak-hour volume/capacity ratios were evaluated based on per-lane capacity of 1,650 vehicles per hour, consistent with the 2000 Highway Capacity Manual (HCM) methodology. The location of the study intersections and study roadway segments is illustrated in Exhibit 4.2-1.

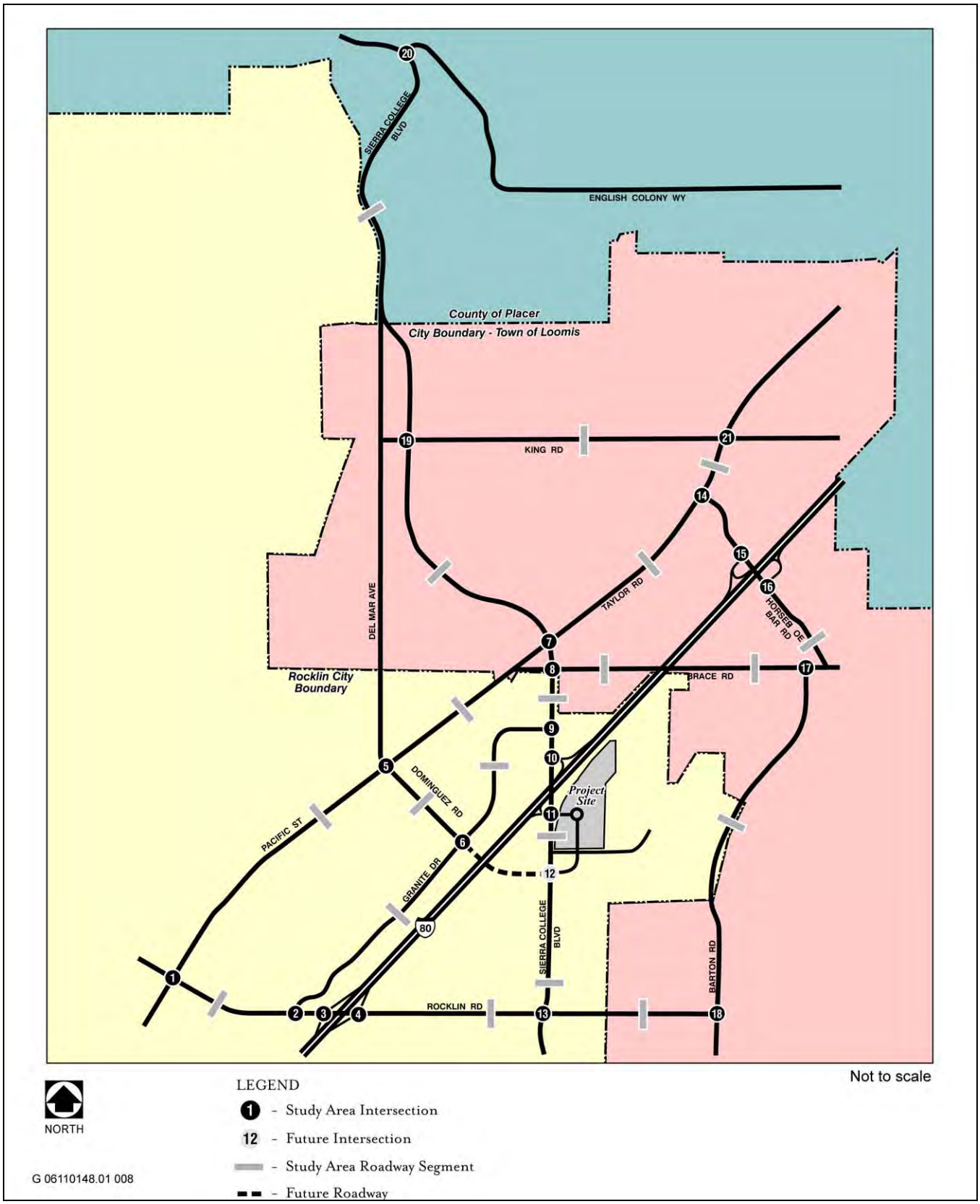
ROADWAY NETWORK

The existing intersection geometrics and traffic control at study area intersections are illustrated in Exhibit 4.2-2. The roadways that would provide access to the project are described below:

- **Interstate 80 (I-80).** I-80 is an interstate highway providing inter-regional access in the vicinity of the project. Throughout the study area, I-80 generally travels in a southwest to northeast direction. Interchanges along I-80 near the project site are provided at Rocklin Road, Sierra College Boulevard, and Horseshoe Bar Road. Direct access to the project site would be provided from the I-80 eastbound ramps at Sierra College Boulevard.

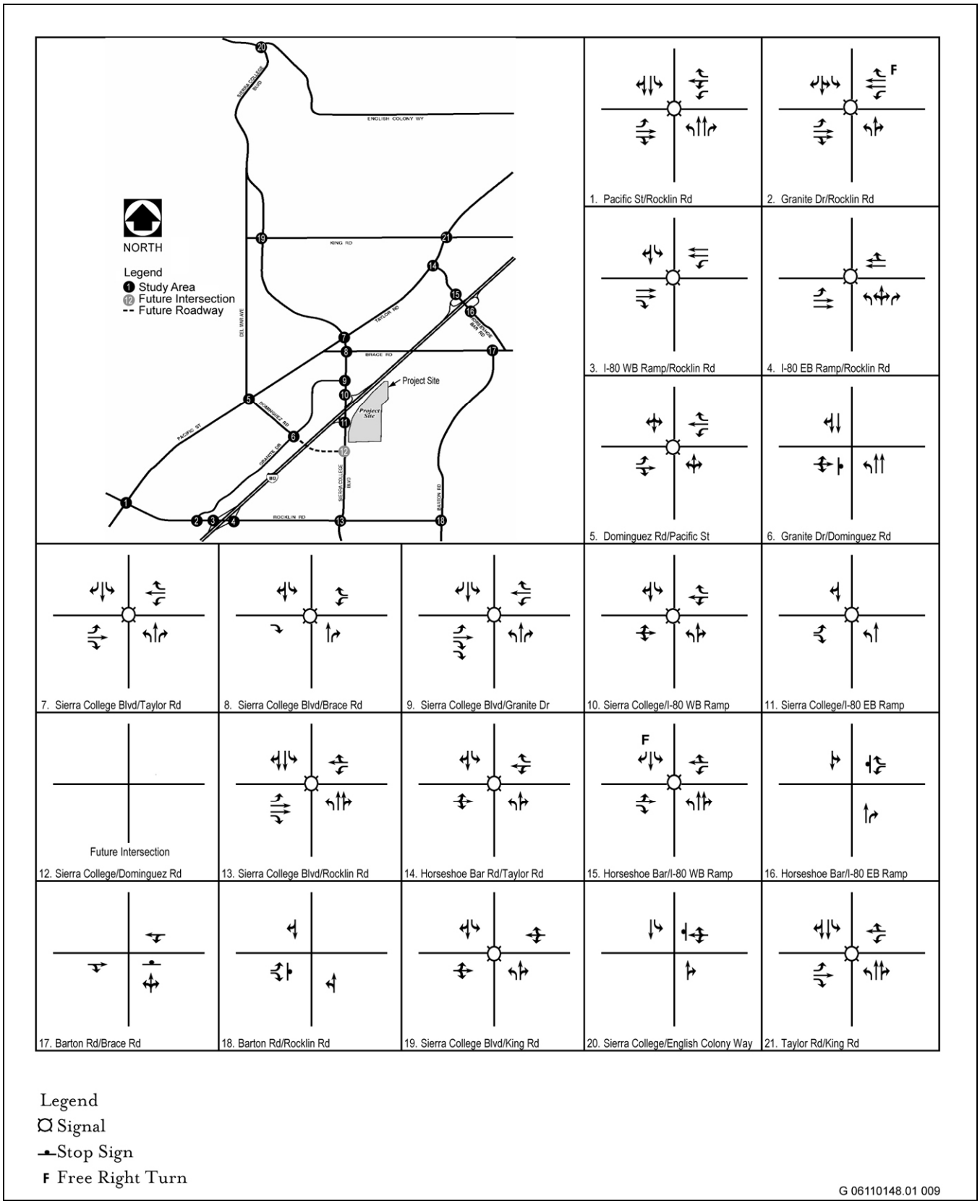
- **State Route 65 (SR-65).** SR-65 provides regional access near the vicinity of the project. SR-65 runs generally northwest from I-80 and joins SR-70 near the town of Marysville. Near the I-80 connector, SR-65 is a four-lane expressway with interchanges at N. Harding Boulevard/Stanford Ranch Road, Pleasant Grove Boulevard, and Blue Oaks Boulevard.

- **Pacific Street.** Pacific Street is a two-lane roadway located northwesterly of Granite Drive, a four-lane roadway from the southern City limits to Sierra Meadows Drive, and a two-lane roadway north of Sierra Meadows Drive. Pacific Street is classified as an Arterial in the City General Plan Circulation Element and is classified as a Truck Route by the City. This roadway provides travel throughout the entire City limits. Pacific Street becomes Taylor Road east of Sierra College Boulevard.



Source: LSA 2007

Study Intersections and Roadway Segments **Exhibit 4.2-1**



Source: LSA 2007

Existing Geometrics and Traffic Control **Exhibit 4.2-2**

- **Granite Drive.** Granite Drive is a four-lane southwest-northeast roadway located west of I-80. Granite Drive is classified as an Arterial in the City General Plan Circulation Element. Granite Drive runs from Rocklin Road in the south and terminates at Sierra College Boulevard just north of the project site. Granite Drive is classified as a Truck Route from Dominguez Road to Sierra College Boulevard.

- **Sierra College Boulevard.** Sierra College Boulevard is a north-south roadway that forms the western boundary of the project site. This roadway is classified as an Arterial roadway with an ultimate six-lane cross-section in the City's General Plan Circulation Element. Sierra College Boulevard is designated as a Truck Route by the City. Within the study area, Sierra College Boulevard is a two-lane roadway north of Rocklin Road and a four-lane roadway immediately south of Rocklin Road. Access to the project would be provided via three locations on Sierra College Boulevard.

- **Rocklin Road.** Rocklin Road is an east-west roadway located south of the project site. West of Sierra College Boulevard, Rocklin Road is a four-lane roadway. Immediately east of Sierra College Boulevard, there are two eastbound and one westbound travel lanes. Farther east, Rocklin Road becomes a two-lane roadway and terminates at Barton Road.

- **Dominguez Road.** Dominguez Road is classified as a Collector roadway on the City's General Plan. North of Pacific Street, Dominguez Road becomes Del Mar Avenue. Dominguez Road/Del Mar Avenue is currently a two-lane undivided roadway. Currently, Dominguez Road terminates at Granite Drive, west of I-80. Dominguez Road is planned to be extended across I-80 and would become the west leg of the southern project driveway. The Dominguez Road extension is included in the City's Traffic Impact Fee and Capital Improvement Program.

- **Brace Road.** Brace Road is a two-lane east-west roadway located north of the project site. This roadway is located within the City of Loomis.

- **Horseshoe Bar Road.** This roadway is located within the City of Loomis and provides access to I-80. Horseshoe Bar Road is a two-lane roadway running in a northwest-southeast direction and is located north of the project site.

EXISTING TRAFFIC VOLUMES

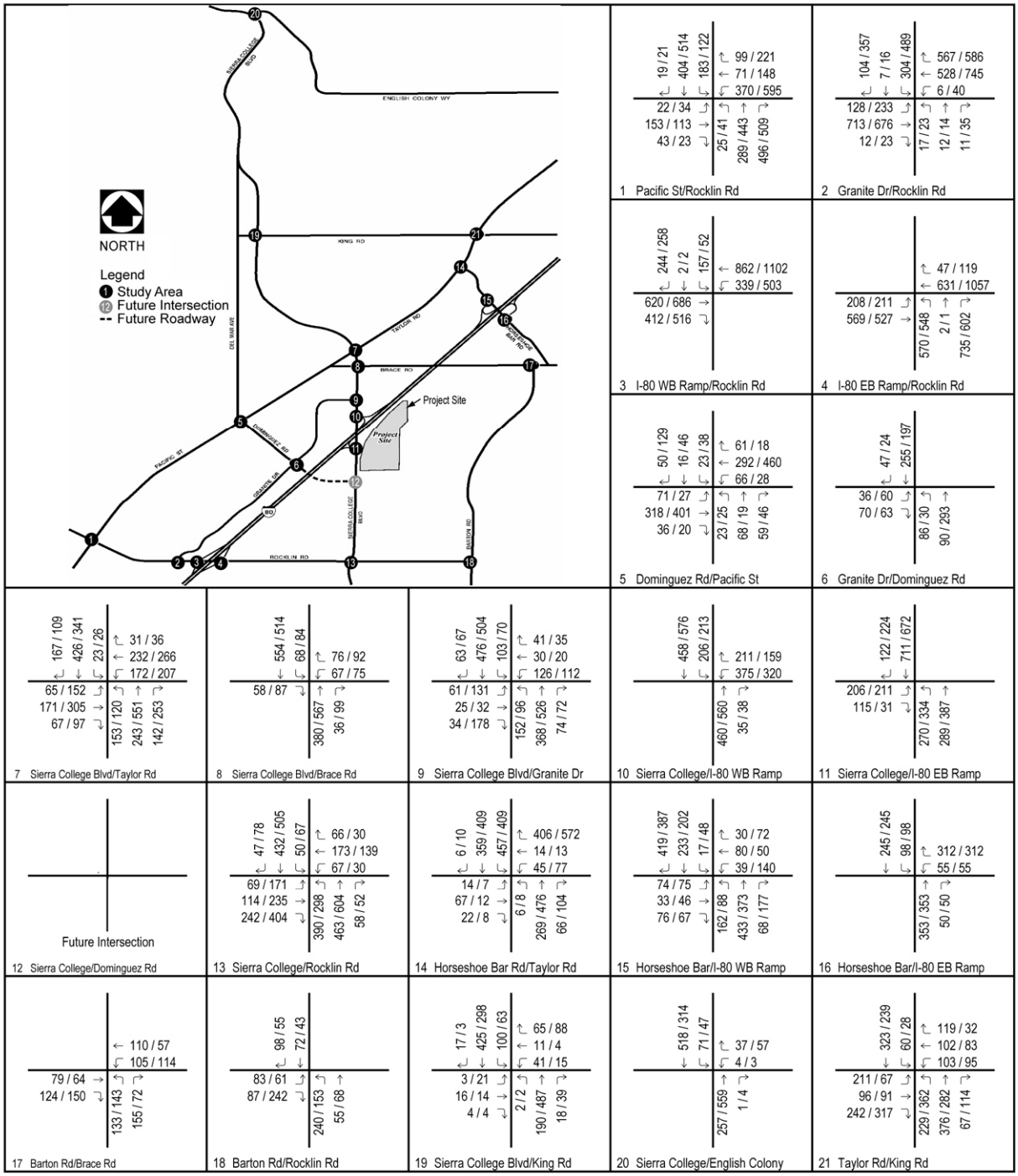
Existing traffic counts at the 21 study intersections were collected in October 2006 (a.m. and p.m. peak hours) and September 2006 (Saturday peak hour). The traffic counts are provided in Appendix C (identified as Appendix A within Appendix C). With the exception of the Saturday peak hour, these counts were taken during a nonholiday period when schools were in session and therefore include the traffic generated by Sierra College and all schools within the study area. The existing a.m. and p.m. peak-hour and Saturday peak-hour traffic volumes are illustrated in Exhibits 4.2-3 and 4.2-4.

EXISTING LEVELS OF SERVICE

Levels of service at study area intersections and roadway segments were calculated for the existing conditions and are summarized in Tables 4.2-1 and 4.2-2. The existing LOS worksheets are provided in Appendix C (identified as Appendix B within Appendix C).

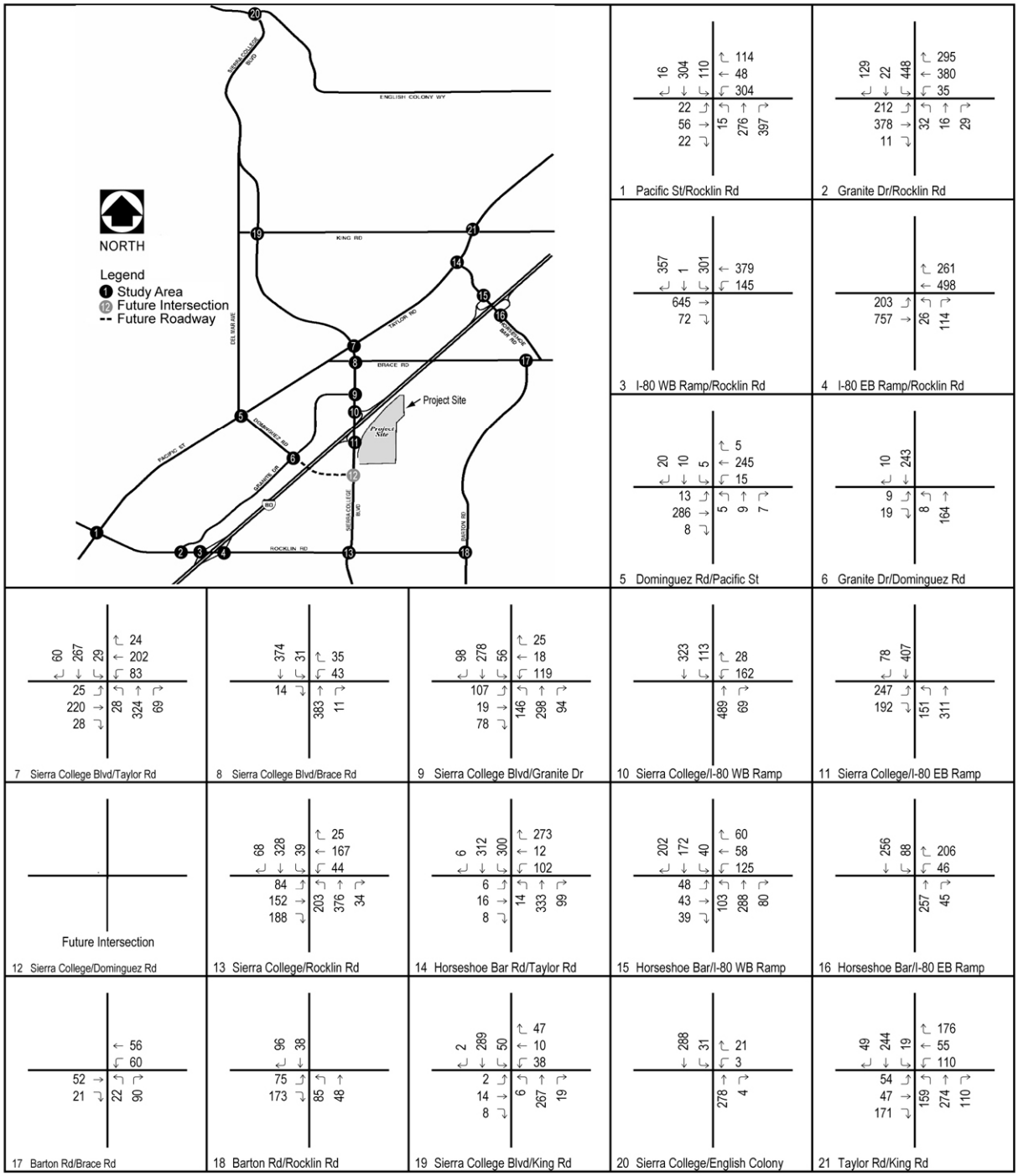
As shown in Table 4.2-1, the following two intersections are operating at an unsatisfactory LOS in the existing condition.

- Sierra College Boulevard/I-80 eastbound ramp
- Taylor Road/Horseshoe Bar Road



Source: LSA 2007

Existing Peak Hour Traffic Volumes **Exhibit 4.2-3**



Source: LSA 2007

Existing Saturday Peak Hour Traffic Volumes **Exhibit 4.2-4**

Table 4.2-1
Existing Peak Hour Intersection Levels of Service

	Intersection	Existing Condition					
		AM Peak Hour		PM Peak Hour		Saturday	
		V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS
1	Rocklin Road/Pacific Street [1]	0.734	C	0.709	C	0.453	A
2	Rocklin Road/Granite Drive	0.389	A	0.637	B	0.452	A
3	Rocklin Road/I-80 Westbound Ramps	0.663	B	0.834	D	0.534	A
4	Rocklin RoadI-80 Eastbound Ramps	0.716	C	0.757	C	0.433	A
5	Dominguez Road/Pacific Street [1]	0.391	A	0.454	A	0.230	A
6	Dominguez Road/Granite Drive [1]	11.7 sec	B	11.9 sec	B	9.9 sec	A
7	Sierra College Boulevard/Taylor Road (Loomis)	0.614	B	0.728	C	0.423	A
8	Sierra College Boulevard/Brace Road (Loomis)	0.440	A	0.522	A	0.295	A
9	Sierra College Boulevard/Granite Drive	0.521	A	0.534	A	0.384	A
10	Sierra College Boulevard/I-80 Westbound Ramps	0.740	C	0.747	C	0.575	A
11	Sierra College Boulevard/I-80 Eastbound Ramps	0.892	D	0.970	E	0.639	B
12	Sierra College Boulevard/Dominguez Road	-	-	-	-	-	-
13	Sierra College Boulevard/Rocklin Road [1]	0.591	A	0.660	B	0.443	A
14	Taylor Road/Horseshoe Bar Road (Loomis)	0.837	D	0.998	E	0.626	B
15	Horseshoe Bar Road/I-80 Westbound Ramps (Loomis)	0.392	A	0.369	A	0.310	A
16	Horseshoe Bar Road/I-80 Eastbound Ramps (Loomis)	16.4 sec	C	16.0 sec	C	12.1 sec	B
17	Barton Road/Brace Road [1] (Loomis)	16.1 sec	C	15.0 sec	C	9.5 sec	A
18	Barton Road/Rocklin Road [1] (Loomis)	15.6 sec	C	10.9 sec	B	10.2 sec	B
19	Sierra College Boulevard/King Road 1 (Loomis)	0.390	A	0.465	A	0.301	A
20	Sierra College Boulevard/English Colony Way [1] (Placer County)	10.9 sec	B	13.4 sec	B	10.5 sec	B
21	Taylor Road/King Road [1] (Loomis)	0.600	A	0.602	B	0.407	A

Notes:
ICU V/C ratio is used for signalized intersections. HCM delay in seconds is used for unsignalized intersections.
[1] LOS C required for these intersections. LOS D acceptable for all other intersections.

Exceeds level of service criteria

As shown in Table 4.2-2, all but three roadway segments currently operate with satisfactory LOS, per applicable guidelines. The following roadway segments are currently operating at unsatisfactory LOS:

- Taylor Road between King Road and Horseshoe Bar Road
- Sierra College Boulevard between Taylor Road and I-80
- Sierra College Boulevard between Dominguez Road and Rocklin Road

4.2-2
Existing Daily Roadway Segment Level of Service Summary

Roadway	Segment	Configuration	Capacity	Weekday			Saturday		
				Volume	V/C	LOS	Volume	V/C	LOS
Taylor Road	King Road and Horseshoe Bar Road [1] (Loomis)	Two-lane Collector	15,000	17,060	1.14	F	11,370	0.76	C
	Horseshoe Bar Road and Sierra College Boulevard[1] (Loomis)	Two-lane Collector	15,000	10,673	0.71	B	3,500	0.23	A
Pacific Street	Sierra College Boulevard and Dominguez Road [1]	Two-lane Collector	15,000	11,578	0.77	C	5,880	0.39	A
	Dominguez Road and Rocklin Road [1]	Four-lane Undivided Arterial	30,000	15,889	0.53	A	6,820	0.23	A
Rocklin Road	Pacific Street and Granite Drive	Four-lane Undivided Arterial	30,000	21,211	0.71	B	11,040	0.37	A
	I-80 and Sierra College Boulevard	Four-lane Undivided Arterial	30,000	9,989	0.33	A	13,090	0.44	A
	Sierra College Boulevard and Barton Road [1] (Loomis)	Two-lane Collector	15,000	5,176	0.35	A	4,060	0.27	A
Barton Road	Rocklin Road and Brace Road [1] (Loomis)	Two-lane Collector	15,000	3,354	0.22	A	2,040	0.14	A
Horseshoe Bar Road	I-80 and Brace Road (Loomis)	Two-lane Collector	15,000	6,101	0.41	A	6,460	0.43	A
Brace Road	I-80 and Barton Road [1] (Loomis)	Two-lane Collector	15,000	4,006	0.27	A	1,940	0.13	A
	I-80 and Sierra College Boulevard [1] (Loomis)	Two-lane Collector	15,000	3,408	0.23	A	560	0.04	A
Sierra College Boulevard	English Colony Way and King Road [1] (Placer County)	Two-lane Collector	15,000	9,600	0.64	B	6,570	0.44	A
	King Road and Taylor Road [1] (Loomis)	Two-lane Collector	15,000	10,560	0.70	B	7,080	0.47	A
	Taylor Road and I-80	Two-lane Collector	15,000	17,566	1.17	F	8,610	0.57	A
	I-80 and Dominguez Road	Two-lane Collector	15,000	13,275	0.88	D	10,400	0.69	B
	Dominguez Road and Rocklin Road [1]	Two-lane Collector	15,000	13,275	0.88	D	10,840	0.72	C
Granite Drive	Dominguez Road and Sierra College Boulevard [1]	Four-lane Undivided Arterial	30,000	6,178	0.21	A	4,350	0.15	A
	Dominguez Road and Rocklin Road [1]	Four-lane Undivided Arterial	30,000	8,258	0.28	A	7,850	0.26	A
Dominguez Road	Taylor Road and Granite Drive [1]	Two-lane Collector	15,000	2,382	0.16	A	510	0.03	A
King Road	Sierra College Boulevard and Taylor Road [1] (Loomis)	Two-lane Collector	15,000	5,610	0.37	A	3,460	0.23	A

Notes:
[1] LOS C required for these segments. LOS D acceptable for all other segments.

Exceeds level of service criteria

EXISTING SIERRA COLLEGE BOULEVARD/I-80 INTERCHANGE RECONSTRUCTION PROJECT

The construction of the Sierra College Boulevard/I-80 interchange reconstruction project is underway and it is anticipated that it will be completed prior to the opening of the proposed project. The interchange reconstruction project is currently anticipated to be completed in the summer or fall of 2008. Although this interchange reconstruction project is not part of the proposed project, it will directly affect access to the project site. The Sierra College Boulevard/I-80 interchange project includes the following improvements:

- Reconstruct the I-80 eastbound off-ramp/Sierra College Boulevard intersection approximately 269 feet south of its present location from centerline to centerline. Provide for a separate westbound right turn with direct connector to the eastbound on-ramp.
- Reconstruct the I-80 westbound off-ramp/Sierra College Boulevard intersection approximately 230 feet north of its present location from centerline to centerline.
- Intersections would be signalized and would operate in multi-phases.
- Provide a third northbound through lane on the Sierra College Boulevard segment between the I-80 westbound off-ramp intersection and Granite Drive. With this improvement, the northbound approach at the Sierra College Boulevard/Granite Drive intersection would have one left-turn lane, two through lanes, and one shared through-right turn lane.
- Provide an exclusive eastbound right-turn lane at the I-80 eastbound off-ramp approach to Sierra College Boulevard. With this improvement, the eastbound off-ramp approach at the Sierra College Boulevard/I-80 eastbound ramps intersection would have two left-turn lanes, two through lanes, and one right-turn lane.
- Reconstruct the Sierra College Boulevard overcrossing of I-80 to provide for a new 5-lane overcrossing structure (two southbound lanes and three northbound lanes).
- Widen the inside shoulders on I-80 (both directions of travel) at the new overcrossing to provide 9.8-foot shoulders to the Type 50E Barrier facing the new structure's median columns. This improvement requires shifting the freeway mainline 2.7 feet away from the inside shoulders (both directions of travel) and widening the mainline on the outside for a distance of approximately 1,312 feet.
- Reconstruct both the eastbound and westbound hook on-ramps to I-80 so the ramps would be a free right turn configuration.
- Construct new eastbound and new westbound Sierra College Boulevard direct connecting on-ramps to I-80. Relocate the park-and-ride lot. (See *Sierra College Boulevard/Interstate 80 Interchange Improvement Project Draft EIS/EA*, pp. v, xxvii.)

The main access into the proposed project will be constructed as part of the Sierra College Boulevard interchange project and dedicated as a City right-of-way. Following completion of the interchange reconstruction, three access locations would be available for the proposed project from Sierra College Boulevard. The northernmost project access would form the east leg of the Interstate 80 eastbound/Sierra College Boulevard ramp currently under construction. This access would provide the main entrance to the project site. The middle access would provide right turns into and out of the project only from the southern boundary road. The southernmost access point would align with the future extension of Dominguez Road over Interstate 80. This southernmost road is being constructed as an access roadway for the approved Croftwood Subdivision development located southeast of the project site and west of Barton Road. The proposed project would connect to this access roadway, which is to be constructed as part of the Croftwood Subdivision project improvements. This access roadway is planned to be completed prior to project implementation.

4.2.2 REGULATORY SETTING

CITY OF ROCKLIN GENERAL PLAN

The Circulation Element of the City of Rocklin General Plan (1991) includes the following relevant goal and policies related to traffic and circulation.

Goal: To provide and maintain a safe and efficient system of streets, highways, and public transportation to meet community needs and promote sound land use.

- **Policy 1.** To maintain existing streets in a safe condition and require that new streets be built to City standards.
- **Policy 2.** To ensure that streets and highways will be available to serve new development by requiring detailed traffic studies as a part of all major development proposals.
- **Policy 6.** To promote pedestrian convenience through development conditions requiring sidewalks, walking paths, or hiking trails that connect residential areas with commercial, shopping, and employment centers.
- **Policy 7.** To require landscaping and tree planting along major new streets and highways, and along existing streets as appropriate.
- **Policy 8.** To encourage a variety of building sites, building types, and land use treatments along major streets and highways.
- **Policy 10.** To promote the use of public transit through development conditions requiring park-and-ride lots, bus turnouts and passenger shelters along major streets.
- **Policy 11.** To enforce the transportation system management requirements of the existing ridesharing ordinance.
- **Policy 13.** To maintain a minimum traffic level of service "C" for all streets and intersections, except for intersections located within ½ mile from direct access to an interstate freeway where a level of service "D" will be acceptable. Exceptions may be made for peak hour traffic where not all movements exceed the acceptable level of service.

CITY OF ROCKLIN CAPITAL IMPROVEMENT PROGRAM

The City's Traffic Impact Fee and Capital Improvement Program (CIP) defines the roadway and intersection improvements needed to maintain the Level of Service (LOS) policy adopted in the City's General Plan. (See Rocklin General Plan Circulation Element, Policy 13.) The City regularly monitors traffic on City streets to include in the City's CIP those improvements needed to maintain an acceptable LOS through the use of traffic fees and other financing mechanisms. The City updated its CIP and traffic impact fees in 2005, and extended the horizon year for the CIP from 2020 to 2025.

On May 22, 2007, the Rocklin City Council adopted Resolution No. 2007-126, increasing the Citywide traffic impact fee based on increased construction costs for all developments within the City. In conjunction with this fee increase, the City also updated it CIP. The updated CIP includes the following improvements in the vicinity of the proposed project:

- Widen Rocklin Road to 4-lanes from the Loomis Town limits to east of Sierra College Boulevard;
- Widen Rocklin Road to 6-lanes (add 2 lanes) from west of Sierra College Boulevard to I-80 eastbound ramps;

- Widen Rocklin Road to 6-lanes from I-80 westbound ramps to west of Granite Drive;
- Widen Sierra College Boulevard to 6-lanes (add 2 lanes) from Nightwatch Drive to Aguilar Tributary;
- Construct a 2-lane extension with bridge over I-80 on Dominguez Road from Granite Drive to Sierra College Boulevard; and
- Reconstruct the Rocklin Road/I-80 interchange.

SOUTH PLACER REGIONAL TRANSPORTATION AUTHORITY

In January 2002, the cities of Rocklin, Roseville, Lincoln, the County of Placer, and the Placer County Transportation and Planning Agency entered into a Joint Powers Authority (JPA) known as the South Placer Regional Transportation Authority (SPRTA). The JPA was formed for the purpose of implementing a regional transportation and air quality mitigation fee to fund specified regional transportation projects (SPRTA 2007). These improvements include:

- Sierra College Boulevard from SR-193 to the south Placer County line;
- SR-65 Lincoln Bypass;
- Douglas Boulevard/Interstate 80 Interchange;
- Placer Parkway; and
- Transit Passenger Rail Improvements (Raney Planning & Management, Inc. 2006).

The estimated completion date for the above projects will be established after the JPA board of directors establishes their respective priorities. In general, the improvements are expected to be made during the next several years, but the timing of these roadway and transit system projects is ultimately dependent on the collection of the fees necessary to fund them (Raney Planning & Management, Inc. 2006).

Because Sierra College Boulevard would serve as a primary transportation link to the Rocklin Crossings project, the improvements related to this roadway included in the JPA are described below:

> Sierra College Boulevard is a major north-south arterial that provides a link from State Route 193 in Lincoln to Interstate 80 in Rocklin and on to the Sacramento County line. Sierra College Boulevard traverses Lincoln, unincorporated Placer County, Loomis, Rocklin, and Roseville. The improvements to Sierra College Boulevard would consist of widening the roadway to four or six lanes from State Route 193 to the Sacramento County line, excluding improvements to the interchange at Interstate 80, which will be funded by a combination of Rocklin and state funds.

The Sierra College Boulevard segments to be funded or credited by the fee program include:

- Segment 1 - from State Route 193 to the northern city limits of the City of Rocklin. This segment would consist of a four-lane facility.
- Segment 2a - from the northern city limits of the City of Rocklin to the northern boundary of the Town of Loomis. This facility would also be built to four lanes.
- Segment 5 - Interstate 80 to Rocklin Road. This segment would consist of six lanes.
- Segment 6 - Rocklin Road to the southern city limits of the City of Rocklin. This segment would consist of six lanes (Raney Planning & Management, Inc. 2006).

The creation of SPRTA resulted in the establishment of an impact fee schedule for new development in the participating jurisdictions. In the past, the primary source of funding for regional transportation projects in Placer

County has been the State Transportation Improvement Program (STIP), which typically falls short of financing current project needs throughout the county. In addition, several jurisdictions in Placer County currently have some form of development fees for local transportation projects, but the County has not had a mechanism to fund large scale or multi-jurisdictional projects. Therefore, with the creation of SPRTA and a list of transportation improvements identified in the JPA, as well as the regional transportation impact fee schedule, the necessary funding for construction of regional improvements (including improvements to Sierra College Boulevard) has been ensured (Raney Planning & Management, Inc. 2006).

4.2.3 IMPACTS AND MITIGATION MEASURES

METHOD OF ANALYSIS

The traffic impact analysis is based on intersection levels of service for the following scenarios:

- Existing
- Existing plus Project
- Existing plus Approved Projects (Baseline)
- Existing plus Approved Projects (Baseline) plus Project

The traffic analysis described below includes the a.m. and p.m. peak hour analysis required by the City. Although typically not required by the City, the traffic analysis evaluates the project's potential impact for a Saturday peak hour scenario. This analysis was performed to determine whether the proposed project would have impacts during the Saturday peak hour that were more significant than those identified for the weekday a.m. and p.m. peak hour scenarios. Based on this analysis, there were no instances where traffic impacts during the Saturday peak hour exceeded the traffic impacts identified for the weekday a.m. and p.m. peak hour scenarios, and as such, any mitigation measures required for the weekday a.m. and p.m. peak hour impacts would also mitigate Saturday peak hour impacts.

Intersection LOS Methodology

Traffix computer software was utilized to determine the levels of service (LOS) at signalized and unsignalized study area intersections based on the Circular 212 "Critical Movement Analysis" (CMA) planning methodology and HCM 2000 Methodology, respectively. This methodology is approved by the City and is consistent with the method used for previous traffic impact analyses prepared for projects in the City.

The CMA methodology compares the amount of traffic an intersection is able to process (capacity) to the level of traffic during peak hours (volume). The resulting volume-to-capacity ratio (v/c) is expressed in terms of LOS, where LOS A represents free-flow activity and LOS F represents overcapacity operation. The CMA methodology provides a planning level assessment of the traffic volume at an intersection and is used by many cities and agencies within California for the purposes of traffic impact analysis. In addition to the City of Rocklin, some of the cities and agencies that utilize the Circular 212 CMA methodology include West Sacramento, Fairfield, Roseville, Union City, San Carlos, the Contra Costa Transportation Authority, and the City/County Associations of Governments of San Mateo County. In addition, a number of agencies throughout the state utilize the Intersection Capacity Utilization (ICU) methodology, which is similar to the Circular 212 CMA methodology but does not take into account the effects of signal phasing on the LOS. Utilization of a methodology that calculates v/c ratio has proven to be an accurate method of disclosing traffic impacts of development projects.

LOS is a qualitative assessment of the quantitative effects of such factors as traffic volume, roadway geometrics, and signal phasing on roadway and intersection operations. LOS criteria for signalized intersections are presented below.

LOS	Description
A	No approach phase is fully utilized by traffic, and no vehicle waits longer than one red indication. Typically, the approach appears quite open, turns are made easily, and nearly all drivers find freedom of operation.
B	This service level represents stable operation, where an occasional approach phase is fully utilized, and a substantial number are nearing full use. Many drivers begin to feel restricted within platoons of vehicles.
C	This level still represents stable operating conditions. Occasionally, drivers may have to wait through more than one red signal indication, and backups may develop behind turning vehicles. Most drivers feel somewhat restricted but not objectionably so.
D	This level encompasses a zone of increasing restriction approaching instability at the intersection. Delays to approaching vehicles may be substantial during short peaks within the peak period; however, enough cycles with lower demand occur to permit periodic clearance of developing queues, thus preventing excessive backups.
E	Capacity occurs at the upper end of this service level. It represents the most vehicles that any particular intersection approach can accommodate. Full utilization of every signal cycle is attained, no matter how great the demand.
F	This level describes forced flow operations at low speeds, where volumes exceed capacity. These conditions usually result from queues of vehicles backing up from a restriction downstream. Speeds are reduced substantially, and stoppages may occur for short or long periods due to the congestion. In the extreme case, speed can drop to zero.

The relationship between LOS and the volume/capacity ratio for signalized intersections is as follows:

Level of Service	Volume to Capacity (CMA Methodology)
A	< 0.600
B	0.610–0.700
C	0.710–0.800
D	0.810–0.900
E	0.910–1.000
F	> 1.000

Because the CMA methodology does not provide an accurate representation of the LOS of an unsignalized intersection, the 2000 Highway Capacity Manual (HCM) methodology has been used to determine intersection levels of service at unsignalized intersections. For the unsignalized HCM methodology, the LOS is presented in terms of total intersection delay (at four-way stop intersections) and approach delay of the major and minor streets (at two-way stop intersections) in seconds per vehicle. The relationship of delay and LOS at unsignalized intersections is summarized below.

Level of Service	Unsignalized Intersection Delay per Vehicle (sec)
A	<10.0
B	>10.0 and <15.0
C	>15.0 and <25.0
D	>25.0 and <35.0
E	>35.0 and <50.0
F	>50.0

The HCM methodology has also been used to determine LOS at the Caltrans controlled signalized I-80/Sierra College Boulevard freeway ramp intersections with Sierra College Boulevard. The HCM method is used by Caltrans for intersections it controls. The HCM analysis at the interchange ramp intersections is provided for purposes of comparison to the LOS analysis presented in the Caltrans Environmental Document and supporting focused interchange Traffic Study conducted in January 2003.

Roadway Level of Service Methodology

Roadway segment analysis in the project area was also conducted as part of this traffic study. To identify the project's impact on the operating condition of a roadway segment, an LOS ranking scale was used. The LOS is based on average daily traffic (ADT) roadway segment threshold capacities as presented below.

LOS	Roadway Segment Capacities: Two-Way Average Daily Traffic Volumes						
	Two-Lane Collector	Four-Lane Undivided Arterial	Four-Lane Divided Arterial	Four-Lane Restricted Access Arterial	Six-Lane Divided Arterial	Six-Lane Restricted Access Arterial	Four-Lane Freeway
A	9,000	18,000	20,250	21,600	30,315	30,315	37,600
B	10,700	21,300	23,625	25,200	36,000	36,000	52,800
C	12,000	24,000	27,000	28,800	40,500	40,500	68,000
D	13,500	27,000	30,375	32,400	45,560	45,560	76,000
E	15,000	30,000	33,750	36,000	50,525	50,525	80,000

The LOS E capacity shown in the above table represents an approximation of the number of vehicles that the roadway can comfortably carry on a daily basis before it is considered to be at capacity. If the ADT on a roadway segment exceeds the LOS E capacity, then the daily LOS of the roadway is considered to be LOS F. It is important to note that an ADT capacity must assume several critical characteristics of traffic, including the percentage of daily traffic in the peak hour and the directional split within that peak hour. Actual characteristics of a specific roadway can significantly influence the daily capacity as described below. To calculate the daily LOS for each roadway segment, the ADT on each segment was divided by the capacity of the segment (the LOS E capacity as shown in the above table) to determine the daily v/c ratio for each roadway. The v/c ratio was compared to the values in the table below to determine the daily LOS for each roadway segment.

Level of Service	Volume to Capacity Ratio
A	< 0.600
B	0.610–0.700
C	0.710–0.800
D	0.810–0.900
E	0.910–1.000
F	> 1.000

The daily LOS, as described above, is a planning-level threshold that is generally used to determine the overall cross-sections of roadways within a circulation network. While it can provide an indication of whether the existing or forecast volume might result in unsatisfactory operation of the roadway, it does not provide an accurate representation of the actual operation of the roadway, especially during the peak hours of the day. For purposes of this project impact analysis, the daily capacity was first examined to determine whether the roadway might exceed its theoretical daily capacity. If the roadway volume exceeded the daily capacity (v/c greater than 1.00), then the peak-hour v/c ratio was calculated. If the peak-hour capacity is also exceeded, the roadway segment is considered to be operating at an unsatisfactory LOS. Although the roadway segment may seem to be operating with unsatisfactory LOS when the daily volume is examined, it is not considered unsatisfactory LOS if the peak-hour traffic volumes does not exceed the capacity. This is because traffic along a roadway segment will be greatest during the peak commute hours. As a result, if traffic operations are satisfactory during the peak hour, when traffic volumes are highest, then the segment will also operate at satisfactory LOS during the remaining off-peak hours of the day.

THRESHOLDS OF SIGNIFICANCE

Policy 13 of the City of Rocklin General Plan Circulation Element states that the City strives "to maintain a minimum traffic level of service "C" for all streets and intersections, except for intersections located within ½ mile from direct access to an interstate freeway where a level of service "D" will be acceptable." Policy 13 further provides that "[e]xceptions may be made for peak hour traffic where not all movements exceed the acceptable level of service." Mitigation is required for any intersection or roadway segment where project traffic causes the intersection to deteriorate from satisfactory to unsatisfactory operation.

Based on the City's significance threshold, if an intersection or roadway segment is already operating at an unsatisfactory level of service, an increase of 5 percent (addition of 0.05) to the v/c ratio would constitute a significant project impact. An increase of 0.05 in the v/c ratio would be considered a measurable worsening of the intersection or roadway operations and therefore would constitute a significant project impact. If an unsignalized intersection is already operating at unsatisfactory LOS D (LOS E within 0.5 mile of freeway access), then the addition of more than 5 percent of the total traffic at the intersection would be considered a significant project impact. The City has determined, based on the expert opinions of the City's traffic consultants and the City's traffic engineering staff, that a 5 percent threshold is appropriate in determining that a measurable adverse change has occurred to an intersection. This threshold applies even where project traffic will be added to existing or projected conditions that are already unacceptable or are projected to be unacceptable under cumulative conditions even without the project.

The City does not subscribe to the notion that, where existing conditions or projected cumulative condition are already bad or will be bad even without the project, *any* additional traffic from the project represents a significant impact or a cumulatively considerable contribution to a significant cumulative impact. The City's rejection of this notion reflects the nature of traffic impacts, compared with other categories of environmental impact, which often involve public health or ecological concerns. Worsened congestion might cause irritation or inconvenience to people, but not any adverse effects on public health or ecosystems. Thus, while the addition of relatively small amounts of air pollution in a polluted air basin might worsen the adverse health effects of air pollution, no similar health effects result from additional congestion. Similarly, while the loss of relatively small amounts of the habitat of an endangered or threatened species might cause ecological consequences of note, worsened congestion has no such consequences to biological resources. In fact, "mitigation" for traffic impacts often has its own adverse consequences on biological resources (i.e., road widenings often wipe out habitat areas). In short, the City does not believe that a "one car" threshold of significance for impacts on already-congested transportation facilities is either practical or desirable from a policy standpoint. Nor is such an approach mandated by CEQA or CEQA case law. While the 0.05 threshold, by allowing small amounts of traffic without triggering additional mitigation, might require drivers to endure minor additional delays during peak periods, this purely human inconvenience is not, in the City's view, a "significant effect on the environment."

The Town of Loomis General Plan Circulation Element (2001) includes the following level of service policy:

> In order to minimize congestion, maintain Level of Service C on all roads and intersections within the Town of Loomis. Level of Service D may be allowed in conjunction with development approved within the Town as an exception to this standard, at the intersections of King and Taylor, Horseshoe Bar Road and Taylor, Horseshoe Bar Road and Interstate 80, Sierra College and Brace Road, and Webb and Taylor, when:
>
> 1. The deficiency is substantially caused by "through" traffic, which neither begins nor ends in Loomis, and is primarily generated by non-residents; or
> 2. The deficiency will be temporary (less than three years), and a fully-funded plan is in place to provide the improvements needed to remedy the substandard condition.

The Environmental Impact Report prepared for the Town of Loomis General Plan further clarifies these thresholds by identifying an increase of 5 percent (addition of 0.05) to the v/c ratio for roadway segments as a significant project impact.

The Town of Loomis was contacted to clarify the significance criteria that should be applied to intersections that currently operate in excess of the Town's LOS C threshold. Town staff requested that the same significance criteria be applied to Loomis intersections as applied in the City of Rocklin. Therefore, consistent with the Town's approach for roadway segments and the City of Rocklin's intersection significance thresholds, if an intersection in the Town of Loomis is already operating at an unsatisfactory level of service, an increase of 5 percent (addition of 0.05) or more to the v/c ratio would constitute a significant project impact.

The California Department of Transportation assumes that project traffic increases that cause the freeway level of service to deteriorate beyond LOS E are significant.

Based on Appendix G of the CEQA Guidelines, the City has determined that a project would result in a significant effect on the environment if it would:

- Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections);
- Exceed, either individually or cumulatively, a level of service (LOS) standard established by the City, the Town of Loomis, or the California Department of Transportation;
- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses;
- Result in inadequate emergency access;
- Result in inadequate parking capacity; or
- Conflict with adopted policies, plans, or program supporting alternative transportation (e.g., bus turnouts, bicycle racks).

PROJECT TRIP GENERATION AND DISTRIBUTION

An estimation of the number of vehicle trips was generated for the site using the trip rates from the Institute of Transportation Engineers (ITE) Trip Generation, 7th Edition, and the article, "Trip Generation Characteristics of Free-Standing Discount Superstores," ITE Journal, August 2006. The project trip generation is shown in Table 4.2-3. As indicated in the table, the project is forecast to generate 18,788 daily trips, 617 a.m. peak-hour trips, 1,914 p.m. peak-hour trips, and 2,280 Saturday peak-hour trips.

As explained above, although Trip Generation, 7th Edition, is the industry-recognized source of trip generation information, this study departs from the approach employed in the ITE manual in one respect because of a study conducted of trips generated by superstores, the results of which were published in the August 2006 ITE Journal. This article proposes a higher trip generation rate for superstores than the one used in the ITE manual. Due to existence of an ongoing debate in some quarters about trip generation rates associated with Wal-Mart Supercenters, this analysis employs a conservative approach that assumes the higher trip generation rate in the ITE Journal article. This approach was taken even though the high trip generation rate posited by the ITE Journal article is based on very conservative assumptions and factors that may not apply to the proposed project.

Table 4.2-3
Rocklin Crossings Trip Generation

Land Use	Size	Units	ADT	A.M. Peak Hour In	A.M. Peak Hour Out	A.M. Peak Hour Total	P.M. Peak Hour In	P.M. Peak Hour Out	P.M. Peak Hour Total	Saturday In	Saturday Out	Saturday Total
Discount Superstore	231.353	TSF										
Trip Rate [1]			49.21	0.94	0.90	1.84	2.75	2.75	5.50	2.56	2.45	5.01
Trip Generation			11,385	217	209	426	636	636	1,272	591	568	1,159
Home Improvement Store [2]	141.038	TSF										
Trip Rate [3]			29.80	0.65	0.55	1.20	1.15	1.30	2.45	2.86	2.54	5.40
Trip Generation			3,065	67	57	123	118	134	252	294	261	555
Shopping Center	171.109	TSF										
Trip Rate [4,5]			37.55	0.49	0.31	0.80	1.69	1.83	3.52	2.49	2.30	4.79
Trip Generation			6,425	83	53	136	289	313	602	426	393	819
Total Site Gross Trips			20,875	367	318	685	1,044	1,083	2,127	1,311	1,222	2,533
Total Site Pass-by Trips [6]	10.0%		-2088	-37	-32	-69	-104	-108	-213	-131	-122	-253
Total Site Trip Generation	543.500	TSF	18,788	330	287	617	939	975	1,914	1,180	1,100	2,280

Note: volumes shown rounded to nearest integer
1 Trip generation based on rates documented in Trip Generation Characteristics of Free-Standing Discount Superstores, ITE Journal, August 2006.
2 Trip generation of Home Improvement Store does not include garden center (34,760 sq. ft) and vestibules (3,411 sq. ft) per description of land use in ITE Trip Generation (7th Edition).
3 Trip generation based on rates for Land Use 862 - Home Improvement Superstore from ITE Trip Generation (7th Edition)
4 Average rate derived from total site generation (543.5 TSF) using fitted curve equations for Land Use 820 - Shopping Center from ITE Trip Generation (7th Edition)
5 ADT: Ln(T) = 0.65 Ln(X) + 5.83; AM: Ln(T) = 0.60 Ln(X) + 2.29; PM: Ln(T) = 0.66 Ln(X) +3.40; Saturday: Ln(T) = 0.63 Ln(T) + 6.23
6 Pass-by trip percentages from ITE Trip Generation Handbook, 2004 vary between 28% and 48% for various land uses.
However, a 10% estimate has been used as a conservative average pass-by trip reduction rate for the entire retail center.
TSF = Thousand square feet

Specifically, the ITE Journal article focused on a small sample of five Wal-Mart Supercenters in Texas and Oklahoma, and found that p.m. trip generation for the five stores ranges from 4.16 to 6.67, with an average of 5.5 trips per 1,000 square feet (compared to the Trip Generation p.m. peak-hour trip generation rate of 3.87 per thousand square feet employed in the ITE manual). There are at least three reasons why this result may not be immediately applicable to the proposed project. First, the sample stores are located in Texas and Oklahoma and do not necessarily reflect conditions in Northern California. Demographics, proximity to the stores, and other factors assumed in the ITE Journal Study have not been demonstrated to be the same as in Northern California. In contrast, information contained in Trip Generation, 7th edition, is comprised of a blend of locations throughout the U.S., including California. Second, the survey data are incomplete and did not include information regarding a.m. peak or daily trip characteristics. Third, the average rate of the sample stores has not been officially accepted by ITE as the rate that should be applied to discount supercenters from now on; and given the small sample size used for the ITE Journal article, the rate recommended in the article may not be widely accepted as reliable until additional survey information becomes available. If the five-store Texas/Oklahoma data were officially accepted and incorporated into the existing ITE manual data for Free Standing Discount Superstore, the data would be added to the existing data points from the previous field studies, with a new average derived from the augmented data set. The resulting average might well yield a trip generation rate considerably lower than the article found to occur in Texas and Oklahoma.

It should be noted that the trip rates contained in Trip Generation, 7th Edition, for Home Improvement Store include the vehicle trips generated by an adjacent garden center. Calculation of trip generation involves taking the product of the trip generation rate (from ITE) and the square footage of the Home Improvement Store building only, not including the garden center. As noted in the description of the land use code for Home Improvement Store, the garden center should not be included in the building's overall gross floor area for the purpose of calculating the vehicle trip generation. The vehicle trip generation shown in Table 4.2-3 for the home

improvement store is based on the floor area without the garden center. However, trips generated by the garden center are still included in the trip generation because they are inherent in the trip rate per thousand square feet.

For further clarification the ITE trip rate are calculated as follows:

- All trips coming into and out of the Home Improvement Store and the garden center are counted.
- These trips are then divided by the building square footage (in thousand square feet) only, deducting the garden center.
- The resultant trips per thousand square feet are the trip generation factors; while the factor is only applied to the building square footage, it does reflect the trips generated by the garden center.

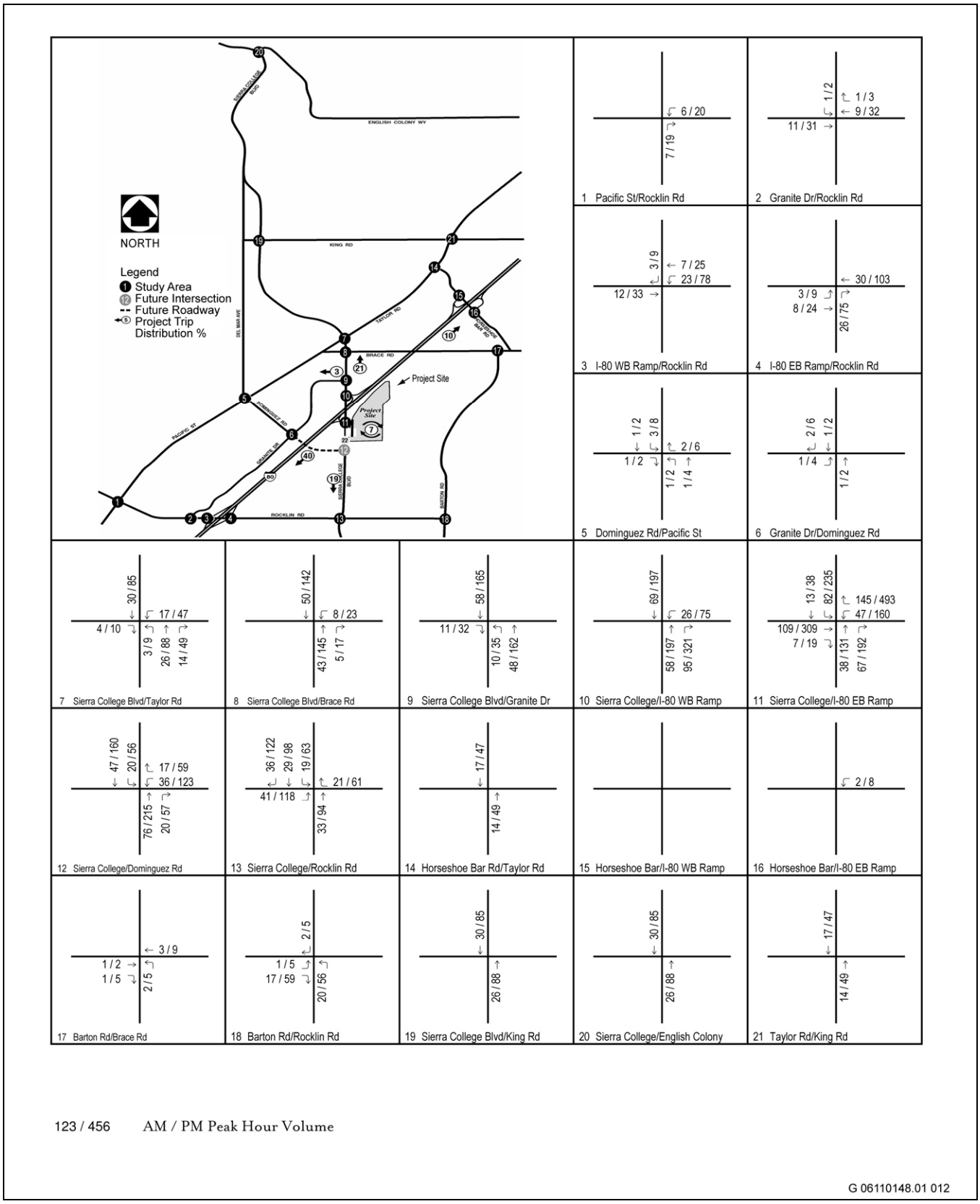
Many of the trips generated by a retail shopping center such as the proposed project would be pass-by trips, or trips whose primary destination is not the shopping center. These would include trips such as a work-to-home trip that stops at a retail center on the way. These trips would not be new trips generated by the project; rather, they are trips that are already on the roadway network that would make a stopover at the proposed shopping center. ITE's Trip Generation Handbook (2004) provides estimates of pass-by trip percentages for various types of land uses. The Trip Generation Handbook estimates pass-by trips to vary between 28 percent and 48 percent for the land uses shown in Table 4.2-3. Rather than apply the more aggressive trip reduction of 28 to 48 percent, a conservative estimate of 10 percent average pass-by trip reduction rate was applied to the trips generated by the entire retail center.

Project trips were distributed throughout the study area using the City's traffic analysis model. The select zone model assignments for the proposed project were used to obtain the trip distribution. The regional trip distribution percentages from the traffic model and the resulting project trips at each intersection are illustrated in Exhibits 4.2-5 and 4.2-6. It should be noted that the distribution percentages shown in the Exhibits are the generalized distribution for illustration only and do not reflect all project trips that may be destined within the study area. This interaction between land uses in the study area is reflected in the actual trip assignment volumes.

EXISTING PLUS PROJECT

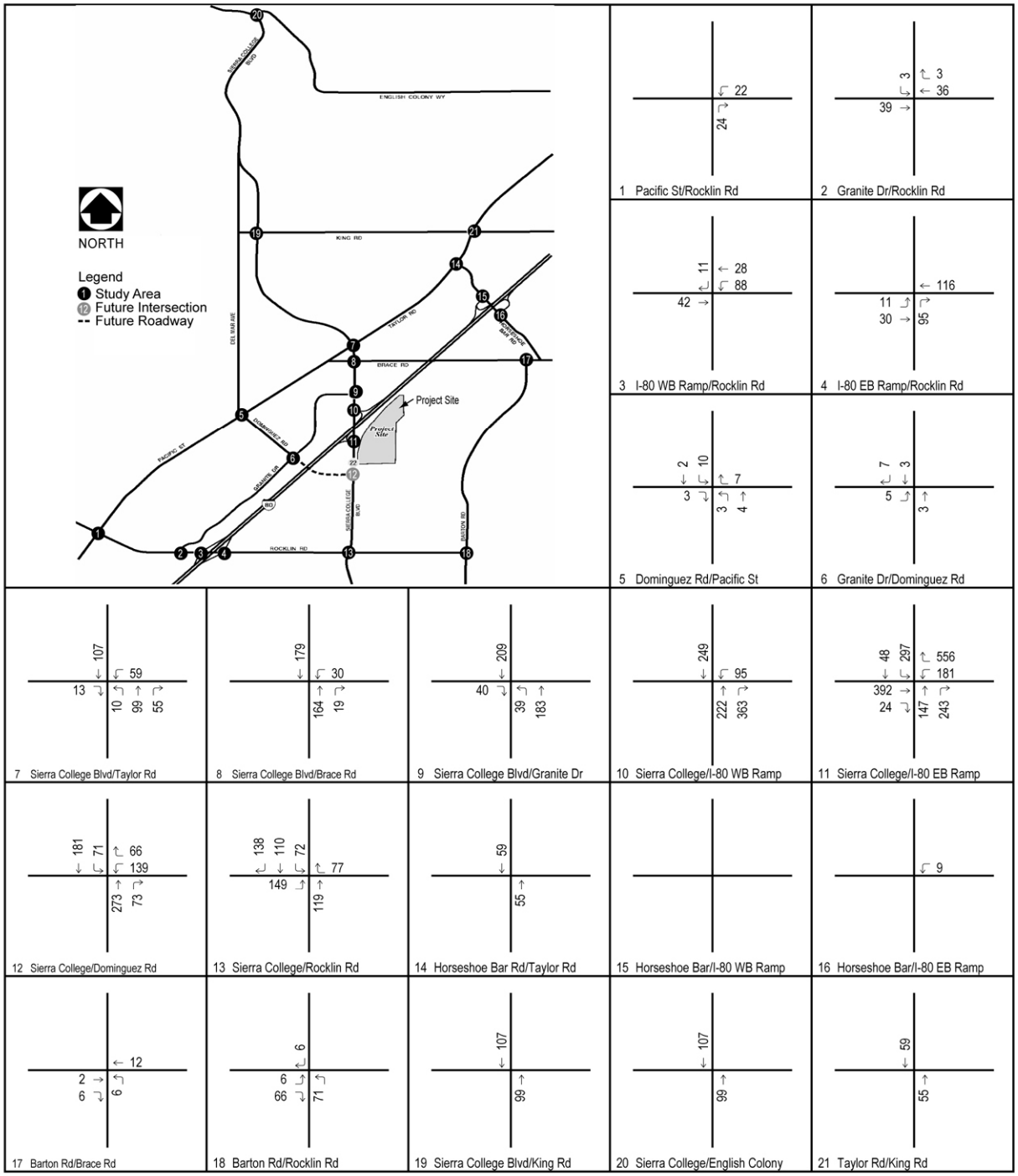
Traffic volumes generated by the proposed project were added to the existing traffic volumes and LOS were calculated for the existing plus project scenario. For purposes of making significance determinations, the EIR relies on the existing plus approved projects scenario. Because construction of the project would follow construction of other previously approved projects in the study area, the existing plus project conditions are not the real-world physical condition that the project would affect. However, an existing plus project condition has nevertheless been analyzed for disclosure purposes. The existing plus project weekday and Saturday peak-hour traffic volumes are illustrated in Exhibits 4.2-7 and 4.2-8. The LOS for study area intersections and roadway segments in the existing plus project scenario is shown in Tables 4.2-4 and 4.2-5. The existing plus project LOS worksheets are provided in Appendix C (identified as Appendix C within Appendix C). The short-term geometrics and traffic control for project scenarios are illustrated in Exhibit 4.2-9.

As shown in Table 4.2-4, the two intersections, Sierra College Boulevard/I-80 Eastbound Ramp and Taylor Road/Horseshoe Bar Road, that operate at LOS E in the existing condition would operate at LOS A and LOS F, respectively, with the addition of project traffic. The project would add more than 0.05 in the v/c ratio to the intersection of Sierra College Boulevard/I-80 Eastbound Ramp. However, as previously discussed, the City has initiated construction on a project to improve the I-80/Sierra College Boulevard interchange, which would mitigate this unsatisfactory LOS. The Rocklin Crossings project would be subject to the City's Traffic Fee and thus would contribute its fair share towards mitigating this impact. The intersection of Taylor Road/Horseshoe Bar Road is forecast to operate at LOS F (v/c = 1.029) in the existing plus project condition. The project would have a significant impact on the intersection of Taylor Road/Horseshoe Bar Road in the existing plus project condition.



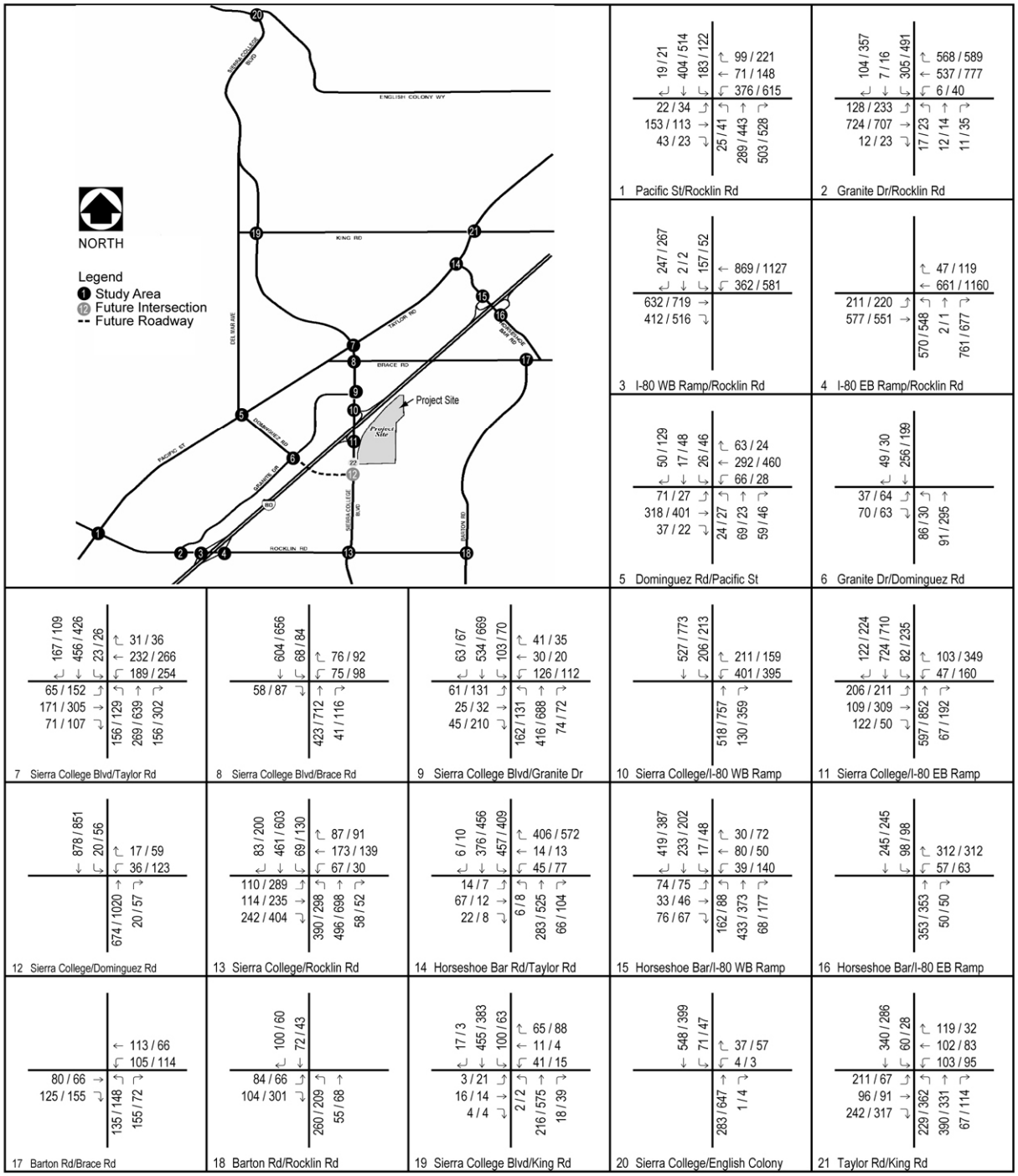
Source: LSA 2007

Project Trip Distribution and Peak Hour Project Trips **Exhibit 4.2-5**



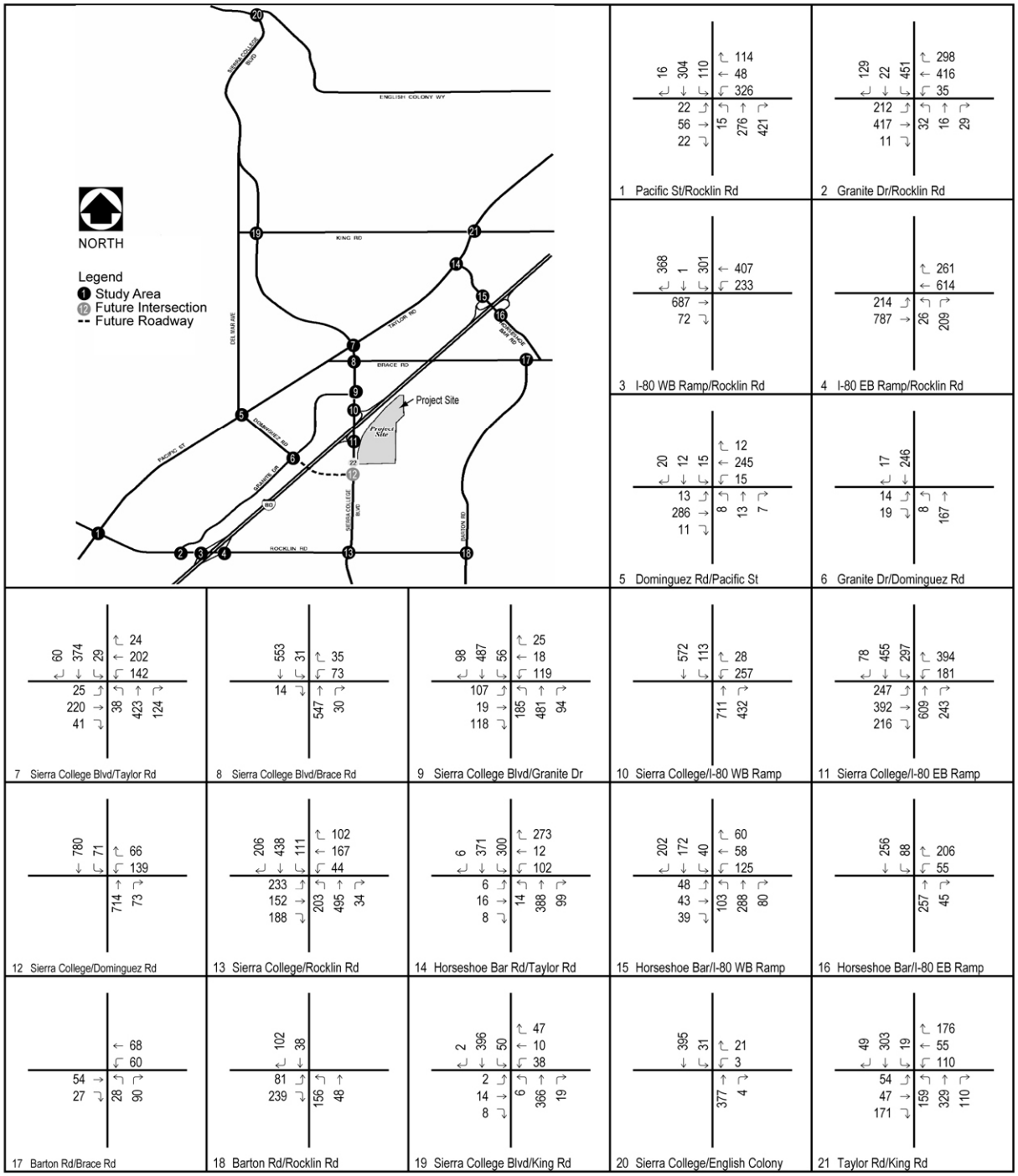
Source: LSA 2007

Saturday Peak Hour Project Trips **Exhibit 4.2-6**



Source: LSA 2007

Existing Plus Project Peak Hour Traffic Volumes **Exhibit 4.2-7**



Source: LSA 2007

Existing Plus Project Saturday Peak Hour Traffic Volumes **Exhibit 4.2-8**

Table 4.2-4
Existing Plus Project Peak Hour Intersection Level of Service Summary

Intersection		Existing Condition						Existing Plus Project Condition					
		AM Peak Hour		PM Peak Hour		Saturday		AM Peak Hour		PM Peak Hour		Saturday	
		V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS
1	Rocklin Road/Pacific Street [1]	0.734	C	0.709	C	0.453	A	0.741	C	0.728	C	0.475	A
2	Rocklin Road/Granite Drive	0.389	A	0.637	B	0.452	A	0.392	A	0.648	B	0.465	A
3	Rocklin Road/I-80 Westbound Ramps	0.663	B	0.834	D	0.534	A	0.680	B	0.891	D	0.614	B
4	Rocklin RoadI-80 Eastbound Ramps	0.716	C	0.757	C	0.433	A	0.729	C	0.815	D	0.504	A
5	Dominguez Road/Pacific Street 1	0.391	A	0.454	A	0.230	A	0.395	A	0.462	A	0.242	A
6	Dominguez Road/Granite Drive [1]	11.7 sec	B	11.9 sec	B	9.9 sec	A	11.8 sec	B	12.1 sec	B	10.2 sec	B
7	Sierra College Boulevard/Taylor Road (Loomis)	0.614	B	0.728	C	0.423	A	0.647	B	0.818	D	0.525	A
8	Sierra College Boulevard/Brace Road (Loomis)	0.440	A	0.522	A	0.295	A	0.477	A	0.630	B	0.416	A
9	Sierra College Boulevard/Granite Drive	0.521	A	0.534	A	0.384	A	0.566	A	0.681	B	0.561	A
10	Sierra College Boulevard/I-80 Westbound Ramps	0.740	C	0.747	C	0.575	A	0.320	A	0.360	A	0.254	A
11	Sierra College Boulevard/I-80 Eastbound Ramps	0.892	D	0.970	E	0.639	B	0.402	A	0.574	A	0.736	C
12	Sierra College Boulevard/Dominguez Road	-	-	-	-	-	-	-	-	-	-	-	-
13	Sierra College Boulevard/Rocklin Road [1]	0.591	A	0.660	B	0.443	A	0.650	B	0.786	C	0.672	B
14	Taylor Road/Horseshoe Bar Road (Loomis)	0.837	D	0.998	E	0.626	B	0.846	D	1.029	F	0.660	B
15	Horseshoe Bar Road/I-80 Westbound Ramps (Loomis)	0.392	A	0.369	A	0.310	A	0.392	A	0.369	A	0.310	A

Table 4.2-4
Existing Plus Project Peak Hour Intersection Level of Service Summary

	Intersection	Existing Condition						Existing Plus Project Condition					
		AM Peak Hour		PM Peak Hour		Saturday		AM Peak Hour		PM Peak Hour		Saturday	
		V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS
16	Horseshoe Bar Road/I-80 Eastbound Ramps (Loomis)	16.4 sec	C	16.0 sec	C	12.1 sec	B	16.4 sec	C	16.1 sec	C	12.3 sec	B
17	Barton Road/Brace Road [1] (Loomis)	16.1 sec	C	15.0 sec	C	9.5 sec	A	16.4 sec	C	15.5 sec	C	9.7 sec	A
18	Barton Road/Rocklin Road[1] (Loomis)	15.6 sec	C	10.9 sec	B	10.2 sec	B	16.3 sec	C	11.8 sec	B	11.1 sec	B
19	Sierra College Boulevard/King Road[1] (Loomis)	0.390	A	0.465	A	0.301	A	0.410	A	0.521	A	0.366	A
20	Sierra College Boulevard/English Colony Way [1] (Placer County)	10.9 sec	B	13.4 sec	B	10.5 sec	B	11.2 sec	B	14.8 sec	B	11.5 sec	B
21	Taylor Road/King Road[1] (Loomis)	0.600	A	0.602	B	0.407	A	0.606	B	0.618	B	0.428	A

Notes:
ICU V/C ratio is used for signalized intersections. HCM delay in seconds is used for unsignalized intersections.
[1] LOS C required for these intersections. LOS D acceptable for all other intersections.

(Shade) = Significant Impact

Exceeds level of service criteria

Table 4.2-5
Existing Plus Project Daily Roadway Segment Level of Service Summary

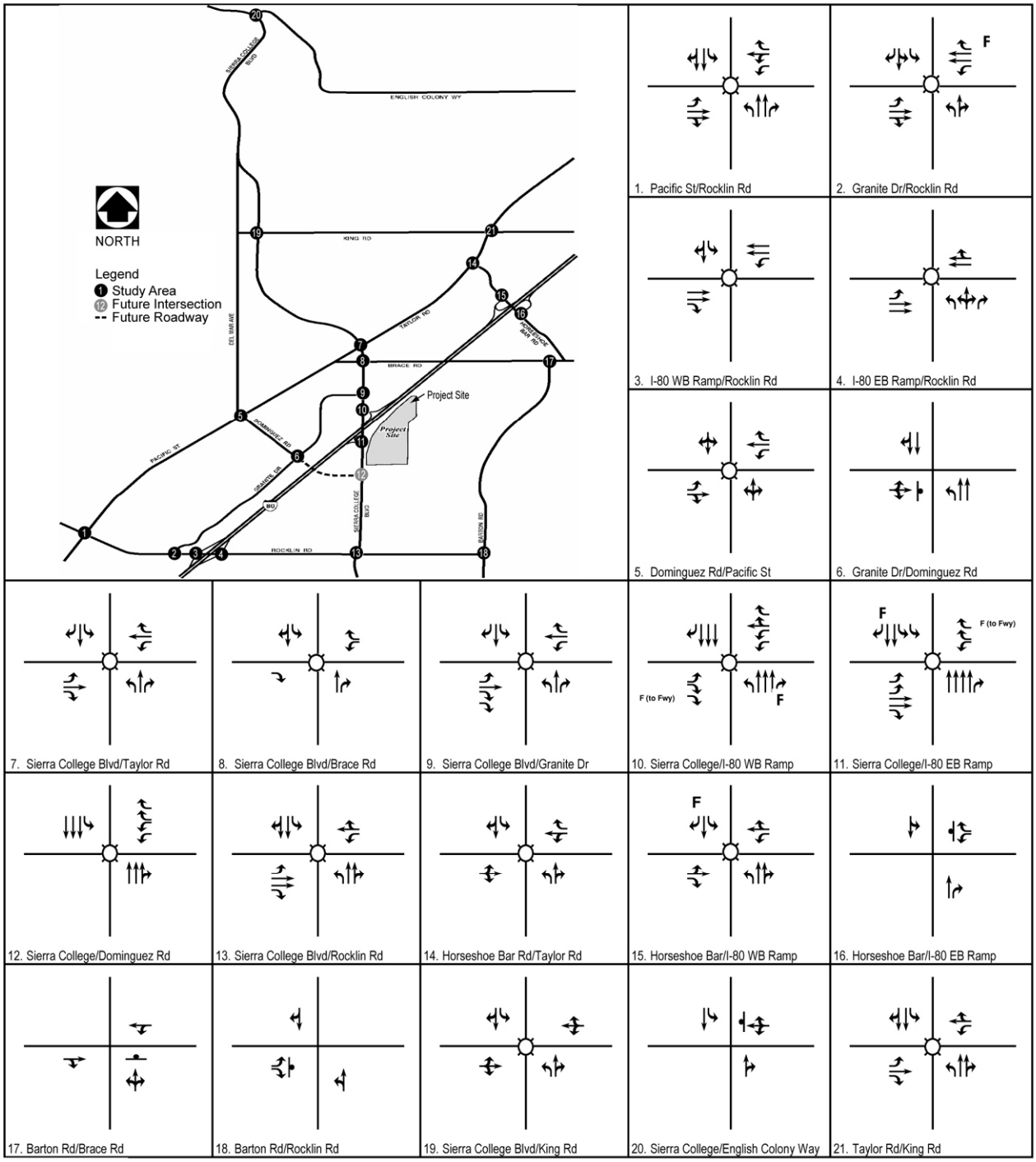
Roadway	Segment	Configuration	Capacity	Weekday			Saturday		
				Volume	V/C	LOS	Volume	V/C	LOS
Taylor Road	King Road and Horseshoe Bar Road [1] (Loomis)	Two-lane Collector	15,000	18,020	1.20	F	12,510	0.83	D
	Horseshoe Bar Road and Sierra College Boulevard[1] (Loomis)	Two-lane Collector	15,000	11,253	0.75	C	4,150	0.28	A
Pacific Street	Sierra College Boulevard and Dominguez Road [1]	Two-lane Collector	15,000	12,088	0.81	D	6,460	0.43	A
	Dominguez Road and Rocklin Road [1]	Four-lane Undivided Arterial	30,000	16,169	0.54	A	7,140	0.24	A
Rocklin Road	Pacific Street and Granite Drive	Four-lane	30,000	21,541	0.72	C	11,460	0.38	A

Table 4.2-5
Existing Plus Project Daily Roadway Segment Level of Service Summary

Roadway	Segment	Configuration	Capacity	Weekday			Saturday		
				Volume	V/C	LOS	Volume	V/C	LOS
		Undivided Arterial							
	I-80 and Sierra College Boulevard	Four-lane Undivided Arterial	30,000	11,649	0.39	A	14,970	0.50	A
	Sierra College Boulevard and Barton Road [1] (Loomis)	Two-lane Collector	15,000	6,396	0.43	A	5,440	0.36	A
Barton Road	Rocklin Road and Brace Road [1] (Loomis)	Two-lane Collector	15,000	3,944	0.26	A	2,700	0.18	A
Horseshoe Bar Road	I-80 and Brace Road (Loomis)	Two-lane Collector	15,000	6,151	0.41	A	6,520	0.43	A
Brace Road	I-80 and Barton Road [1] (Loomis)	Two-lane Collector	15,000	4,116	0.27	A	2,080	0.14	A
	I-80 and Sierra College Boulevard [1] (Loomis)	Two-lane Collector	15,000	3,408	0.23	A	560	0.04	A
Sierra College Boulevard	English Colony Way and King Road [1] (Placer County)	Two-lane Collector	15,000	11,330	0.76	C	8,630	0.58	A
	King Road and Taylor Road [1] (Loomis)	Two-lane Collector	15,000	12,860	0.86	D	9,860	0.66	B
	Taylor Road and I-80	Two-lane Collector	15,000	20,986	1.40	F	12,740	0.85	D
	I-80 and Dominguez Road	Four-lane Undivided Arterial	30,000	22,345	0.74	C	20,630	0.69	B
	Dominguez Road and Rocklin Road [1]	Two-lane Collector	15,000	16,995	1.13	F	15,330	1.02	F
Granite Drive	Dominguez Road and Sierra College Boulevard [1]	Four-lane Undivided Arterial	30,000	6,198	0.21	A	4,380	0.15	A
	Dominguez Road and Rocklin Road [1]	Four-lane Undivided Arterial	30,000	8,318	0.28	A	7,930	0.26	A
Dominguez Road	Taylor Road and Granite Drive [1]	Two-lane Collector	15,000	2,482	0.17	A	620	0.04	A
King Road	Sierra College Boulevard and Taylor Road [1] (Loomis)	Two-lane Collector	15,000	5,610	0.37	A	3,460	0.23	A

Notes:
[1] LOS C required for these segments. LOS D acceptable for all other segments.
Exceeds level of service criteria

Exceeds level of service criteria



Source: LSA 2007

Short-Term Geometrics and Traffic Control **Exhibit 4.2-9**

As shown in Table 4.2-5, most of the study area roadway segments are forecast to operate within their daily roadway capacities in the existing plus project condition except for the following five segments:

- Taylor Road between King Road and Horseshoe Bar Road (Loomis)
- Pacific Street between Sierra College Boulevard and Dominguez Road
- Sierra College Boulevard between King Road and Taylor Road
- Sierra College Boulevard between Taylor Road and I-80
- Sierra College Boulevard between Dominguez Road and Rocklin Road

A directional peak-hour roadway segment analysis was prepared for these five segments and is shown in Table 4.2-6. In a.m., p.m. and Saturday peak hours, the five affected roadway segments would operate at LOS A or B. Because the roadway segments would operate with satisfactory LOS during the peak hour of roadway traffic, they are not significantly affected by the project.

Table 4.2-6
Existing plus Project Peak Hour Roadway Segment Level of Service Summary

Roadway	Segment	Capacity	Existing			Existing + Project		
			Volume	V/C	LOS	Volume	V/C	LOS
Taylor Road	**King Rd and Horseshoe Bar Rd (Loomis)**							
	A.M. Peak Hour Northbound	1,650	426	0.26	A	443	0.27	A
	A.M. Peak Hour Southbound	1,650	706	0.43	A	720	0.44	A
	Total A.M. Peak Hour	3,300	1,132	0.34	A	1,163	0.35	A
	P.M Peak Hour Northbound	1,650	494	0.30	A	541	0.33	A
	P.M Peak Hour Southbound	1,650	588	0.36	A	637	0.39	A
	Total P.M. Peak Hour	3,300	1,082	0.33	A	1,178	0.36	A
	SAT Peak Hour Northbound	1,650	422	0.26	A	481	0.29	A
	SAT Peak Hour Southbound	1,650	504	0.31	A	559	0.34	A
	Total SAT Peak Hour	3,300	926	0.28	A	1,040	0.32	A
Pacific Street	**Sierra College Blvd and Dominguez Rd**							
	A.M. Peak Hour Northbound	1,650	435	0.26	A	452	0.27	A
	A.M. Peak Hour Southbound	1,650	425	0.26	A	426	0.26	A
	Total A.M. Peak Hour	3,300	860	0.26	A	878	0.27	A
	P.M Peak Hour Northbound	1,650	614	0.37	A	616	0.37	A
	P.M Peak Hour Southbound	1,650	584	0.35	A	633	0.38	A
	Total P.M. Peak Hour	3,300	1,198	0.36	A	1,249	0.38	A
Pacific Street	SAT Peak Hour Northbound	1,650	309	0.19	A	368	0.22	A
continued	SAT Peak Hour Southbound	1,650	318	0.19	A	373	0.23	A
	Total SAT Peak Hour	3,300	627	0.19	A	741	0.22	A

Table 4.2-6
Existing plus Project Peak Hour Roadway Segment Level of Service Summary

Roadway	Segment	Capacity	Existing			Existing + Project		
			Volume	V/C	LOS	Volume	V/C	LOS
Sierra College Boulevard	**King Rd and Taylor Rd (Loomis)**							
	A.M. Peak Hour Northbound	1,650	665	0.40	A	716	0.43	A
	A.M. Peak Hour Southbound	1,650	538	0.33	A	581	0.35	A
	Total A.M. Peak Hour	3,300	1,203	0.36	A	1,297	0.39	A
	P.M Peak Hour Northbound	1,650	645	0.39	A	787	0.48	A
	P.M Peak Hour Southbound	1,650	924	0.56	A	1,070	0.65	B
	Total P.M. Peak Hour	3,300	1,569	0.48	A	1,857	0.56	A
	SAT Peak Hour Northbound	1,650	378	0.23	A	557	0.34	A
	SAT Peak Hour Southbound	1,650	421	0.26	A	585	0.35	A
	Total SAT Peak Hour	3,300	799	0.24	A	1,142	0.35	A
Sierra College Boulevard	**Taylor Rd and I-80**							
	A.M. Peak Hour Northbound	1,650	594	0.36	A	705	0.43	A
	A.M. Peak Hour Southbound	1,650	636	0.39	A	652	0.40	A
	Total A.M. Peak Hour	3,300	1,230	0.37	A	1,357	0.41	A
	P.M Peak Hour Northbound	1,650	794	0.48	A	991	0.60	A
	P.M Peak Hour Southbound	1,650	694	0.42	A	891	0.54	A
	Total P.M. Peak Hour	3,300	1,488	0.45	A	1,882	0.57	A
	SAT Peak Hour Northbound	1,650	475	0.29	A	760	0.46	A
	SAT Peak Hour Southbound	1,650	538	0.33	A	724	0.44	A
	Total SAT Peak Hour	3,300	1,013	0.31	A	1,484	0.45	A
Sierra College Boulevard	**Dominguez Rd and Rocklin Rd**							
	A.M. Peak Hour Northbound	1,650	831	0.50	A	944	0.57	A
	A.M. Peak Hour Southbound	1,650	911	0.55	A	770	0.47	A
	Total A.M. Peak Hour	3,300	1,742	0.53	A	1,714	0.52	A
	P.M Peak Hour Northbound	1,650	939	0.57	A	1,037	0.63	A
	P.M Peak Hour Southbound	1,650	954	0.58	A	1,079	0.65	A
	Total P.M. Peak Hour	3,300	1,893	0.57	A	2,116	0.64	A
	SAT Peak Hour Northbound	1,650	599	0.36	A	851	0.52	A
	SAT Peak Hour Southbound	1,650	613	0.37	A	780	0.47	A
	Total SAT Peak Hour	3,300	1,212	0.37	A	1,631	0.49	A

These numbers come from the Traffix Link Volume Report Total Link Volume.

EXISTING PLUS APPROVED PROJECTS (BASELINE)

Existing plus Approved Projects (Baseline) Traffic Volumes

To identify traffic conditions that could be expected at the time of project opening, an existing plus approved projects (baseline) scenario was developed. The City provided a list of approved projects in the vicinity of the project. The approved projects include interchange improvements at I-80 and Sierra College Boulevard, as the interchange improvements have been approved, are fully funded and are under construction. The approved projects do not include the proposed Dominguez Road extension. The approved projects list is provided in Appendix C (identified as Appendix D within Appendix C). Traffic volumes for approved projects were determined by applying the trip generation rates from the ITE Trip Generation, 7th Edition, to the approved land uses. Vehicle trips from approved projects were distributed to the study area intersections based on the location of the approved projects in relation to other land uses and local and regional transportation networks. The locations of the approved projects and trip distribution are illustrated in Exhibit 4.2-10. The approved projects and their respective trip generation are shown in Table 4.2-7.

EXISTING PLUS APPROVED PROJECTS (BASELINE) LEVELS OF SERVICE

Traffic from the approved projects was added to the existing traffic counts and LOS were calculated for the existing plus approved projects scenario. Existing plus approved projects weekday peak-hour and Saturday traffic volumes are illustrated in Exhibits 4.2-11 and 4.2-12. The LOS for study area intersections and roadway segments in the existing plus approved projects scenario are shown in Tables 4.2-8 and 4.2-9. The existing plus approved projects LOS worksheets are provided in Appendix C (identified as Appendix E within Appendix C).

As shown in Table 4.2-8, the following five intersections are operating at an unsatisfactory LOS in the existing plus approved projects condition:

- Rocklin Road/Pacific Street
- Rocklin Road/I-80 westbound ramps
- Rocklin Road/I-80 eastbound ramps
- Sierra College Boulevard/Rocklin Road
- Taylor Road/Horseshoe Bar Road (Loomis)

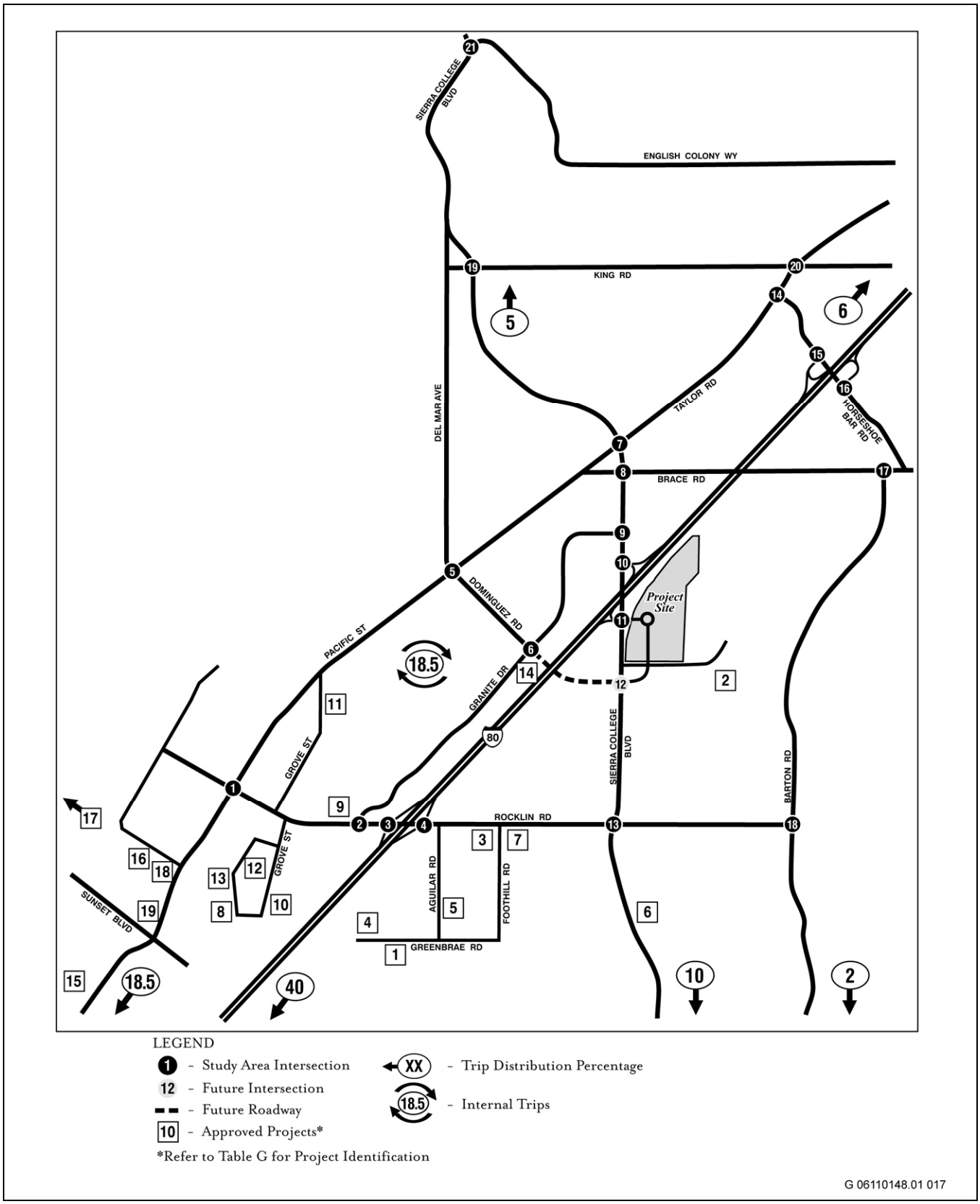
As shown in Table 4.2-9, most of the study area roadway segments are forecast to operate within their daily roadway capacities except for the following three segments:

- Taylor Road between King Road and Horseshoe Bar Road (Loomis)
- Sierra College Boulevard between Taylor Road and I-80
- Sierra College Boulevard between Dominguez Road and Rocklin Road

These segments would exceed the threshold of daily capacity in the existing plus approved projects (baseline) scenario. However, in the a.m., p.m. and Saturday peak hours, all affected segments are forecast to operate with satisfactory v/c ratios, as shown in Table 4.2-10.

EXISTING PLUS APPROVED PROJECTS (BASELINE) PLUS PROJECT

Traffic volumes generated by the proposed project were added to the existing plus approved projects (baseline) traffic volumes and LOS were calculated for the existing plus approved projects (baseline) plus project scenario. The existing plus approved projects (baseline) plus project weekday and Saturday peak-hour traffic volumes are illustrated in Exhibits 4.2-13 and 4.2-14. The LOS for study area intersections and roadway segments in the existing plus approved projects plus project scenario are shown in Tables 4.2-11 and 4.2-12. The existing plus approved projects plus project LOS worksheets are provided in Appendix C (identified as Appendix F within Appendix C). The LOS for the existing plus approved projects (baseline) plus project condition assumes the reconstruction of the I-80/Sierra College Boulevard interchange (Exhibit 4.2-9), as the interchange improvements have been approved, are fully funded and are under construction.

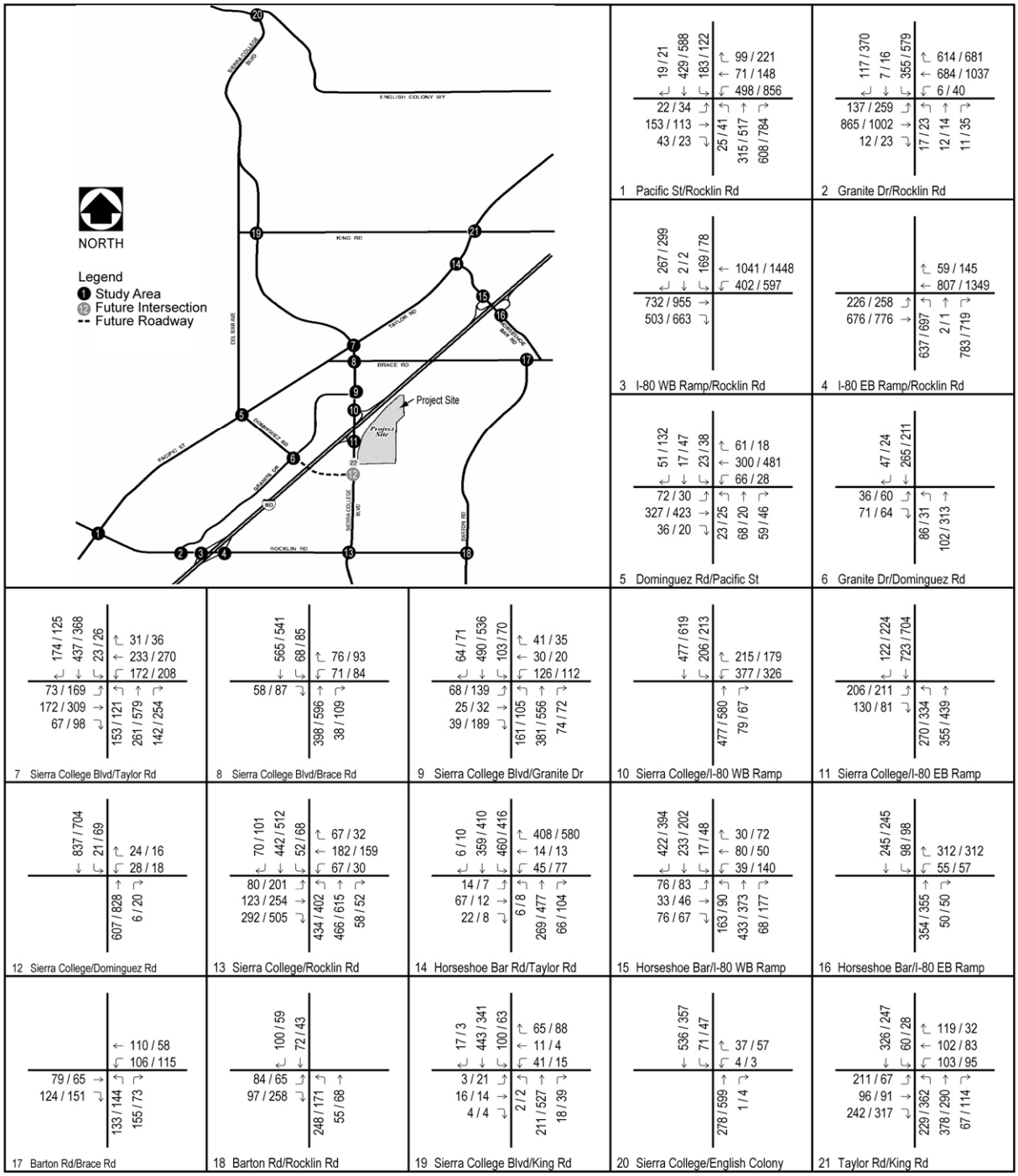


Source: LSA 2007

Location of Approved Projects **Exhibit 4.2-10**

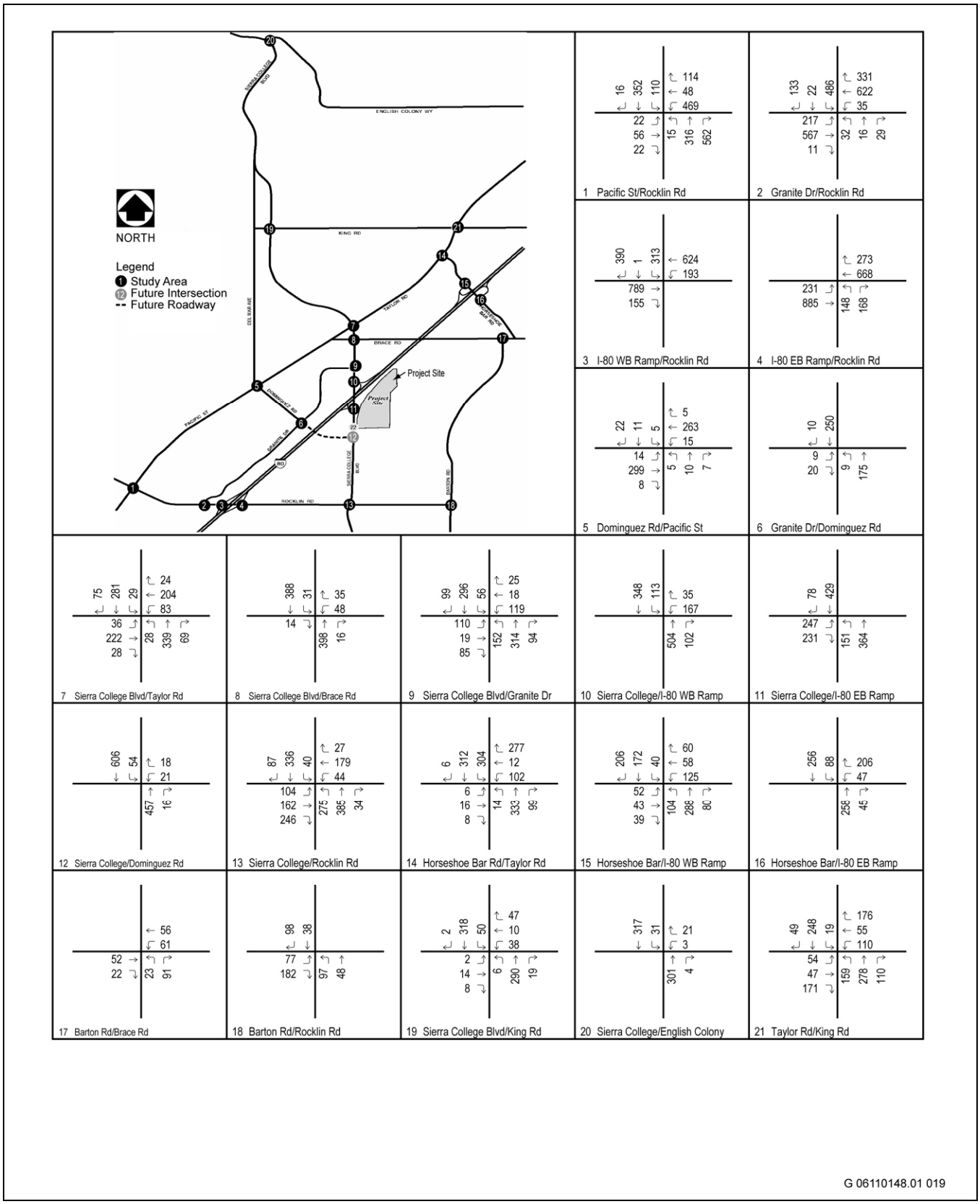
Table 4.2-7
Trip Generation of Approved Projects

No.	Project No.	Description	Landuse (ITE Code)	Size		AM Peak Hour			PM Peak Hour			Saturday Peak Hour		
						In	Out	Total	In	Out	Total	In	Out	Total
Southeast Rocklin (Map Sheet 8)														
2	1	Granite Lake Estates	Single Family Detached Housing (210)	119	du	23	70	93	79	46	125	60	51	112
19	2	Croftwood, Unit 1	Single Family Detached Housing (210)	156	du	30	89	119	101	59	160	79	67	147
22	3	Rocklin Sierra Plaza	Shopping Center (820)	31.60	ksf	78	30	108	140	153	293	82	75	157
29	4	Bender Insurance Office Building	Bender Insurance Office Building	14.75	ksf	10	31	41	60	35	95	3	3	6
37	5	Bramblewood Estates	Single Family Detached Housing (210)	2	du	3	8	11	2	1	3	1	1	2
38	6	Sunrise Assisted Living	Sunrise Assisted Living	48	ksf	6	3	9	7	7	14	12	14	26
43	7	Rocklin Executive Office Park	Office Park (710)	21	ksf	27	27	54	51	51	102	5	4	9
2	8	Villages	Single Family Detached Housing (210)	65	du	14	41	55	46	27	73	33	28	61
56	9	Granite Business Center	General Office Building (710)	16.60	ksf	39	6	45	17	80	97	4	3	7
59	10	Rocklin Mobile Home Park Addition	Mobile Home Park (240)	21	du	4	14	18	9	5	14	6	5	11
60	11	Holy Cross Lutheran Church	Church (560)	40.63	ksf	16	13	29	14	13	27	102	42	144
65	12	Winding Lane Estates	Single Family Detached Housing (210)	26	du	7	21	28	20	12	32	13	11	24
69	13	Samoylovich Estates	Single Family Detached Housing (210)	4	du	7	5	12	3	3	6	2	2	4
76	14	Granite Drive Retail/Office	Office (710)	22	ksf	14	42	56	65	38	103	5	4	9
51	15	Rocklin 94	Residential Condominium (230)	94	du	8	41	49	38	19	57	24	20	44
3	16	Colish Subdivision	Single Family Detached Housing (210)	8	du	4	11	15	7	4	11	4	3	8
7	17	Community Covenant Church	Church (560)	11.78	ksf	1	0	1	1	0	1	30	12	42
28	18	Rocklin Retail Center	Shopping Center (820)	19.5	ksf	36	23	59	102	111	213	50	47	97
37	19	Pacific Center Retail Center	Shopping Center (820)	32.2	ksf	48	31	79	142	154	296	83	77	160
Total						375	506	881	904	818	1,722	598	470	1,068



Source: LSA 2007

Existing Plus Approved Projects (Baseline) Peak Hour Traffic Volumes **Exhibit 4.2-11**



Source: LSA 2007

Existing Plus Approved Projects (Baseline) Saturday Peak Hour Traffic Volumes **Exhibit 4.2-12**

Table 4.2-8
Existing Plus Approved Projects (Baseline) Condition Intersection Level of Service Summary

	Intersection	Existing Plus Approved Condition					
		AM Peak Hour		PM Peak Hour		Saturday	
		V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS
1	Rocklin Road/Pacific Street [1]	0.866	D	0.978	E	0.610	B
2	Rocklin Road/Granite Drive	0.465	A	0.757	C	0.547	A
3	Rocklin Road/I-80 Westbound Ramps	0.780	C	1.018	F	0.633	B
4	Rocklin Road/I-80 Eastbound Ramps	0.823	D	0.946	E	0.549	A
5	Dominguez Road/Pacific Street [1]	0.397	A	0.472	A	0.241	A
6	Dominguez Road/Granite Drive [1]	11.8 sec	B	12.2 sec	B	9.9 sec	A
7	Sierra College Boulevard/Taylor Road (Loomis)	0.622	B	0.750	C	0.434	A
8	Sierra College Boulevard/Brace Road (Loomis)	0.449	A	0.547	A	0.307	A
9	Sierra College Boulevard/Granite Drive	0.536	A	0.568	A	0.402	A
10	Sierra College Boulevard/I-80 Westbound Ramps	0.299	A	0.301	A	0.179	A
11	Sierra College Boulevard/I-80 Eastbound Ramps	0.335	A	0.315	A	0.323	A
12	Sierra College Boulevard/Dominguez Road	-	-	-	-	-	-
13	Sierra College Boulevard/Rocklin Road [1]	0.661	B	0.802	D	0.521	A
14	Taylor Road/Horseshoe Bar Road (Loomis)	0.840	D	1.008	F	0.631	B
15	Horseshoe Bar Road/I-80 Westbound Ramps (Loomis)	0.394	A	0.375	A	0.313	A
16	Horseshoe Bar Road/I-80 Eastbound Ramps (Loomis)	16.4 sec	C	16.1 sec	C	12.2 sec	B
17	Barton Road/Brace Road [1] (Loomis)	16.2 sec	C	15.2 sec	C	9.5 sec	A
18	Barton Road/Rocklin Road [1] (Loomis)	15.9 sec	C	11.2 sec	B	10.3 sec	B
19	Sierra College Boulevard/King Road [1] (Loomis)	0.402	A	0.490	A	0.316	A
20	Sierra College Boulevard/English Colony Way [1] (Placer County)	11.1 sec	B	14.0 sec	B	10.7 sec	B
21	Taylor Road/King Road 1 (Loomis)	0.601	B	0.604	B	0.409	A

Notes:
ICU V/C ratio is used for signalized intersections. HCM delay in seconds is used for unsignalized intersections.
[1] LOS C required for these intersections. LOS D acceptable for all other intersections.

Exceeds level of service criteria

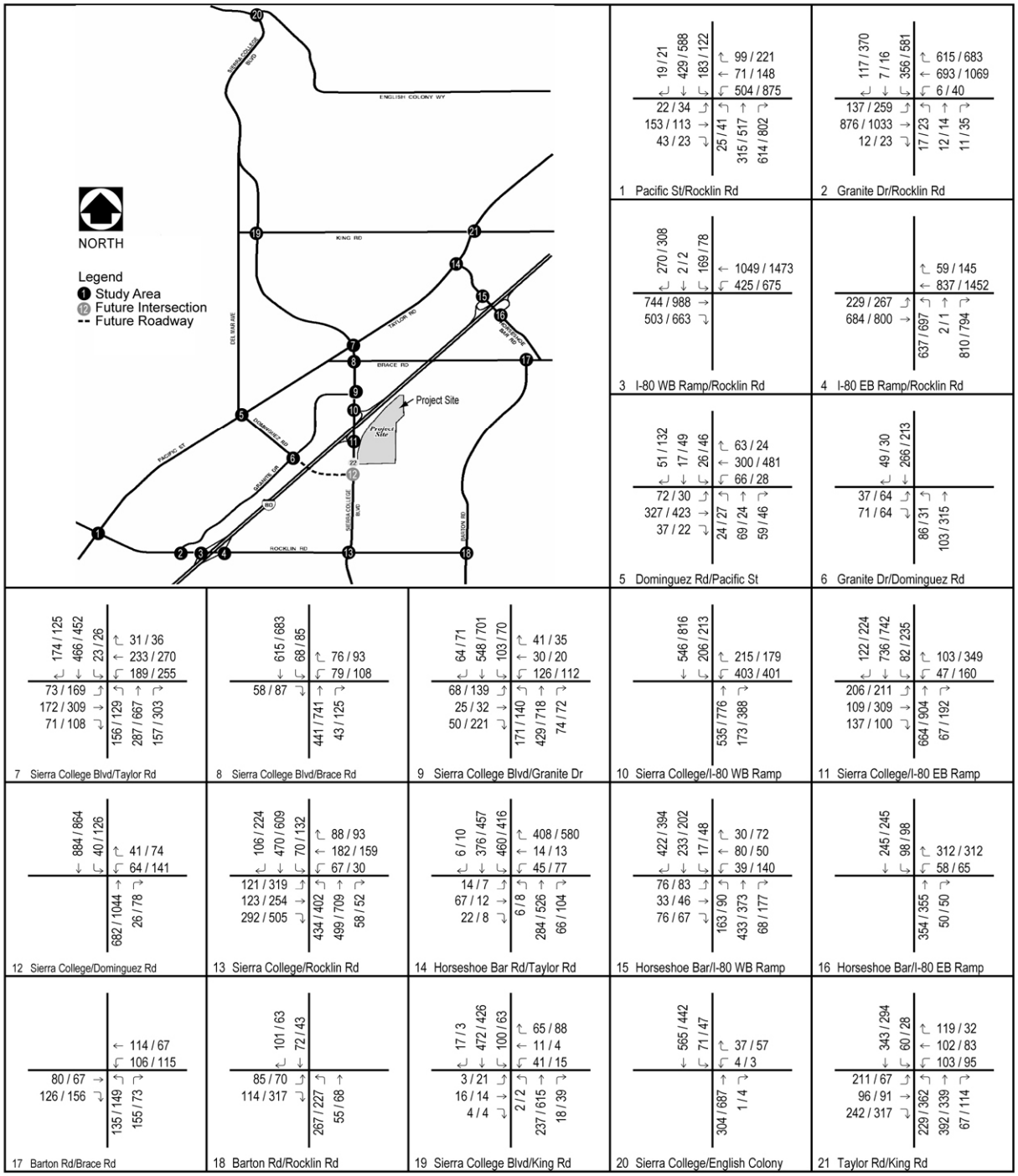
Table 4.2-9
Existing Plus Approved Projects (Baseline) Daily Roadway Segment Level of Service Summary

Roadway	Segment	Configuration	Capacity	Weekday			Saturday		
				Volume	V/C	LOS	Volume	V/C	LOS
Taylor Road	King Road and Horseshoe Bar Road [1] (Loomis)	Two-lane Collector	15,000	17,150	1.14	F	11,410	0.76	C
	Horseshoe Bar Road and Sierra College Boulevard [1] (Loomis)	Two-lane Collector	15,000	10,973	0.73	C	3,710	0.25	A
Pacific Street	Sierra College Boulevard and Dominguez Road [1]	Two-lane Collector	15,000	11,868	0.79	C	6,100	0.41	A
	Dominguez Road and Rocklin Road [1]	Four-lane Undivided Arterial	30,000	19,459	0.65	B	9,080	0.30	A
Rocklin Road	Pacific Street and Granite Drive	Four-lane Undivided Arterial	30,000	25,371	0.85	D	13,310	0.44	A
	I-80 and Sierra College Boulevard	Four-lane Undivided Arterial	30,000	14,599	0.49	A	16,120	0.54	A
	Sierra College Boulevard and Barton Road [1] (Loomis)	Two-lane Collector	15,000	6,646	0.44	A	5,090	0.34	A
Barton Road	Rocklin Road and Brace Road [1] (Loomis)	Two-lane Collector	15,000	3,514	0.23	A	2,130	0.14	A
Horseshoe Bar Road	I-80 and Brace Road (Loomis)	Two-lane Collector	15,000	6,141	0.41	A	6,490	0.43	A
Brace Road	I-80 and Barton Road [1] (Loomis)	Two-lane Collector	15,000	4,046	0.27	A	1,960	0.13	A
	I-80 and Sierra College Boulevard [1] (Loomis)	Two-lane Collector	15,000	3,408	0.23	A	560	0.04	A
Sierra College Boulevard	English Colony Way and King Road [1] (Placer County)	Two-lane Collector	15,000	10,430	0.70	B	7,090	0.47	A
	King Road and Taylor Road [1] (Loomis)	Two-lane Collector	15,000	11,250	0.75	C	7,450	0.50	A
	Taylor Road and I-80	Two-lane Collector	15,000	18,296	1.22	F	9,010	0.60	B
	I-80 and Dominguez Road	Four-lane Undivided Arterial	30,000	14,105	0.47	A	11,210	0.37	A
	Dominguez Road and Rocklin Road [1]	Two-lane Collector	15,000	14,745	0.98	E	11,840	0.79	C
Granite Drive	Dominguez Road and Sierra College Boulevard [1]	Four-lane Undivided Arterial	30,000	6,328	0.21	A	4,430	0.15	A
	Dominguez Road and Rocklin Road [1]	Four-lane Undivided Arterial	30,000	8,458	0.28	A	7,960	0.27	A
Dominguez Road	Taylor Road and Granite Drive [1]	Two-lane Collector	15,000	2,422	0.16	A	530	0.04	A
King Road	Sierra College Boulevard and Taylor Road [1] (Loomis)	Two-lane Collector	15,000	5,610	0.37	A	3,460	0.23	A

Notes:
ICU V/C ratio is used for signalized intersections. HCM delay in seconds is used for unsignalized intersections.
[1] LOS C required for these intersections. LOS D acceptable for all other intersections.
Exceeds level of service criteria

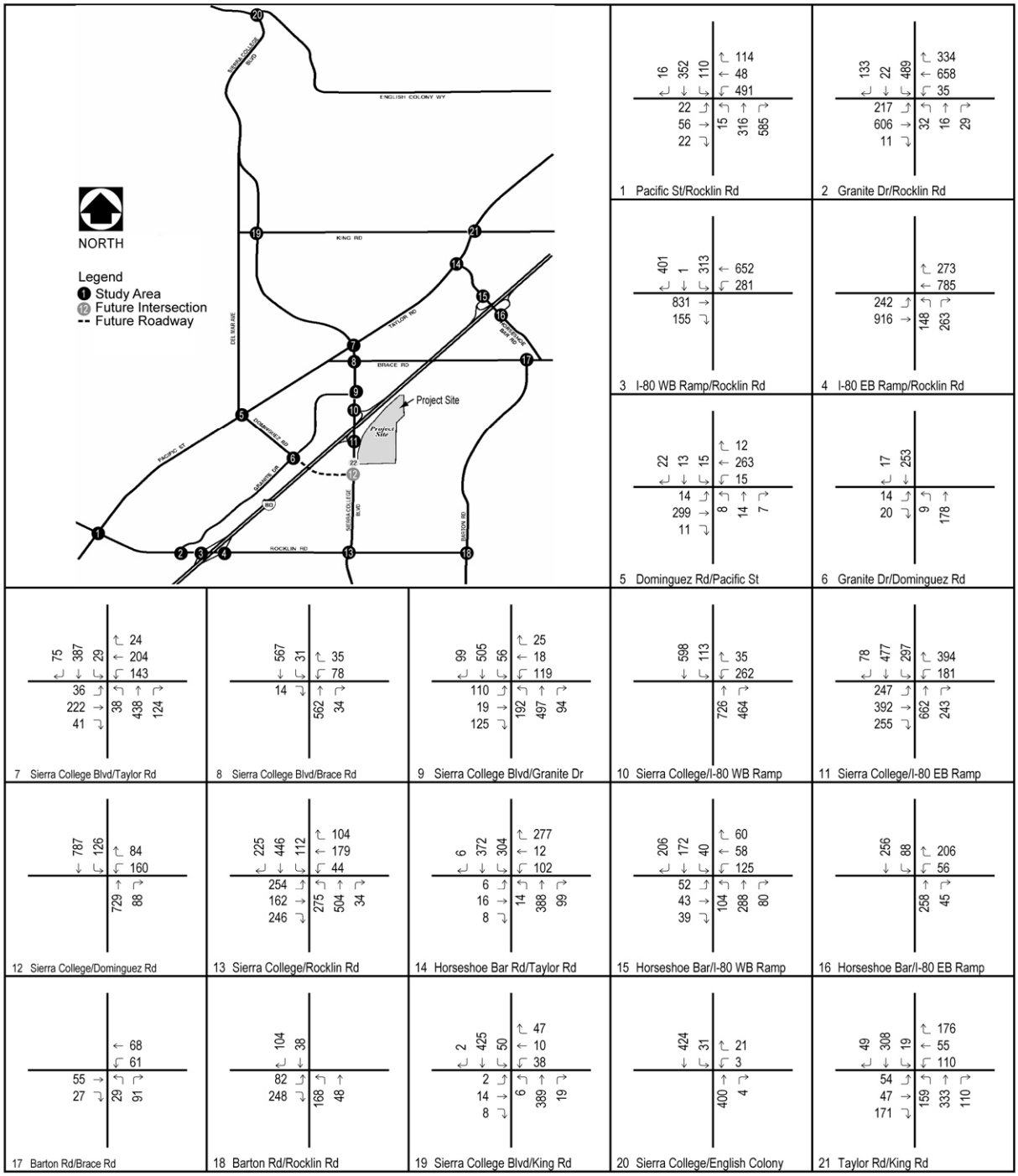
Table 4.2-10
Existing Plus Approved Projects (Baseline) Peak Hour Roadway Segment Level of Service Summary

Roadway	Segment	Capacity	Existing + Approved			Existing + Approved + Project		
			Volume	V/C	LOS	Volume	V/C	LOS
Taylor Road	**King Rd and Horseshoe Bar Rd (Loomis)**							
	A.M. Peak Hour Northbound	1,650	426	0.26	A	443	0.27	A
	A.M. Peak Hour Southbound	1,650	708	0.43	A	722	0.44	A
	Total A.M. Peak Hour	3,300	1,134	0.34	A	1,165	0.35	A
	P.M Peak Hour Northbound	1,650	495	0.30	A	638	0.39	A
	P.M Peak Hour Southbound	1,650	589	0.36	A	542	0.33	A
	Total P.M. Peak Hour	3,300	1,084	0.33	A	1,180	0.36	A
	SAT Peak Hour Northbound	1,650	422	0.26	A	482	0.29	A
	SAT Peak Hour Southbound	1,650	508	0.31	A	563	0.34	A
	Total SAT Peak Hour	3,300	930	0.28	A	1,045	0.32	A
Sierra College Boulevard	**Taylor Rd and I-80**							
	A.M. Peak Hour Northbound	1,650	655	0.40	A	724	0.44	A
	A.M. Peak Hour Southbound	1,650	616	0.37	A	674	0.41	A
	Total A.M. Peak Hour	3,300	1,271	0.39	A	1,398	0.42	A
	P.M Peak Hour Northbound	1,650	837	0.51	A	1,034	0.63	B
	P.M Peak Hour Southbound	1,650	733	0.44	A	930	0.56	A
	Total P.M. Peak Hour	3,300	1,570	0.48	A	1,964	0.60	A
	SAT Peak Hour Northbound	1,650	500	0.30	A	749	0.45	A
	SAT Peak Hour Southbound	1,650	560	0.34	A	783	0.47	A
	Total SAT Peak Hour	3,300	1,060	0.32	A	1,532	0.46	A
Sierra College Boulevard	**Dominguez Rd and Rocklin Rd**							
	A.M. Peak Hour Northbound	1,650	865	0.52	A	924	0.56	A
	A.M. Peak Hour Southbound	1,650	958	0.58	A	991	0.60	A
	Total A.M. Peak Hour	3,300	1,823	0.55	A	1,915	0.58	A
	P.M Peak Hour Northbound	1,650	1,047	0.63	B	1,144	0.69	B
	P.M Peak Hour Southbound	1,650	1,069	0.65	B	1,163	0.70	C
	Total P.M. Peak Hour	3,300	2,116	0.64	B	2,307	0.70	B
	SAT Peak Hour Northbound	1,650	660	0.40	A	482	0.29	A
	SAT Peak Hour Southbound	1,650	694	0.42	A	501	0.30	A
	Total SAT Peak Hour	3,300	1,354	0.41	A	983	0.30	A



Source: LSA 2007

Existing Plus Approved Projects (Baseline)
Plus Project Peak Hour Traffic Volumes **Exhibit 4.2-13**



Source: LSA 2007

Existing Plus Approved Projects (Baseline)
Plus Project Saturday Peak Hour Traffic Volumes **Exhibit 4.2-14**

As shown in Table 4.2-11, the following five intersections are forecast to operate at unsatisfactory LOS in the existing plus approved projects (baseline) plus project scenario:

- Rocklin Road/Pacific Street
- Rocklin Road/I-80 westbound ramps
- Rocklin Road/I-80 eastbound ramps
- Sierra College Boulevard/Rocklin Road
- Taylor Road/Horseshoe Bar Road (Loomis)

Table 4.2-11
Existing Plus Approved Projects (Baseline) Plus Project Condition
Intersection Level of Service Summary

Intersection		Existing Plus Approved Condition						Existing Plus Approved Plus Project Condition					
		AM Peak Hour		PM Peak Hour		Saturday		AM Peak Hour		PM Peak Hour		Saturday	
		V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS
1	Rocklin Road/ Pacific Street [1]	0.866	D	0.978	E	0.610	B	0.872	D	0.997	E [2]	0.632	B
2	Rocklin Road/ Granite Drive	0.465	A	0.757	C	0.547	A	0.469	A	0.767	C	0.559	A
3	Rocklin Road/I-80 Westbound Ramps	0.780	C	1.018	F	0.633	B	0.797	C	1.075	F	0.711	C
4	Rocklin RoadI-80 Eastbound Ramps	0.823	D	0.946	E	0.549	A	0.843	D	1.000	F	0.619	B
5	Dominguez Road/Pacific Street [1]	0.397	A	0.472	A	0.241	A	0.401	A	0.479	A	0.253	A
6	Dominguez Road/Granite Drive [1]	11.8 sec	B	12.2 sec	B	9.9 sec	A	11.9 sec	B	12.4 sec	B	10.3 sec	B
7	Sierra College Boulevard/Taylor Road (Loomis)	0.622	B	0.750	C	0.434	A	0.655	B	0.840	D	0.537	A
8	Sierra College Boulevard/Brace Road (Loomis)	0.449	A	0.547	A	0.307	A	0.487	A	0.655	B	0.429	A
9	Sierra College Boulevard/Granite Drive	0.536	A	0.568	A	0.402	A	0.583	A	0.713	C	0.580	A
10	Sierra College Boulevard/I-80 Westbound Ramps	0.299	A	0.301	A	0.179	A	0.325	A	0.372	A	0.267	A
11	Sierra College Boulevard/I-80 Eastbound Ramps	0.335	A	0.315	A	0.323	A	0.414	A	0.589	A	0.764	C
12	Sierra College Boulevard/Dominguez Road	-	-	-	-	-	-	-	-	-	-	-	-

Table 4.2-11
Existing Plus Approved Projects (Baseline) Plus Project Condition
Intersection Level of Service Summary

	Intersection	Existing Plus Approved Condition						Existing Plus Approved Plus Project Condition					
		AM Peak Hour		PM Peak Hour		Saturday		AM Peak Hour		PM Peak Hour		Saturday	
		V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS
13	Sierra College Boulevard/Rocklin Road [1]	0.661	B	0.802	D	0.521	A	0.701	C	0.896	D	0.751	C
14	Taylor Road/ Horseshoe Bar Road (Loomis)	0.840	D	1.008	F	0.631	B	0.850	D	1.040	F [2]	0.665	B
15	Horseshoe Bar Road/ I-80 Westbound Ramps (Loomis)	0.394	A	0.375	A	0.313	A	0.394	A	0.375	A	0.313	A
16	Horseshoe Bar Road/ I-80 Eastbound Ramps (Loomis)	16.4 sec	C	16.1 sec	C	12.2 sec	B	16.5 sec	C	16.2 sec	C	12.3 sec	B
17	Barton Road/Brace Road [1] (Loomis)	16.2 sec	C	15.2 sec	C	9.5 sec	A	16.5 sec	C	15.7 sec	C	9.7 sec	A
18	Barton Road/Rocklin Road [1] (Loomis)	15.9 sec	C	11.2 sec	B	10.3 sec	B	16.5 sec	C	12.2 sec	B	11.3 sec	B
19	Sierra College Boulevard/King Road [1] (Loomis)	0.402	A	0.490	A	0.316	A	0.422	A	0.546	A	0.381	A
20	Sierra College Boulevard/English Colony Way [1] (Placer County)	11.1 sec	B	14.0 sec	B	10.7 sec	B	11.4 sec	B	15.6 sec	C	11.8 sec	B
21	Taylor Road/King Road [1] (Loomis)	0.601	B	0.604	B	0.409	A	0.607	B	0.620	B	0.429	A

Notes:
ICU V/C ratio is used for signalized intersections. HCM delay in seconds is used for unsignalized intersections.
[1] LOS C required for these intersections. LOS D acceptable for all other intersections.
[2] Project impact is less than 5% of total intersection V/C or delay and therefore not a significant impact.

(Shade) = Significant Impact

Exceeds level of service criteria

As shown in Table 4.2-12, most of the study area roadway segments are forecast to operate within their daily roadway capacities except for the following six roadway segments:

- Taylor Road between King Road and Horseshoe Bar Road (Loomis)
- Pacific Street between Sierra College Boulevard and Dominguez Road
- Sierra College Boulevard between English Colony Way and King Road (Placer County)
- Sierra College Boulevard between King Road and Taylor Road (Loomis)
- Sierra College Boulevard between Taylor Road and I-80
- Sierra College Boulevard between Dominguez Road and Rocklin Road

Similar to the previous scenarios, these segments will exceed the threshold of daily capacity in the existing plus approved projects (baseline) plus project scenario. However, in the a.m., p.m. and Saturday peak hours, the traffic on all six roadway segments are forecast to operate with satisfactory v/c ratios in the peak hours with project conditions. Therefore, the project does not cause a significant impact on the roadway segments.

Table 4.2-12
Existing Plus Approved Projects (Baseline) Plus Project - Daily Roadway Segment Level of Service Summary

Roadway	Segment	Configuration	Capacity	Weekday			Saturday		
				Volume	V/C	LOS	Volume	V/C	LOS
Taylor Road	King Road and Horseshoe Bar Road [1] (Loomis)	Two-lane Collector	15,000	18,110	1.21	F	12,550	0.84	D
	Horseshoe Bar Road and Sierra College Boulevard[1] (Loomis)	Two-lane Collector	15,000	11,553	0.77	C	4,360	0.29	A
Pacific Street	Sierra College Boulevard and Dominguez Road [1]	Two-lane Collector	15,000	12,378	0.83	D	6,680	0.45	A
	Dominguez Road and Rocklin Road [1]	Four-lane Undivided Arterial	30,000	19,739	0.66	B	9,400	0.31	A
Rocklin Road	Pacific Street and Granite Drive	Four-lane Undivided Arterial	30,000	25,701	0.86	D	13,730	0.46	A
	I-80 and Sierra College Boulevard	Four-lane Undivided Arterial	30,000	16,259	0.54	A	18,000	0.60	B
	Sierra College Boulevard and Barton Road [1] (Loomis)	Two-lane Collector	15,000	7,866	0.52	A	6,470	0.43	A
Barton Road	Rocklin Road and Brace Road [1] (Loomis)	Two-lane Collector	15,000	4,104	0.27	A	2,790	0.19	A
Horseshoe Bar Road	I-80 and Brace Road (Loomis)	Two-lane Collector	15,000	6,191	0.41	A	6,550	0.44	A
Brace Road	I-80 and Barton Road [1] (Loomis)	Two-lane Collector	15,000	4,156	0.28	A	2,100	0.14	A
	I-80 and Sierra College Boulevard [1] (Loomis)	Two-lane Collector	15,000	3,408	0.23	A	560	0.04	A

Table 4.2-12
Existing Plus Approved Projects (Baseline) Plus Project -
Daily Roadway Segment Level of Service Summary

Roadway	Segment	Configuration	Capacity	Weekday			Saturday		
				Volume	V/C	LOS	Volume	V/C	LOS
Sierra College Boulevard	English Colony Way and King Road [1] (Placer County)	Two-lane Collector	15,000	12,160	0.81	D	9,150	0.61	B
	King Road and Taylor Road [1] (Loomis)	Two-lane Collector	15,000	13,550	0.90	E	10,230	0.68	B
	Taylor Road and I-80	Two-lane Collector	15,000	21,716	1.45	F	13,140	0.88	D
	I-80 and Dominguez Road	Four-lane Undivided Arterial	30,000	23,175	0.77	C	21,440	0.71	C
	Dominguez Road and Rocklin Road [1]	Two-lane Collector	15,000	18,465	1.23	F	16,330	1.09	F
Granite Drive	Dominguez Road and Sierra College Boulevard [1]	Four-lane Undivided Arterial	30,000	6,348	0.21	A	4,460	0.15	A
	Dominguez Road and Rocklin Road [1]	Four-lane Undivided Arterial	30,000	8,518	0.28	A	8,040	0.27	A
Dominguez Road	Taylor Road and Granite Drive [1]	Two-lane Collector	15,000	2,522	0.17	A	640	0.04	A
King Road	Sierra College Boulevard and Taylor Road [1] (Loomis)	Two-lane Collector	15,000	5,610	0.37	A	3,460	0.23	A

Notes:
ICU V/C ratio is used for signalized intersections. HCM delay in seconds is used for unsignalized intersections.
[1] LOS C required for these intersections. LOS D acceptable for all other intersections.

Exceeds level of service criteria

IMPACTS AND MITIGATION MEASURES

IMPACT 4.2-1 Rocklin Road/I-80 Westbound Ramps. *The addition of project-related traffic to baseline traffic volumes would degrade traffic operations at the westbound ramps of the Rocklin Road/I-80 intersection during the p.m. peak hour. Because this intersection already operates unacceptably and the project's contribution would be greater than 5 percent, this impact would be considered* ***significant****.*

The addition of project-related traffic to baseline traffic volumes would degrade traffic operations at the westbound ramps of the Rocklin Road/I-80 intersection. For the existing plus approved condition, this intersection operates at an LOS F with a volume/capacity ratio of 1.018 during the p.m. peak hour. The project would further degrade the volume/capacity ratio by more than 5 percent to 1.075 during the p.m. peak hour. This impact would be considered **significant**.

Mitigation Measure 4.2-1 Rocklin Road/I-80 Westbound Ramps

- Prior to the issuance of any building permits for the project, the project applicant shall pay the City's traffic impact fee in an amount that constitutes the project's fair share contribution to the construction of improvements necessitated in part by project impacts, as reflected in a comparison between Exhibit 4.2-2 (Existing Geometrics and Traffic Control) and Exhibit 4.2-15 (Existing Plus Approved Project (Baseline) Plus Project Condition – Mitigations), consistent with the City's CIP and the SPRTA programs.

Explanation: The City has previously proposed an improvement at the intersection of Rocklin Road/I-80 westbound ramps that provides a flyover from westbound Rocklin Road to the I-80 westbound on ramp that would mitigate the impact at this location. The City is currently evaluating that option and other design options through a contract with the traffic engineering and planning firm of Omni-Means.

The City of Rocklin 2004 Traffic Impact Fee and Capital Improvement Program Update (May 23, 2007) identifies the Rocklin Road/Interstate 80 interchange for needed improvements. Of the different improvement design options being explored, the CIP conservatively includes the highest design cost, such that all other improvement design options are below the cost identified in the CIP and are assured adequate CIP program funding. The fees for the improvements to the Rocklin Road/I-80 interchange are to be funded in part by the City's impact fees and in part by the South Placer Regional Transportation Authority (SPRTA) fees.

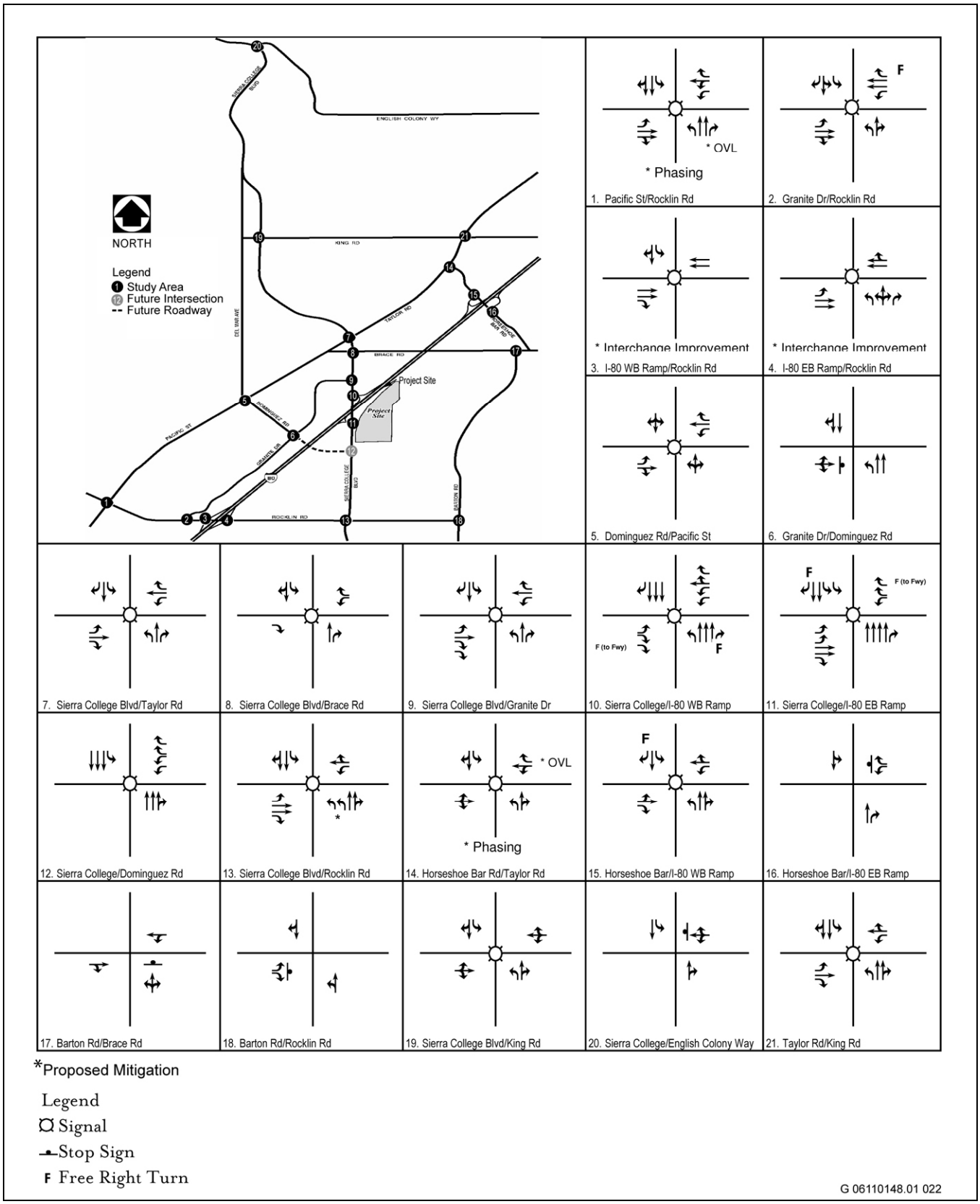
The SPRTA is a Joint Powers Authority (JPA) comprised of the Cities of Lincoln, Rocklin, Roseville and the County of Placer. The SPRTA was formed for the purpose of implementing a regional transportation and air quality mitigation fee to fund specified regional transportation projects. The Placer County Transportation Planning Agency (PCTPA) is designated as the entity to provide administrative, accounting, and staffing support for the SPRTA. PCTPA adopted a Regional Transportation Funding Strategy in August 2000, which included the development of a regional transportation impact fee program and a mechanism to implement the impact fee. The Rocklin Road/Interstate 80 interchange is one of the many improvement projects identified by SPRTA.

The proposed project would be conditioned to contribute its fair share to the cost of circulation improvements via the existing Citywide traffic impact mitigation (TIM) fee program that will be applied as a uniformly applied development policy and standard. The traffic impact mitigation fee program is one of the various methods that the City of Rocklin uses for financing improvements identified in the Capital Improvement Program (CIP). The CIP, which is overseen by the City's Engineering Department, is updated periodically to assure that growth in the City and surrounding jurisdictions does not degrade the Level of Service on the City's roadways. The roadway improvements that are identified in the CIP in response to anticipated growth in population and development in the City are consistent with the City's Circulation Element. The traffic impact fee program collects funds from new development in the City to finance a portion of the roadway improvements that result from traffic generated by new development. Fees are calculated on a citywide basis, differentiated by type of development in relationship to their relative traffic impacts. The intent of the fee is to provide an equitable means of ensuring that future development contributes their fair share of roadway improvements, so that the City's General Plan Circulation policies and quality of life can be maintained.

The proposed mitigations for the existing plus approved projects (baseline) plus project are shown in Exhibit 4.2-15 and the LOS following their implementation are identified in Table 4.2-13. Proposed new features or proposed changes to the phasing of improvements can be identified by comparing the diagrams in Exhibit 4.2-15 to the corresponding diagrams found in Exhibit 4.2-2 (Existing Geometrics and Traffic Control).

Level of Significance after Mitigation

With implementation of the identified mitigation measure, the Rocklin Road/I-80 westbound ramps intersection would operate at an acceptable LOS and this impact would be considered less than significant.



Existing Plus Approved Projects (Baseline)
Plus Project Condition - Mitigations **Exhibit 4.2-15**

Table 4.2-13
Existing Plus Approved Projects (Baseline) Plus Project Condition Peak Hour Intersection Level of Service Summary - With Mitigation

Intersection		Existing Plus Approved Plus Project Condition						Existing Plus Approved Plus Project Condition - With mitigation					
		AM Peak Hour		PM Peak Hour		Saturday		AM Peak Hour		PM Peak Hour		Saturday	
		V/C Ratio/ Delay	LOS	V/C Ratio/ Delay	LOS	V/C Ratio/ Delay	LOS	V/C Ratio/ Delay	LOS	V/C Ratio/ Delay	LOS	V/C Ratio/ Delay	LOS
1	Rocklin Road/Pacific Street [1]	0.872	D	0.997	E	0.632	B	0.872	D	0.997	E	0.632	B
2	Rocklin Road/Granite Drive	0.469	A	0.767	C	0.559	A	0.469	A	0.767	C	0.559	A
3	Rocklin Road/I-80 Westbound Ramps	0.797	C	1.075	F	0.711	C	0.529	A	0.683	B	0.529	A
4	Rocklin RoadI-80 Eastbound Ramps	0.843	D	1.000	F	0.619	B	0.694	B	0.791	C	0.524	A
5	Dominguez Road/Pacific Street [1]	0.401	A	0.479	A	0.253	A	0.401	A	0.479	A	0.253	A
6	Dominguez Road/Granite Drive [1]	11.9 sec	B	12.4 sec	B	10.3 sec	B	11.9 sec	B	12.4 sec	B	10.3 sec	B
7	Sierra College Boulevard/Taylor Road (Loomis)	0.655	B	0.840	D	0.537	A	0.655	B	0.840	D	0.537	A
8	Sierra College Boulevard/Brace Road (Loomis)	0.487	A	0.655	B	0.429	A	0.487	A	0.655	B	0.429	A
9	Sierra College Boulevard/ Granite Drive	0.583	A	0.713	C	0.580	A	0.583	A	0.713	C	0.580	A
10	Sierra College Boulevard/ I-80 Westbound Ramps	0.325	A	0.372	A	0.267	A	0.325	A	0.372	A	0.267	A
11	Sierra College Boulevard/ I-80 Eastbound Ramps	0.414	A	0.589	A	0.764	C	0.414	A	0.589	A	0.764	C
12	Sierra College Boulevard/ Dominguez Road	-	-	-	-	-	-	-	-	-	-	-	-
13	Sierra College Boulevard/ Rocklin Road [1]	0.701	C	0.896	D	0.751	C	0.578	A	0.779	C	0.670	B
14	Taylor Road/Horseshoe Bar Road (Loomis)	0.850	D	1.040	F	0.665	B	0.850	D	1.040	F	0.665	B
15	Horseshoe Bar Road/I-80 Westbound Ramps (Loomis)	0.394	A	0.375	A	0.313	A	0.394	A	0.375	A	0.313	A
16	Horseshoe Bar Road/I-80 Eastbound Ramps (Loomis)	16.5 sec	C	16.2 sec	C	12.3 sec	B	16.5 sec	C	16.2 sec	C	12.3 sec	B

Table 4.2-13 Existing Plus Approved Projects (Baseline) Plus Project Condition Peak Hour Intersection Level of Service Summary - With Mitigation													
Intersection		Existing Plus Approved Plus Project Condition						Existing Plus Approved Plus Project Condition - With mitigation					
		AM Peak Hour		PM Peak Hour		Saturday		AM Peak Hour		PM Peak Hour		Saturday	
		V/C Ratio/ Delay	LOS	V/C Ratio/ Delay	LOS	V/C Ratio/ Delay	LOS	V/C Ratio/ Delay	LOS	V/C Ratio/ Delay	LOS	V/C Ratio/ Delay	LOS
17	Barton Road/Brace Road [1] (Loomis)	16.5 sec	C	15.7 sec	C	9.7 sec	A	16.5 sec	C	15.7 sec	C	9.7 sec	A
18	Barton Road/Rocklin Road [1] (Loomis)	16.5 sec	C	12.2 sec	B	11.3 sec	B	16.5 sec	C	12.2 sec	B	11.3 sec	B
19	Sierra College Boulevard/King Road [1] (Loomis)	0.422	A	0.546	A	0.381	A	0.422	A	0.546	A	0.381	A
20	Sierra College Boulevard/ English Colony Way [1] (Placer County)	11.4 sec	B	15.6 sec	C	11.8 sec	B	11.4 sec	B	15.6 sec	C	11.8 sec	B
21	Taylor Road/King Road [1] (Loomis)	0.607	B	0.620	B	0.429	A	0.607	B	0.620	B	0.429	A

Notes:
ICU V/C ratio is used for signalized intersections. HCM delay in seconds is used for unsignalized intersections.
[1] LOS C required for these intersections. LOS D acceptable for all other intersections.

(Shade) = Significant Impact

Mitigated Condition

IMPACT 4.2-2 Rocklin Road/I-80 Eastbound Ramps. *The addition of project-related traffic to baseline traffic volumes would degrade traffic operations at the eastbound ramps of the Rocklin Road/I-80 intersection from LOS E to LOS F during the p.m. peak hour. Because this intersection already operates unacceptably and the project's contribution would be greater than 5 percent, this impact would be considered* ***significant****.*

The addition of project-related traffic to baseline traffic volumes would degrade traffic operations at the eastbound ramps of the Rocklin Road/I-80 intersection. For the existing plus approved condition, this intersection operates at an LOS E with a volume/capacity ratio of 0.946 during the p.m. peak hour. The project would further degrade the intersection operations to an LOS F with a volume/capacity ratio of 1.000 during the p.m. peak hour.

This degradation in the volume/capacity ratio would be greater than 5 percent. Therefore, this impact would be considered **significant**.

Mitigation Measure 4.2-2 Rocklin Road/I-80 Eastbound Ramps

- Implement Mitigation Measure 4.2-1 described above in order to reduce westbound through traffic at the intersection of Rocklin Road/I-80 eastbound ramps and improve operations at this intersection to acceptable levels.

Explanation: The proposed mitigations for the existing plus approved projects (baseline) plus project are shown in Exhibit 4.2-15 and the LOS following their implementation are identified in Table 4.2-13. Proposed new features

or proposed changes to the phasing of improvements can be identified by comparing the diagrams in Exhibit 4.2-15 to the corresponding diagrams found in Exhibit 4.2-2 (Existing Geometrics and Traffic Control).

Level of Significance after Mitigation

With implementation of the identified mitigation measure, the Rocklin Road/I-80 eastbound ramps intersection would operate at an acceptable LOS and this impact would be considered less than significant.

IMPACT 4.2-3 Sierra College Boulevard/Rocklin Road Intersection. *The addition of project-related traffic to baseline traffic volumes would degrade traffic operations at the Sierra College Boulevard/Rocklin Road intersection during the p.m. peak hour. Because this intersection already operates unacceptably and the project's contribution would be greater than 5 percent, this impact would be considered* ***significant****.*

The addition of project-related traffic to baseline traffic volumes would degrade traffic operations at the Sierra College Boulevard/Rocklin Road intersection. For the existing plus approved condition, this intersection operates at an LOS D with a volume/capacity ratio of 0.802 during the p.m. peak hour. Although the intersection would continue to operate at LOS D with the project, the volume/capacity ratio would be degraded by more than 5 percent to 0.896 during the p.m. peak hour. This impact would be considered **significant**.

Mitigation Measure 4.2-3 Sierra College Boulevard/Rocklin Road Intersection

- The project applicant shall build an additional northbound left-turn lane (resulting in dual left-turn lanes) at this intersection. There is an approved, not-yet-built project that is obligated to construct this same improvement, and if that project completes this improvement prior to the proposed project, then this project's obligation to construct the improvement is no longer necessary.

Explanation: The proposed mitigations for the existing plus approved projects (baseline) plus project are shown in Exhibit 4.2-15 and the LOS following their implementation are identified in Table 4.2-13. Proposed new features or proposed changes to the phasing of improvements can be identified by comparing the diagrams in Exhibit 4.2-15 to the corresponding diagrams found in Exhibit 4.2-2 (Existing Geometrics and Traffic Control).

Level of Significance after Mitigation

With the implementation of the identified mitigation measure, the intersection would operate at an acceptable LOS and this impact would be considered less than significant.

IMPACT 4.2-4 Rocklin Road/Pacific Street Intersection. *The addition of project-related traffic to baseline traffic volumes would degrade traffic operations at the Rocklin Road/Pacific Street intersection during the p.m. peak hour. Although this intersection already operates unacceptably, the project's contribution would represent less than a 5 percent decrease in the volume/capacity ratio. Therefore, this impact would be considered* ***less than significant****.*

The addition of project-related traffic to baseline traffic volumes would degrade traffic operations at the Rocklin Road/Pacific Street intersection. For the existing plus approved projects condition, the Rocklin Road/Pacific Street intersection would operate at an LOS D with a volume/capacity ratio of 0.978 during the p.m. peak hour. The intersection would continue to operate at LOS D with the proposed project and the volume/capacity ratio would be degraded to 0.997, which represents less than a 5 percent decrease. Because the volume/capacity ratio would not be degraded by more than 5 percent for this intersection with the contribution of project traffic, the project's impacts at this intersection would be considered **less than significant**.

Mitigation Measure 4.2-4 Rocklin Road/Pacific Street Intersection

No mitigation is necessary.

Level of Significance after Mitigation

The project's impacts on the Rocklin Road/Pacific Street intersection would be considered less than significant.

IMPACT 4.2-5 Taylor Road/Horseshoe Bar Road (Loomis) Intersection. *The addition of project-related traffic to baseline traffic volumes would degrade traffic operations at the Taylor Road/Horseshoe Bar Road (Loomis) intersection during the p.m. peak hour. Although this intersection already operates unacceptably, the project's contribution would represent less than a 5 percent decrease in the volume/capacity ratio. Therefore, this impact would be considered* ***less than significant****.*

The addition of project-related traffic to baseline traffic volumes would degrade traffic operations at the Taylor Road/Horseshoe Bar Road (Loomis) intersection. For the existing plus approved projects condition, the Taylor Road/Horseshoe Bar Road (Loomis) intersection would operate at an LOS F with a volume/capacity ratio of 1.008 during the p.m. peak hour. The intersection would continue to operate at LOS F with the proposed project and the volume/capacity ratio would be degraded to 1.040, which represents less than a 5 percent decrease. Because the volume/capacity ratio would not be degraded by more than 5 percent for this intersection with the contribution of project traffic, the project's impacts at this intersection would be considered **less than significant**.

Mitigation Measure 4.2-5 Taylor Road/Horseshoe Bar Road (Loomis) Intersection

No mitigation is necessary.

Level of Significance after Mitigation

The project's impacts on the Taylor Road/Horseshoe Bar Road (Loomis) intersection would be considered less than significant.

IMPACT 4.2-6 Sierra College Boulevard/Taylor Road (Loomis) Intersection. *The addition of project-related traffic to baseline traffic volumes would degrade traffic operations at the Sierra College Boulevard/Taylor Road (Loomis) intersection during the p.m. peak hour from LOS C to LOS D. Based on the City of Loomis significance threshold, this impact would be considered* ***significant****.*

The addition of project-related traffic to baseline traffic volumes would degrade traffic operations at the Sierra College Boulevard/Taylor Road (Loomis) intersection. For the existing plus approved condition, this intersection operates at an LOS C with a volume/capacity ratio of 0.750 during the p.m. peak hour. With the addition of project traffic, this intersection would operate at LOS D with a volume/capacity ratio of 0.840 during the p.m. peak hour. This impact would be considered **significant**.

Mitigation Measure 4.2-6 Sierra College Boulevard/Taylor Road Intersection (Loomis)

- Prior to the issuance of building permits for the project, the project applicant shall pay the SPRTA fee.

Explanation: The SPRTA is a Joint Powers Authority (JPA) comprised of the Cities of Lincoln, Rocklin, Roseville and the County of Placer. The SPRTA was formed for the purpose of implementing a regional transportation and air quality mitigation fee to fund specified regional transportation projects. The Placer County Transportation Planning Agency (PCTPA) is designated as the entity to provide administrative, accounting, and staffing support for the SPRTA. PCTPA adopted a Regional Transportation Funding Strategy in August 2000, which included the development of a regional transportation impact fee program and a mechanism to implement

the impact fee. The Sierra College Boulevard/Taylor Road intersection improvement project, one of the many improvement projects identified by SPRTA, is currently in the final design stage by the City of Rocklin.

Level of Significance after Mitigation

With the implementation of the identified mitigation measure, the intersection would operate at an acceptable LOS and this impact would be considered less than significant.

IMPACT 4.2-7 Roadway Segments. *The proposed project would cause six roadway segments to exceed the threshold of daily capacity. However, in both the a.m. and p.m. peak hours, the traffic on all six roadway segments are forecast to operate with satisfactory volume/capacity ratios in both peak hours with project conditions. Therefore, the project's impacts on roadway segments would be considered* ***less than significant****.*

As shown in Table 4.2-12, most of the study area roadway segments are forecast to operate within their daily roadway capacities except for the following six roadway segments:

- Taylor Road between King Road and Horseshoe Bar Road (Loomis)
- Pacific Street between Sierra College Boulevard and Dominguez Road
- Sierra College Boulevard between English Colony Way and King Road (Placer County)
- Sierra College Boulevard between King Road and Taylor Road (Loomis)
- Sierra College Boulevard between Taylor Road and I-80
- Sierra College Boulevard between the future Dominguez Road and Rocklin Road

These segments would exceed the threshold of daily capacity in the existing plus approved projects (baseline) plus project scenario. However, in both the a.m. and p.m. peak hours, the traffic on all six roadway segments is forecast to operate with satisfactory volume/capacity ratios in both peak hours with project conditions, as shown in Table 4.2-10. Therefore, the project's impacts on roadway segments would be considered **less than significant**.

Mitigation Measure 4.2-7 Roadway Segments

No mitigation is necessary.

Level of Significance after Mitigation

The project's impacts on roadway segments would be considered less than significant.

IMPACT 4.2-8 Entrance Vehicle Stacking. *The project's main access roadway has adequate length to avoid entrance vehicle stacking. Therefore, the project's effects on entrance vehicle stacking would be considered* ***less than significant****.*

The main project access driveway on Sierra College Boulevard would form the east leg of the I-80 eastbound off-ramp intersection. The main access drive is approximately 300 feet in length and terminates at a roundabout on the site. Vehicles entering the project could make a right turn into the Village 1 area from the access drive (approximately 250 feet from Sierra College Boulevard); however, left turns would be prohibited along the access drive. To determine whether adequate throat distance is provided to ensure excessive vehicle stacking on the access drive does not occur, the Access Management Manual, published by the Transportation Research Board, was consulted. According to Table 10-8 in the Access Management Manual, the minimum throat length recommended for a driveway with three egress lanes is 200 feet. Approximately 250 feet is provided from Sierra College Boulevard to the first right-turn opportunity into the Village 1 area. This distance would exceed the recommendation in the Access Management Manual. As a result, minimal stacking of vehicles from the internal right turn to Sierra College Boulevard is expected and this impact would be considered **less than significant**.

Mitigation Measure 4.2-8 Entrance Vehicle Stacking

No mitigation is necessary.

Level of Significance after Mitigation

The proposed project would not cause excessive entrance vehicle stacking.

IMPACT 4.2-9 Right Turns from Unsignalized Driveway. *Northbound vehicles exiting from the project's unsignalized driveway would be required to cross two lanes of traffic. Sufficient gaps in the traffic stream would occur along Sierra College Boulevard to allow right turns from the project's unsignalized driveway to the northbound through lanes. Therefore, this impact would be considered* ***less than significant****.*

The geometrics shown on the project site plan for Sierra College Boulevard and the project driveways include the planned improvements to the I-80/Sierra College Boulevard interchanges as well as the improvements to Sierra College Boulevard along the project frontage. The project site plan includes one unsignalized driveway, located approximately half way between the I-80 eastbound off-ramp and the Dominguez Road extension. The unsignalized driveway would allow right turns in and out only onto Sierra College Boulevard. The northbound Sierra College Boulevard at the driveway location is made up of five lanes. The number 1, 2, and 3 lanes provide northbound through-movement. The number 4 lane provides northbound movement through the I-80 eastbound off-ramp intersection and becomes a "trap" lane onto the I-80 eastbound on-ramp. The number 5 lane is a right-turn-only lane into the proposed project at the Signalized I-80 eastbound off-ramp driveway.

Because of the width of Sierra College Boulevard at the unsignalized driveway, outbound vehicles could have difficulty turning onto the northbound Sierra College Boulevard through lanes, as those vehicles would need to cross both the right-turn lane into the proposed project and the freeway trap lane. To determine whether vehicles would be restricted from turning out of the driveway into the through lanes by heavy northbound through traffic, an operational analysis of this driveway location was prepared using Synchro 7. Synchro 7 allows the user to model the expected traffic operations of a corridor, rather than just a single intersection. The Synchro model is used extensively by the California Department of Transportation to model project impacts on State highway facilities.

The unsignalized driveway was modeled along with the two adjacent signalized intersections to determine whether adequate gaps would be caused by the traffic signals to allow egress from the driveway. The unsignalized operations analysis is provided in Appendix C (identified as Appendix I within Appendix C). The unsignalized LOS worksheets indicate the proportion of time that the westbound right-turn movement is not blocked by vehicles traveling northbound on Sierra College Boulevard as well as the capacity of the right-turn movement considering the total conflicting flow rate. In both the a.m. and p.m. peak hour, the capacity of the right-turn movement exceeds the demand for right turns (890 capacity vs. 193 demand during the a.m. peak hour, and 785 capacity vs. 394 demand during the p.m. peak hour). According to the calculations, the westbound right turn would be unblocked 82 percent of the time during the a.m. peak hour and 72 percent of the time during the p.m. peak hour. As a result, sufficient gaps in the traffic stream would occur along Sierra College Boulevard to allow right turns from the unsignalized driveway to the northbound through lanes and this impact would be considered **less than significant**.

Mitigation Measure 4.2-9 Right Turns from Unsignalized Driveway

No mitigation is necessary.

Level of Significance after Mitigation

The project's impacts on northbound vehicles turning right from the project's unsignalized driveway would be considered less than significant.

IMPACT 4.2-10 Bicycle/Pedestrian Circulation Policy Consistency. *The proposed project would include design components that are intended to allow safe pedestrian/bicycle access and movement to and through the site consistent with City policies. Therefore, this impact would be considered* ***less than significant****.*

Policy 6 of the Circulation Element of the City of Rocklin General Plan (1991) requires projects to promote pedestrian convenience through development conditions requiring sidewalks, walking paths, or hiking trails that connect residential areas with commercial, shopping, and employment centers. The project design is intended to allow safe access and movement to, from and within the site for pedestrians and automobiles. This would be accomplished through the use of designated pedestrian circulation routes/walkways within the proposed parking lots that are articulated with differential landscaping and pavement markings. To provide access to the proposed Rocklin 60 residential subdivision to the east, a pedestrian/bicycle access point would be provided along the site's eastern boundary. These project components would be consistent with Policy 6 of the Circulation Element. Therefore, the proposed project would not be expected to conflict with adopted policies, plans, or program supporting alternative transportation and this impact would be **less than significant**.

Mitigation Measure 4.2-10 Bicycle/Pedestrian Circulation Policy Consistency

No mitigation is necessary.

Level of Significance after Mitigation

The project would be consistent with the City's policy regarding bicycle/pedestrian circulation. Therefore, the project's impact on bicycle/pedestrian circulation would be considered less than significant.

4.3 AIR QUALITY

This section includes a summary of applicable regulations, existing air quality conditions, and an analysis of potential short-term and long-term air quality impacts of the proposed project. The method of analysis for short-term construction, long-term regional (operational), local mobile sources, and toxic air emissions is consistent with the recommendations of the Placer County Air Pollution Control District (PCAPCD). In addition, mitigation measures are recommended, as necessary, to reduce significant air quality impacts.

4.3.1 EXISTING SETTING

The proposed project site is located in the western portion of Placer County, California (western Placer County), which is under the local jurisdiction of the PCAPCD. Western Placer County is within the Sacramento Valley Air Basin (SVAB), which also comprises all of Butte, Colusa, Glenn, Sacramento, Shasta, Sutter, Tehama, Yolo and Yuba counties, and the eastern portion of Solano County.

The ambient concentrations of air pollutant emissions are determined by the amount of emissions released by pollutant sources and the atmosphere's ability to transport and dilute such emissions. Natural factors that affect transport and dilution include terrain, wind, atmospheric stability, and the presence of sunlight. Therefore, existing air quality conditions in the area are determined by such natural factors as topography, meteorology, and climate, in addition to the amount of emissions released by existing air pollutant sources, as discussed separately below.

TOPOGRAPHY, CLIMATE, AND METEOROLOGY

The SVAB is relatively flat, bordered by the North Coast Ranges to the west and the Northern Sierra Nevada Mountains to the east. Air flows into the SVAB through the Carquinez Strait, the only breach in the western mountain barrier, and moves across the Sacramento–San Joaquin River Delta from the San Francisco Bay area.

The Mediterranean climate type of the SVAB is characterized by hot, dry summers and cool, rainy winters. During the summer, daily temperatures range from 50°F to more than 100°F. The inland location and surrounding mountains shelter the area from much of the ocean breezes that keep the coastal regions moderate in temperature.

Most precipitation in the area results from air masses that move in from the Pacific Ocean, usually from the west or northwest during the winter months. More than half the total annual precipitation falls during the winter rainy season (November through February); the average winter temperature is a moderate 49°F. Characteristic of SVAB winters are also periods of dense and persistent low-level fog, which are most prevalent between storms. The prevailing winds are moderate in speed and vary from moisture laden breezes from the south to dry land flows from the north.

The mountains surrounding the SVAB create a barrier to airflow, which leads to the entrapment of air pollutants when meteorological conditions are unfavorable for transport and dilution. The highest frequency of poor air movement occurs in the fall and winter when high-pressure cells are present over the SVAB. The lack of surface wind during these periods combined with the reduced vertical flow because of less surface heating reduces the influx of air and leads to the concentration of air pollutants under stable metrological conditions. Surface concentrations of air pollutant emissions are highest when these conditions occur in combination with agricultural burning activities or temperature inversions which hamper dispersion by creating a ceiling over the area and trapping air pollutants near the ground.

May through October is ozone season in the SVAB. This period is characterized by poor air movement in the mornings with the arrival of the delta sea breeze from the southwest in the afternoons. In addition, longer daylight hours provide a plentiful amount of sunlight to fuel photochemical reactions between reactive organic gases (ROG) and nitrogen oxides (NO_X), which result in ozone formation. Typically, the delta breeze transports air

pollutants northward out of the SVAB; however, a phenomenon known as the Schultz Eddy prevents this from occurring during approximately half of the time from July to September. The Schultz Eddy phenomenon causes the wind pattern to shift southward resulting in air pollutants being blown back into the SVAB. This phenomenon exacerbates the concentration of air pollutant emissions in the area and contributes to violations of the ambient air quality standards.

Local meteorology of the proposed project site is represented by measurements recorded at the Rocklin station. The normal annual precipitation is approximately 21 inches. January temperatures range from a normal minimum of 34°F to a normal maximum of 54°F. July temperatures range from a normal minimum of 59°F to a normal maximum of 96°F (National Oceanic and Atmospheric Administration 1992). The predominant wind direction and speed is from the south-southwest at 10 mph (California Air Resources Board [ARB] 1994).

EXISTING AIR QUALITY - CRITERIA AIR POLLUTANTS

Concentrations of the following air pollutants: ozone, carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), respirable and fine particulate matter (PM_{10} and $PM_{2.5}$), and lead are used as indicators of ambient air quality conditions. Because these are the most prevalent air pollutants known to be deleterious to human health and extensive health-effects criteria documents are available, they are commonly referred to as "criteria air pollutants."

A brief description of each criteria air pollutant including source types, health effects, and future trends is provided below along with the current attainment area designations and monitoring data for the project area.

Ozone

Ozone is a photochemical oxidant, a substance whose oxygen combines chemically with another substance in the presence of sunlight, and the primary component of smog. Ozone is not directly emitted into the air, but is formed through complex chemical reactions between precursor emissions of ROG and NO_X in the presence of sunlight. ROG are volatile organic compounds that are photochemically reactive. ROG emissions result primarily from incomplete combustion and the evaporation of chemical solvents and fuels. NO_X is a group of gaseous compounds of nitrogen and oxygen that results from the combustion of fuels.

Ozone located in the upper atmosphere (stratosphere) acts in a beneficial manner by shielding the earth from harmful ultraviolet radiation that is emitted by the sun. However, ozone located in the lower atmosphere (ground level) is a major health and environmental concern. Meteorology and terrain play a major role in ozone formation. Generally, low wind speeds or stagnant air coupled with warm temperatures and clear skies provide the optimum conditions for formation. As a result, summer is generally the peak ozone season. Because of the reaction time involved, peak ozone concentrations often occur far downwind of the precursor emissions. Therefore, ozone is a regional pollutant that often affects large areas. In general, ozone concentrations over or near urban and rural areas reflect an interplay of emissions of ozone precursors, transport, meteorology, and atmospheric chemistry (Godish 1991).

The adverse health effects associated with exposure to ozone pertain primarily to the respiratory system. Scientific evidence indicates that ambient levels of ozone affect not only sensitive receptors, such as asthmatics and children, but healthy adults as well. Exposure to ambient levels of ozone ranging from 0.10 to 0.40 parts per million (ppm) for 1 to 2 hours has been found to significantly alter lung functions by increasing respiratory rates and pulmonary resistance, decreasing tidal volumes, and impairing respiratory mechanics. Ambient levels of ozone above 0.12 ppm are linked to symptomatic responses that include such symptoms as throat dryness, chest tightness, headache, and nausea. In addition to the above adverse health effects, evidence also exists relating ozone exposure to an increase in the permeability of respiratory epithelia; such increased permeability leads to an increase in responsiveness of the respiratory system to challenges, and the interference or inhibition of the immune system's ability to defend against infection (Godish 1991).

Emissions of ozone precursors ROG and NO_X have decreased over the past several years because of more stringent motor vehicle standards and cleaner burning fuels. Consequently, peak 1-hour and 8-hour ozone concentrations in the SVAB have declined overall by about 15% since 1988. However, peak ozone values in the SVAB have not declined as rapidly over the last several years as they have in other urban areas. This can be attributed to influx of pollutants into the SVAB from other urbanized areas, making the region both a transport contributor and a receptor of pollutants (ARB 2006a).

Carbon Monoxide

Carbon monoxide (CO) is a colorless, odorless, and poisonous gas produced by incomplete burning of carbon in fuels, primarily from mobile (transportation) sources. In fact, 77% of the nationwide CO emissions are from mobile sources. The other 23% consists of CO emissions from wood-burning stoves, incinerators, and industrial sources.

CO enters the bloodstream through the lungs by combining with hemoglobin, which normally supplies oxygen to the cells. However, CO combines with hemoglobin much more readily than oxygen does, resulting in a drastic reduction in the amount of oxygen available to the cells. Adverse health effects associated with exposure to CO concentrations include such symptoms as dizziness, headaches, and fatigue. CO exposure is especially harmful to individuals who suffer from cardiovascular and respiratory diseases (U.S. Environmental Protection Agency [EPA] 2007a).

The highest concentrations are generally associated with cold stagnant weather conditions that occur during the winter. In contrast to ozone, which tends to be a regional pollutant, CO problems tend to be localized.

Nitrogen Dioxide

Nitrogen dioxide (NO_2) is a brownish, highly reactive gas that is present in all urban environments. The major human-made sources of NO_2 are combustion devices, such as boilers, gas turbines, and mobile and stationary reciprocating internal combustion engines. Combustion devices emit primarily nitric oxide (NO), which reacts through oxidation in the atmosphere to form NO_2 (EPA 2007a). The combined emissions of NO and NO_2 are referred to as NO_X, which are reported as equivalent NO_2. Because NO_2 is formed and depleted by reactions associated with photochemical smog (ozone), the NO_2 concentration in a particular geographical area may not be representative of the local NO_X emission sources.

Inhalation is the most common route of exposure to NO_2. Because NO_2 has relatively low solubility in water, the principal site of toxicity is in the lower respiratory tract. The severity of the adverse health effects depends primarily on the concentration inhaled rather than the duration of exposure. An individual may experience a variety of acute symptoms, including coughing, difficulty with breathing, vomiting, headache, and eye irritation during or shortly after exposure. After a period of approximately 4 to 12 hours, an exposed individual may experience chemical pneumonitis or pulmonary edema with breathing abnormalities, cough, cyanosis, chest pain, and rapid heartbeat. Severe, symptomatic NO_2 intoxication after acute exposure has been linked on occasion with prolonged respiratory impairment with such symptoms as chronic bronchitis and decreased lung functions.

Sulfur Dioxide

Sulfur dioxide (SO_2) is produced by such stationary sources as coal and oil combustion, steel mills, refineries, pulp and paper mills. The major adverse health effects associated with SO_2 exposure pertain to the upper respiratory tract. SO_2 is a respiratory irritant with constriction of the bronchioles occurring with inhalation of SO_2 at 5 ppm or more. On contact with the moist mucous membranes, SO_2 produces sulfurous acid, which is a direct irritant. Concentration rather than duration of the exposure is an important determinant of respiratory effects. Exposure to high SO_2 concentrations may result in edema of the lungs or glottis and respiratory paralysis.

Particulate Matter

Respirable particulate matter with an aerodynamic diameter of 10 micrometers or less is referred to as PM_{10}. PM_{10} consists of particulate matter emitted directly into the air, such as fugitive dust, soot, and smoke from mobile and stationary sources, construction operations, fires and natural windblown dust, and particulate matter formed in the atmosphere by condensation and/or transformation of SO_2 and ROG (EPA 2007a). Fine particulate matter ($PM_{2.5}$) includes a subgroup of smaller particles that have an aerodynamic diameter of 2.5 micrometers or less (ARB 2006a).

The adverse health effects associated with PM_{10} depend on the specific composition of the particulate matter. For example, health effects may be associated with metals, polycyclic aromatic hydrocarbons (PAH), and other toxic substances adsorbed onto fine particulate matter, which is referred to as the piggybacking effect, or with fine dust particles of silica or asbestos. Generally, adverse health effects associated with PM_{10} may result from both short-term and long-term exposure to elevated concentrations and may include breathing and respiratory symptoms, aggravation of existing respiratory and cardiovascular diseases, alterations to the immune system, carcinogenesis, and premature death (EPA 2007a). $PM_{2.5}$ poses an increased health risk because the particles can deposit deep in the lungs and may contain substances that are particularly harmful to human health.

Direct emissions of both PM_{10} and $PM_{2.5}$ have increased in the SVAB between 1975 and 2000 and are projected to increase through at least 2020. These emissions are dominated by area-wide sources, primarily because of development (ARB 2006a).

Lead

Lead is a metal found naturally in the environment as well as in manufactured products. The major sources of lead emissions have historically been mobile and industrial sources. As a result of the phase-out of leaded gasoline, as discussed in detail below, metal processing is currently the primary source of lead emissions. The highest levels of lead in air are generally found near lead smelters. Other stationary sources are waste incinerators, utilities, and lead-acid battery manufacturers.

Twenty years ago, mobile sources were the main contributor to ambient lead concentrations in the air. In the early 1970s, the EPA set national regulations to gradually reduce the lead content in gasoline. In 1975, unleaded gasoline was introduced for motor vehicles equipped with catalytic converters. The EPA banned the use of leaded gasoline in highway vehicles in December 1995 (EPA 2007a).

As a result of the EPA's regulatory efforts to remove lead from gasoline, emissions of lead from the transportation sector have declined dramatically (95% between 1980 and 1999), and levels of lead in the air decreased by 94% between 1980 and 1999. Transportation sources, primarily airplanes, now contribute only 13% of lead emissions. A recent National Health and Nutrition Examination Survey reported a 78% decrease in the levels of lead in people's blood between 1976 and 1991. This dramatic decline can be attributed to the move from leaded to unleaded gasoline (EPA 2007a).

AMBIENT AIR QUALITY - MONITORING STATION DATA AND ATTAINMENT DESIGNATIONS

Criteria air pollutant concentrations are measured at several monitoring stations in the SVAB. The Auburn-C Avenue and the Roseville-North Sunrise Boulevard stations are the closest in proximity to the proposed project site with recent data for ozone, CO, NO_2, $PM_{2.5}$ and PM_{10}. In general, the ambient air quality measurements from these stations are representative of the air quality in the vicinity of the proposed project site. Table 4.3-1 summarizes the air quality data from the most recent 3 years.

Both California Air Resources Board (ARB) and the U.S. Environmental Protection Agency (EPA) use this type of monitoring data to designate areas according to attainment status for criteria air pollutants established by the agencies. The purpose of these designations is to identify those areas with air quality problems and thereby

initiate planning efforts for improvement. The three basic designation categories are nonattainment, attainment, and unclassified. Unclassified is used in an area that cannot be classified on the basis of available information as meeting or not meeting the standards. In addition, the California designations include a subcategory of the nonattainment designation, called nonattainment-transitional. The nonattainment-transitional designation is given to nonattainment areas that are progressing and nearing attainment. The most current attainment designations for the Placer County portion of the SVAB are shown in Table 4.3-2 for each criteria air pollutant.

Table 4.3-1
Summary of Annual Ambient Air Quality Data (2004–2006)[1]

	2004	2005	2006
Auburn-C Avenue Monitoring Station Ozone			
- Ozone			
Maximum concentration (1-hr/8-hr, ppm)	0.118/0.101	0.120/0.107	0.120/0.107
Number of days state standard exceeded (1-hr)	14	11	11
Number of days national standard exceeded (1-hr/8-hr)	0/12	0/10	0/10
Roseville-North Sunrise Boulevard Monitoring Station			
- Ozone			
Maximum concentration (1-hr/8-hr, ppm)	0.106/0.085	0.118/0.106	0.121/0.097
Number of days state standard exceeded (1-hr)	5	13	16
Number of days national standard exceeded (1-hr/8-hr)	0/1	0/9	0/9
- Carbon Monoxide (CO)			
Maximum concentration (1-hr/8-hr, ppm)	2.6/1.93	2.0/1.27	-
Number of days state standard exceeded (8-hr)	0	0	-
Number of days national standard exceeded (1-hr/8-hr)	0/0	0/0	-
- Nitrogen Dioxide (NO_2)			
Maximum concentration (1-hr, ppm)	0.067	0.079	0.063
Number of days state standard exceeded (1-hr)	0	0	0
Annual Average (ppm)	0.015	0.015	0.013
- Fine Particulate Matter ($PM_{2.5}$)			
Maximum concentration ($\mu g/m^3$)	47.8	59.2	45.0
Number of days national standard exceeded (measured[2])	0	0	0
- Respirable Particulate Matter (PM_{10})			
Maximum concentration ($\mu g/m^3$)	43.0	40.0	55.0
Number of days state standard exceeded (measured/calculated[2])	0/0	0/-	1
Number of days national standard exceeded (measured/ calculated[2])	0/0	0/-	0

[1] Where, $\mu g/m^3$ = micrograms per cubic meter and ppm = parts per million.
[2] Measured days are those days that an actual measurement was greater than the level of the state daily standard or the national daily standard. Measurements are typically collected every 6 days. Calculated days are the estimated number of days that a measurement would have been greater than the level of the standard had measurements been collected every day. The number of days above the standard is not necessarily the number of violations of the standard for the year.
Sources: ARB 2007b, EPA 2007b, 2007c

Table 4.3-2
Ambient Air Quality Standards and Designations

Pollutant	Averaging Time	California		National Standards [1]		
		Standards [2,3]	Attainment Status [4]	Primary [3,5]	Secondary [3,6]	Attainment Status [7]
Ozone	1-hour	0.09 ppm (180 μg/m^3)	N(Serious) [10]	–[8]	Same as Primary Standard	–[8]
	8-hour	0.07 ppm (137 μg/m^3)	–	0.08 ppm (157 μg/m^3)		N(Serious)
Carbon Monoxide (CO)	1-hour	20 ppm (23 mg/m^3)	A	35 ppm (40 mg/m^3)	–	U/A
	8-hour	9 ppm (10 mg/m^3)		9 ppm (10 mg/m^3)		
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	0.030 ppm (56 μg/m^3)	–	0.053 ppm (100 μg/m^3)	Same as Primary Standard	U/A
	1-hour	0.18 ppm (338 μg/m^3)	A	–		–
Sulfur Dioxide (SO_2)	Annual Arithmetic Mean	–	–	0.030 ppm (80 μg/m^3)	–	U
	24-hour	0.04 ppm (105 μg/m^3)	A	0.14 ppm (365 μg/m^3)	–	
	3-hour	–	–	–	0.5 ppm (1300 μg/m^3)	
	1-hour	0.25 ppm (655 μg/m^3)	A	–	–	–
Respirable Particulate Matter (PM_{10})	Annual Arithmetic Mean	20 μg/m^3	N	–[8]	Same as Primary Standard	U
	24-hour	50 μg/m^3		150 μg/m^3		
Fine Particulate Matter ($PM_{2.5}$)	Annual Arithmetic Mean	12 μg/m^3	N	15 μg/m^3	Same as Primary Standard	U/A
	24-hour	–	–	35 μg/m^3		
Lead[10]	30-day Average	1.5 μg/m^3	A	–	–	–
	Calendar Quarter	–	–	1.5 μg/m^3	Same as Primary Standard	

Table 4.3-2
Ambient Air Quality Standards and Designations

Pollutant	Averaging Time	California		National Standards [1]		
		Standards [2,3]	Attainment Status [4]	Primary [3,5]	Secondary [3,6]	Attainment Status [7]
Sulfates	24-hour	25 μg/m^3	A	**No National Standards**		
Hydrogen Sulfide	1-hour	0.03 ppm (42 μg/m^3)	U			
Vinyl Chloride[9]	24-hour	0.01 ppm (26 μg/m^3)	U/A			
Visibility-Reducing Particle Matter	8-hour	Extinction coefficient of 0.23 per kilometer —visibility of 10 miles or more (0.07—30 miles or more for Lake Tahoe) because of particles when the relative humidity is less than 70%.	U			

1 National standards (other than ozone, PM, and those based on annual averages or annual arithmetic means) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration in a year, averaged over 3 years, is equal to or less than the standard. The PM_{10} 24-hour standard is attained when 99% of the daily concentrations, averaged over 3 years, are equal to or less than the standard. The $PM_{2.5}$ 24-hour standard is attained when 98% of the daily concentrations, averaged over 3 years, are equal to or less than the standard. Contact the EPA for further clarification and current federal policies.
2 California standards for ozone, CO (except Lake Tahoe), SO_2 (1- and 24-hour), NO_2, PM, and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. CAAQS are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
3 Concentration expressed first in units in which it was promulgated [i.e., parts per million (ppm) or micrograms per cubic meter (μg/m^3)]. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4 Unclassified (U): a pollutant is designated unclassified if the data are incomplete and do not support a designation of attainment or nonattainment.
Attainment (A): a pollutant is designated attainment if the state standard for that pollutant was not violated at any site in the area during a 3-year period.
Nonattainment (N): a pollutant is designated nonattainment if there was a least one violation of a state standard for that pollutant in the area.
Nonattainment/Transitional (NT): is a subcategory of the nonattainment designation. An area is designated nonattainment/transitional to signify that the area is close to attaining the standard for that pollutant.
5 National Primary Standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health.
6 National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
7 Nonattainment (N): any area that does not meet (or that contributes to ambient air quality in a nearby area that does not meet) the national primary or secondary ambient air quality standard for the pollutant.
Attainment (A): any area that meets the national primary or secondary ambient air quality standard for the pollutant.
Unclassifiable (U): any area that cannot be classified on the basis of available information as meeting or not meeting the national primary or secondary ambient air quality standard for the pollutant.
8 The 1-hour ozone NAAQS was revoked on June 15, 2005. The annual PM_{10} NAAQS was revoked in October 2006.
9 ARB has identified lead and vinyl chloride as toxic air contaminants with no threshold of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
10. N(serious) = Non-attainment area (serious), defined as an area in non-attainment with an ozone design value of 0.160 up to 0.180 ppm.
Source: ARB 2007a, EPA 2007b

EXISTING AIR QUALITY - TOXIC AIR CONTAMINANTS

Concentrations of toxic air contaminants (TACs) are also used as indicators of ambient air quality conditions. A TAC is defined as an air pollutant that may cause or contribute to an increase in mortality or in serious illness, or that may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health even at low concentrations.

According to the California Almanac of Emissions and Air Quality (ARB 2006a), the majority of the estimated health risk from TACs can be attributed to relatively few compounds, the most important being PM from diesel-fueled engines (diesel PM). Diesel PM differs from other TACs in that it is not a single substance, but rather a complex mixture of hundreds of substances. Although diesel PM is emitted by diesel-fueled internal combustion engines, the composition of the emissions varies depending on engine type, operating conditions, fuel composition, lubricating oil, and whether an emission control system is present. Unlike the other TACs, no ambient monitoring data are available for diesel PM because no routine measurement method currently exists. However, the ARB has made preliminary concentration estimates based on a PM exposure method. This method uses ARB emissions inventory's PM_{10} database, ambient PM_{10} monitoring data, and the results from several studies to estimate concentrations of diesel PM. In addition to diesel PM, benzene, 1,3-butadiene, acetaldehyde, carbon tetrachloride, hexavalent chromium, *para*-dichlorobenzene, formaldehyde, methylene chloride, and perchloroethylene pose the greatest existing ambient risk, for which data are available, in California.

Diesel PM poses the greatest health risk among these ten TACs mentioned. Based on receptor modeling techniques, the ARB estimated its health risk to be 360 excess cancer cases per million people in the SVAB. Since 1990, the diesel PM's health risk has been reduced by 52%. Overall, levels of most TACs have gone down since 1990 except for *para*-dichlorobenzene and formaldehyde (ARB 2006a).

Asbestos

Asbestos is the common name for a group of naturally occurring fibrous silicate minerals that can separate into thin but strong and durable fibers. Naturally occurring asbestos (NOA), which was identified as a TAC in 1986 by the ARB, is located in many parts of California, including several foothill areas of Placer County, and are commonly associated with serpentine.

For individuals living in areas of NOA, there are many potential pathways for airborne exposure. Exposures to soil dust containing asbestos can occur under a variety of scenarios, including children playing in the dirt, dust raised from unpaved roads and driveways covered with crushed serpentine, uncontrolled quarry emissions, grading and construction associated with development of new housing, gardening and other human activities. For homes built on asbestos outcroppings, asbestos can be tracked into the home and can also enter as fibers suspended in outdoor air. Once such fibers are indoors, they can be entrained into the air by normal household activities, such as vacuuming (as many fibers will simply pass through vacuum cleaner bags).

The general public exposed to low levels of asbestos may be at elevated risk (e.g., above background rates) of lung cancer and mesothelioma. The risk is proportional to the cumulative inhaled dose (number of fibers), and also increases with the time since first exposure. Although there are a number of factors that influence the disease-causing potency of any given asbestos, such as fiber length and width, fiber type, and fiber chemistry, all forms are carcinogens.

Geologic maps prepared by the California Geologic Survey (formerly the California Division of Mines and Geology) show areas of higher probability for asbestos containing rock within the broad zone of faults that follows the low foothills and lay in a south-east to north-west band. The Placer County communities of Auburn, Colfax, Meadow Vista, and Foresthill are among those that are within this fault band. Generally, there are no areas of high probability of occurrence for NOA in Placer County that lay neither to the west of Folsom Lake nor to the south of Wise Road. That is, Roseville (and Granite Bay), Rocklin, Lincoln, Loomis, Penryn, and

Newcastle lay within geologic areas that have a lower probability for the presence of NOA. There are some isolated areas of higher probability for the presence of NOA within the Tahoe National Forest.

The identification of locations in Placer County has been improved with the development of an enhanced 1:1,100,000 scale map by the California Geological Survey. The map denotes areas of Placer County that are more or less likely to contain NOA that is based on available soil and geologic studies, with some field verification.

The characterization of an area as having a lower overall probability of NOA presence means that although the likelihood is slight, in some instances NOA might be found within such an area. Similarly, a location in the area identified as being most likely to have NOA may not contain NOA.

NOA deposits have been found in rock other than ultramafic and serpentine rock; for example NOA deposits have been found in metavolcanic rocks such as the Copper Hill Volcanics in the Folsom vicinity. Metavolcanic rock formations are prevalent to the northeast, north, and west of Auburn. Finally in areas of sedimentary of alluvial rock deposits, such as exist in western Placer County; it is possible that analytically detectible NOA may be found.

According to Special Report 190: Relative Likelihood for the Presence of Naturally Occurring Asbestos in Placer County, California (Higgins and Clinkenbeard 2006) and the General Location Guide for Ultramafic Rocks in California – Areas More Likely to Contain Naturally Occurring Asbestos (Churchill and Hill 2000), the proposed project site is not located in an area that is likely to contain NOA.

4.3.2 REGULATORY SETTING

Air quality within Placer County is regulated by such agencies as the EPA, ARB, and PCAPCD. Each of these agencies develops rules, regulations, policies, and/or goals to comply with applicable legislation. Although EPA regulations may not be superseded, both state and local regulations may be more stringent.

FEDERAL PLANS, POLICIES, REGULATIONS, AND LAWS

At the federal level, the EPA has been charged with implementing national air quality programs. The EPA's air quality mandates are drawn primarily from the federal Clean Air Act (CAA), which was enacted in 1970. The most recent major amendments made by Congress were in 1990.

The CAA required the EPA to establish national ambient air quality standards (NAAQS). As shown in Table 4.3-2, the EPA has established primary and secondary NAAQS for the following criteria air pollutants:

- ozone,
- CO,
- NO_2,
- SO_2,
- PM_{10},
- $PM_{2.5}$, and
- lead.

The primary standards protect the public health and the secondary standards protect public welfare. The CAA also required each state to prepare an air quality control plan referred to as a State Implementation Plan (SIP). The federal Clean Air Act Amendments of 1990 (CAAA) added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is periodically modified to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins as reported by their jurisdictional agencies. The EPA has responsibility to review all state SIPs to

determine conformation to the mandates of the CAA, and the amendments thereof, and determine if implementation will achieve air quality goals. If the EPA determines a SIP to be inadequate, a Federal Implementation Plan (FIP) may be prepared for the nonattainment area that imposes additional control measures. Failure to submit an approvable SIP or to implement the plan within the mandated timeframe may result in sanctions being applied to transportation funding and stationary air pollution sources in the air basin.

STATE PLANS, POLICIES, REGULATIONS, AND LAWS

The ARB is the agency responsible for coordination and oversight of state and local air pollution control programs in California and for implementing the California Clean Air Act (CCAA). The CCAA, which was adopted in 1988, required the ARB to establish California ambient air quality standards (CAAQS) (Table 4.3-2). The ARB has established CAAQS for sulfates, hydrogen sulfide, vinyl chloride, visibility-reducing particulate matter, and the above mentioned criteria air pollutants. In most cases the CAAQS are more stringent than the NAAQS. Differences in the standards are generally explained by the health effects studies considered during the standard setting process and the interpretation of the studies. In addition, the CAAQS incorporate a margin of safety to protect sensitive individuals.

The CCAA requires that all local air districts in the state endeavor to achieve and maintain the CAAQS by the earliest practical date. The act specifies that local air districts should focus particular attention on reducing the emissions from transportation and area-wide emission sources, and provides districts with the authority to regulate indirect sources.

Other ARB responsibilities include, but are not limited to, overseeing local air district compliance with California and federal laws, approving local air quality plans, submitting SIPs to the EPA, monitoring air quality, determining and updating area designations and maps, and setting emissions standards for new mobile sources, consumer products, small utility engines, off-road vehicles, and fuels.

LOCAL PLANS, POLICIES, REGULATIONS, AND LAWS

Placer County Air Pollution Control District

The PCAPCD attains and maintains air quality conditions in Placer County through a comprehensive program of planning, regulation, enforcement, technical innovation, and promotion of the understanding of air quality issues. The clean air strategy of the PCAPCD includes the preparation of plans for the attainment of ambient air quality standards, adoption and enforcement of rules and regulations concerning sources of air pollution, and issuance of permits for stationary sources of air pollution. The PCAPCD also inspects stationary sources of air pollution and responds to citizen complaints, monitors ambient air quality and meteorological conditions, and implements programs and regulations required by the CAA, CAAA, and the CCAA. Air quality plans applicable to the proposed project are discussed below.

As mentioned above, the PCAPCD adopts rules and regulations. All projects are subject to PCAPCD rules and regulations in effect at the time of construction. Specific rules applicable to the construction of the proposed project may include, but are not limited to:

- ***Rule 202-Visible Emissions.*** A person shall not discharge into the atmosphere from any single source of emission whatsoever any air contaminant for a period or periods aggregating more than three minutes in any one hour which is as dark or darker in shade as that designated as number 1 on the Ringelmann Chart, as published by the United States Bureau of Mines.

- ***Rule 205-Nuisances.*** A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such

persons or the public, or which cause to have a natural tendency to cause injury or damage to business or property.

- ***Rule 217-Cutback and Emulsified Asphalt Paving Materials.*** A person shall not manufacture for sale nor use for paving, road construction or road maintenance any: rapid cure cutback asphalt; slow cure cutback asphalt containing organic compounds which evaporate at 500°F or lower as determined by current American Society for Testing and Materials (ASTM) Method D402; medium cure cutback asphalt except as provided in Section 1.2.; or emulsified asphalt containing organic compounds which evaporate at 500°F or lower as determined by current ASTM Method D244, in excess of 3% by volume.

- ***Rule 218-Application of Architectural Coatings.*** No person shall manufacture, blend, or repackage for sale within PCAPCD; supply, sell, or offer for sale within PCAPCD; or solicit for application or apply within the PCAPCD, any architectural coating with a volatile organic carbon (VOC) content in excess of the corresponding specified manufacturer's maximum recommendation.

- ***Rule 228-Fugitive Dust.***

  - ***Visible Emissions Not Allowed Beyond the Boundary Line:*** A person shall not cause or allow the emissions of fugitive dust from any active operation, open storage pile, or disturbed surface area (including disturbance as a result of the raising and/or keeping of animals or by vehicle use), such that the presence of such dust remains visible in the atmosphere beyond the boundary line of the emission source.

  - ***Visible Emissions from Active Operations:*** In addition to the requirements of Rule 202, Visible Emissions, a person shall not cause or allow fugitive dust generated by active operations, an open storage pile, or a disturbed surface area, such that the fugitive dust is of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke as dark or darker in shade as that designated as number 2 on the Ringelmann Chart, as published by the United States Bureau of Mines.

  - ***Concentration Limit:*** A person shall not cause or allow PM_{10} levels to exceed 50 micrograms per cubic meter ($\mu g/m^3$) (24-hour average) when determined, by simultaneous sampling, as the difference between upwind and downwind samples collected on high-volume particulate matter samplers or other EPA-approved equivalent method for PM_{10} monitoring.

  - ***Track-Out onto Paved Public Roadways:*** Visible roadway dust as a result of active operations, spillage from transport trucks, and the track-out of bulk material onto public paved roadways shall be minimized and removed.

    - The track-out of bulk material onto public paved roadways as a result of operations, or erosion, shall be minimized by the use of track-out and erosion control, minimization, and preventative measures, and removed within one hour from adjacent streets such material anytime track-out extends for a cumulative distance of greater than 50 feet onto any paved public road during active operations.

    - All visible roadway dust tracked-out upon public paved roadways as a result of active operations shall be removed at the conclusion of each work day when active operations cease, or every 24 hours for continuous operations. Wet sweeping or a High Efficiency Particulate Air (HEPA) filter equipped vacuum device shall be used for roadway dust removal.

    - Any material tracked-out, or carried by erosion, and clean-up water, shall be prevented from entering waterways or storm water inlets as required to comply water quality control requirements.

- ***Minimum Dust Control Requirements:*** The following dust mitigation measures are to be initiated at the start and maintained throughout the duration of the construction or grading activity, including any construction or grading for road construction or maintenance.

  - Unpaved areas subject to vehicle traffic must be stabilized by being kept wet, treated with a chemical dust suppressant, or covered.

  - The speed of any vehicles and equipment traveling across unpaved areas must be no more than 15 miles per hour unless the road surface and surrounding area is sufficiently stabilized to prevent vehicles and equipment traveling more than 15 miles per hour from emitting dust exceeding Ringelmann 2 or visible emissions from crossing the project boundary line.

  - Storage piles and disturbed areas not subject to vehicular traffic must be stabilized by being kept wet, treated with a chemical dust suppressant, or covered when material is not being added to or removed from the pile.

  - Prior to any ground disturbance, including grading, excavating, and land clearing, sufficient water must be applied to the area to be disturbed to prevent emitting dust exceeding Ringelmann 2 and to minimize visible emissions from crossing the boundary line.

  - Construction vehicles leaving the site shall be cleaned to prevent dust, silt, mud, and dirt, from being released or tracked offsite.

  - When wind speeds are high enough to result in dust emissions crossing the boundary line, despite the application of dust mitigation measures, grading and earthmoving operations shall be suspended.

  - No trucks are allowed to transport excavated material off-site unless the trucks are maintained such that no spillage can occur from holes or other openings in cargo compartments, and loads are either covered with tarps; or wetted and loaded such that the material does not touch the front, back, or sides of the cargo compartment at any point less than six inches from the top and that no point of the load extends above the top of the cargo compartment.

- ***Wind-Driven Fugitive Dust Control:*** A person shall take action(s), such as surface stabilization, establishment of a vegetative cover, or paving, to minimize wind-driven dust from inactive disturbed surface areas.

- ***Rule 501-General Permit Requirements.*** Any person operating an article, machine, equipment or other contrivance, the use of which may cause, eliminate, reduce, or control the issuance of air contaminants, shall first obtain a written permit from the Air Pollution Control Officer (APCO). Stationary sources subject to the requirements of Rule 507, Federal Operating Permit Program, must also obtain a Title V permit pursuant to the requirements and procedures of that rule.

Air Quality Plans

The PCAPCD, in coordination with the air quality management districts and air pollution control districts of El Dorado, Sacramento, Solano, Sutter, and Yolo counties, prepared and submitted the 1991 Air Quality Attainment Plan (AQAP) in compliance with the requirements set forth in the CCAA, which specifically addressed the nonattainment status for ozone and to a lesser extent, CO and PM_{10}. The CCAA also requires a triennial assessment of the extent of air quality improvements and emission reductions achieved through the use of control measures. As part of the assessment, the attainment plan must be reviewed and, if necessary, revised to correct for deficiencies in progress and to incorporate new data or projections. The requirement of the CCAA for a first triennial progress report and revision of the 1991 AQAP was fulfilled with the preparation and adoption of the

1994 Ozone Attainment Plan (OAP). The OAP stresses attainment of ozone standards and focuses on strategies for reducing ozone precursor emissions of reactive organic gases (ROG) and oxides of nitrogen (NO_X). It promotes active public involvement, enforcement of compliance with PCAPCD rules and regulations, public education in both the public and private sectors, development and promotion of transportation and land use programs designed to reduce vehicle miles traveled (VMT) within the region, and implementation of stationary and mobile-source control measures. The OAP became part of the SIP in accordance with the requirements of the CAAA and amended the 1991 AQAP. However, at that time the region could not show that the national ozone (1-hour) standard would be met by 1999. In exchange for moving the deadline to 2005, the region accepted a designation of "severe nonattainment" coupled with additional emission requirements on stationary sources. Additional triennial reports were also prepared in 1997, 2000, and 2003 in compliance with the CCAA that act as incremental updates.

As a nonattainment area, the region is also required to submit rate-of-progress milestone evaluations in accordance with the CAAA. Milestone reports were prepared for 1996, 1999, and 2002. These milestone reports include compliance demonstrations that the requirements have been met for the Sacramento nonattainment area. The air quality attainment plans and reports present comprehensive strategies to reduce ROG, NO_X, and PM_{10} emissions from stationary, area, mobile, and indirect sources. Such strategies include the adoption of rules and regulations; enhancement of CEQA participation; implementation of a new and modified indirect source review program; adoption of local air quality plans; and stationary-, mobile-, and indirect-source control measures.

In July of 1997, the EPA promulgated a new 8-hour ozone standard. This change lowered the standard for ambient ozone from 0.12 ppm (parts per million) averaged over one hour to 0.08 ppm averaged over eight hours. In general, the 8-hour standard is more protective of public health and more stringent than the 1-hour standard. The promulgation of this standard prompted new designations and nonattainment classifications in June 2004, and resulted in the revocation of the 1-hour standard in June 2005. The region has been designated as a nonattainment (serious) area for the national (8-hour) ozone standard with an attainment deadline of June 2013.

Although the region has made significant progress in reducing ozone, a problem has arisen with regard to another issue. The region's transportation plan must conform and show that implementation will not harm the region's chances of attaining the ozone standard. The SIP is tied to a "motor vehicle emissions budget" and thus, transportation planners must ensure that emissions anticipated from plans and improvement programs remain within this budget. The region was not required to update the SIP before the ozone (8-hour) plans were due in 2006. However, since a conformity lapse began October 4, 2004, an expedited process to prepare a plan is underway (SMAQMD 2007).

TOXIC AIR CONTAMINANTS

Air quality regulations also focus on TACs, or in federal parlance hazardous air pollutants (HAPs). In general, for those TACs that may cause cancer, there is no concentration that does not present some risk. In other words, there is no threshold level below which adverse health impacts may not be expected to occur. This contrasts with the criteria air pollutants for which acceptable levels of exposure can be determined and for which the ambient standards have been established (Table 4.3-2). Instead, the EPA and ARB regulate HAPs and TACs, respectively, through statutes and regulations that generally require the use of the maximum or best available control technology for toxics (MACT and BACT) to limit emissions. These, in conjunction with additional rules set forth by the PCAPCD, establish the regulatory framework for TACs.

Federal Hazardous Air Pollutant Programs

The EPA has programs for identifying and regulating HAPs. Title III of the CAAA directed the EPA to promulgate national emissions standards for HAPs (NESHAP). The NESHAP may differ for major sources than for area sources of HAPs. Major sources are defined as stationary sources with potential to emit more than 10 tons per year (TPY) of any HAP or more than 25 TPY of any combination of HAPs; all other sources are considered

area sources. The emissions standards are to be promulgated in two phases. In the first phase (1992–2000), the EPA developed technology-based emission standards designed to produce the maximum emission reduction achievable. These standards are generally referred to as requiring MACT. For area sources, the standards may be different, based on generally available control technology. In the second phase (2001–2008), the EPA is required to promulgate health risk–based emissions standards where deemed necessary to address risks remaining after implementation of the technology-based NESHAP standards.

The CAAA also required the EPA to promulgate vehicle or fuel standards containing reasonable requirements that control toxic emissions, at a minimum to benzene and formaldehyde. Performance criteria were established to limit mobile-source emissions of toxics, including benzene, formaldehyde, and 1-3-butadiene. In addition, Section 219 required the use of reformulated gasoline in selected areas with the most severe ozone nonattainment conditions to further reduce mobile-source emissions.

State and Local Toxic Air Contaminant Programs

TACs in California are primarily regulated through the Tanner Air Toxics Act (AB 1807) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588). AB 1807 sets forth a formal procedure for ARB to designate substances as TACs. This includes research, public participation, and scientific peer review before ARB can designate a substance as a TAC. To date, ARB has identified over 21 TACs, and adopted the EPA's list of HAPs as TACs. Most recently, diesel PM was added to the ARB list of TACs.

Once a TAC is identified, the ARB then adopts an Airborne Toxics Control Measure (ATCM) for sources that emit that particular TAC. If there is a safe threshold for a substance at which there is no toxic effect, the control measure must reduce exposure below that threshold. If there is no safe threshold, the measure must incorporate BACT to minimize emissions.

The Hot Spots Act requires that existing facilities that emit toxic substances above a specified level prepare a toxic-emission inventory, prepare a risk assessment if emissions are significant, notify the public of significant risk levels, and prepare and implement risk reduction measures.

The ARB has adopted diesel exhaust control measures and more stringent emission standards for various on-road mobile sources of emissions, including transit buses and off-road diesel equipment (e.g., tractors, generators). In February 2000, the ARB adopted a new public transit bus fleet rule and emission standards for new urban buses. These new rules and standards provide for 1) more stringent emission standards for some new urban bus engines beginning with 2002 model year engines; 2) zero-emission bus demonstration and purchase requirements applicable to transit agencies; and 3) reporting requirements with which transit agencies must demonstrate compliance with the urban transit bus fleet rule. Upcoming milestones include the low sulfur diesel fuel requirement, and tighter emission standards for heavy-duty diesel trucks (2007) and off-road diesel equipment (2011) nationwide. Thus, with the turnover of vehicle fleets, TAC emissions will substantially decrease in the future in comparison to current conditions. Mobile-source emissions of TACs (i.e., benzene, 1-3-butadiene, diesel PM) have been reduced significantly over the last decade, and will be reduced further in California through a progression of regulatory measures (e.g., Low Emission Vehicle (LEV)/Clean Fuels and Phase II reformulated gasoline regulations) and control technologies. With implementation of ARB's Risk Reduction Plan, it is expected that diesel PM concentrations will be reduced by 75% in 2010 and 85% in 2020 from the estimated year 2000 level. Adopted regulations are also expected to continue to reduce formaldehyde emissions from cars and light-duty trucks. As emissions are reduced, it is expected that risks associated with exposure to the emissions will also be reduced.

The ARB recently published the Air Quality and Land Use Handbook: A Community Health Perspective, which provides guidance concerning land use compatibility with TAC sources (ARB 2005). While not a law or adopted policy, the handbook offers advisory recommendations for the siting of sensitive receptors near uses associated with TACs such as freeways and high-traffic roads, commercial distribution centers, rail yards, ports, refineries

dry cleaners, gasoline stations, and industrial facilities to help keep children and other sensitive populations out of harm's way. A number of comments on the Handbook were provided to the ARB by air districts, other agencies, real estate representatives, and others. The comments included concern over whether the ARB was playing a role in local land use planning, the validity of relying on static air quality conditions over the next several decades in light of technological improvements, and support for providing information that can be used in local decision making.

At the local level, air pollution control or management districts may adopt and enforce ARB control measures. Under PCAPCD Rule 501 (General Permit Requirements), Rule 502 (New Source Review), and Rule 507 (Federal Operating Permit), all sources that possess the potential to emit TACs are required to obtain permits from the district. Permits may be granted to these operations if they are constructed and operated in accordance with applicable regulations, including new source review standards and air toxics control measures. The PCAPCD limits emissions and public exposure to TACs through a number of programs. The PCAPCD prioritizes TAC-emitting stationary sources based on the quantity and toxicity of the TAC emissions and the proximity of the facilities to sensitive receptors.

Sources that require a permit are analyzed by the PCAPCD (e.g., health risk assessment) based on their potential to emit toxics. If it is determined that the project will emit toxics in excess of PCAPCD's threshold of significant for TACs, as identified below, sources have to implement the best available control technology for TACs (T-BACT) in order to reduce emissions. If a source cannot reduce the risk below the threshold of significance even after T-BACT has been implemented, the PCAPCD will deny the permit required by the source. This helps to prevent new problems and reduces emissions from existing older sources by requiring them to apply new technology when retrofitting with respect to TACs. It is important to note that the air quality permitting process applies to stationary sources; and properties, which may be exposed to elevated levels of non-stationary type sources of TACs, and the non-stationary type sources themselves (e.g., on-road mobile) are not subject to this process or any requirements of T-BACT implementation. Rather, emissions controls on such sources (e.g., vehicles) are subject to regulations implemented on the state and federal level.

City of Rocklin

The following policy is applicable to the proposed project (City of Rocklin 1991):

- Policy 25. To coordinate and cooperate with the Placer County Air Pollution District in the development of stationary and mobile source control measures affecting the City of Rocklin, to be included in the California Clean Air Act Plan for Placer County (Rocklin Circulation Element).

Existing Sources

Stationary

According to the EPA, the only major stationary sources of TAC emissions located near the project site are Sierra Pine, LTD, and Pacific Manufactured Products, Inc, both located approximately 1 mile to the northwest of the project site (EPA 2007d). These industrial facilities are subject to PCAPCD's permit requirements involving Best Available Control Technology for toxics (T-BACT) and offset requirements.

Mobile Sources

Existing sources of TAC's also include mobile sources (i.e., diesel-fueled internal combustion engines) on nearby roadways (e.g., Interstate 80, which borders the north boundary of the project site). According to the ARB, on-road diesel-fueled vehicles contribute approximately 24% of the statewide total of TAC emissions, with an additional 71% attributed to other mobile sources such as construction, mining, and agricultural equipment; and transport refrigeration units.

EXISTING AIR QUALITY - ODORS

Typically odors are regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache).

With respect to odors, the human nose is the sole sensing device. The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals have the ability to smell minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same odor; in fact, an odor that is offensive to one person (e.g., from a fast-food restaurant) may be perfectly acceptable to another. It is also important to note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity.

Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as flowery or sweet, then the person is describing the quality of the odor. Intensity refers to the strength of the odor. For example, a person may use the word "strong" to describe the intensity of an odor. Odor intensity depends on the odorant concentration in the air. When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

4.3.3 IMPACTS AND MITIGATION MEASURES

METHOD OF ANALYSIS

Short-term construction-generated criteria air pollutant (e.g., PM_{10}) and ozone precursor emissions (ROG and NO_X) were assessed in accordance with PCAPCD-recommended methods. Emissions were modeled using the URBEMIS 2007 Version 9.2 computer model, and other emission factors and recommended methodologies from PCAPCD. Modeling was based on project-specific data (e.g., estimated duration of construction, size and type of proposed land uses) and URBEMIS default settings for the SVAB.

Long-term (i.e., operational) regional criteria air pollutant and precursor emissions, including mobile- and area-source emissions, were also quantified using the URBEMIS 2007 Version 9.2 computer model. Modeling was based on project-specific data (e.g., size and type of proposed uses), URBEMIS default settings for the SVAB, and trip generation data from the traffic analysis (LSA 2007). Long-term stationary source emissions were qualitatively assessed in accordance with PCAPCD-recommended methodologies.

Other air quality impacts (i.e., local mobile source and odor) were assessed in accordance with ARB and PCAPCD-recommended methodologies. Such methodologies include the use of a screening level procedure for local mobile-source CO concentrations. The Sacramento Metropolitan Air Quality Management District (SMAQMD)-recommended screening level analysis for local CO was used in the absence of such from PCAPCD (SMAQMD 2004, 2007).

For TAC emissions, a health risk assessment was prepared (Michael Brandman Associates 2007). The health risk assessment employed several mathematical modeling tools that are routinely used to perform such air quality assessments. These tools included:

- The U.S. Environmental Protection Agency (USEPA) Industrial Source Complex Model (ISC) (USEPA 1995), which is the air dispersion modeling method approved by the California Air Resources Board (CARB) for such assessments;
- The CARB EMFAC2007 mobile emission source model (CARB 2006c), which is used to calculate emissions from various mobile sources that would access the project site during operations; and
- The California Office of Environmental Health Hazard Assessment (OEHHA) Tier I risk assessment methodology to estimate potential cancer risks from diesel PM emissions.

The net increase in greenhouse gas emissions generated by the project is addressed in Chapter 6.

THRESHOLDS OF SIGNIFICANCE

Per Appendix G of the CEQA Guidelines and PCAPCD recommendations, air quality impacts are considered significant if implementation of the proposed project under consideration would do any of the following:

- Generate (directly or indirectly through automobile trip generation) criteria air pollutant or precursor emissions in excess of significance thresholds developed by the PCAPCD [i.e., 82 pounds/day (lb/day) of ROG, NO_X, or PM_{10}; or 550 lb/day of CO)];
- Cause or contribute to local CO concentrations exceeding 20 parts per million (ppm) over a one-hour averaging period or 9 ppm over an eight-hour averaging period;
- Conflict with adopted environmental plans, policies, or regulations for air pollutants;
- Conflict with or obstruct implementation of any applicable air quality plans;
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- Expose sensitive receptors to substantial pollutant concentrations. For TACs, the PCAPCD applies a cancer risk significance threshold of 10 in one million for an individual project's contribution to excess lifetime cancer risk (Michael Brandman Associates 2007). The risk is defined as "excess" because it is above the background cancer risk to the population. Such a risk is assumed to apply for a continuous exposure to TACs over a 70-year lifetime;
- Create objectionable odors affecting a substantial number of people; or
- Result in a cumulatively considerable net increase of any criteria pollutant for which the region is designated non-attainment under an applicable national or State ambient air quality standard.

IMPACTS AND MITIGATION MEASURES

IMPACT 4.3-1 Short-Term Construction-Generated Criteria Air Pollutant and Precursor Emissions. *The short-term construction-generated emissions of PM_{10} would exceed PCAPCD's significance threshold of 82 lb/day. This would be considered a* ***significant*** *impact.*

Construction emissions are described as "short term" or temporary in duration and have the potential to represent a significant impact with respect to air quality, especially fugitive PM_{10} dust emissions. Fugitive PM_{10} dust emissions are associated primarily with ground disturbance activities during site preparation and vary as a function of such parameters as soil silt content, soil moisture, wind speed, acreage of disturbance area, and VMT on- and offsite. Exhaust emissions from employee commute trips and construction equipment also contribute to short-term increases in PM_{10} emissions but to a much lesser extent. Emissions of ozone precursor emissions

(ROG and NO_X) and CO are primarily associated with exhaust emissions from employee commute trips and construction equipment, application of architectural coatings, and asphalt paving.

With respect to the proposed project, the initial site preparation and building phases of construction would result in the temporary generation of ROG, NO_X, PM_{10}, and CO emissions from ground disturbance activities, use of off-road equipment, employee commute trips, and other miscellaneous activities (e.g., asphalt paving and the application of architectural coatings).

Short-term construction emissions of ROG, NO_X, PM_{10}, and CO were modeled using the ARB-approved URBEMIS 2002 Version 8.7 computer program as recommended by the PCAPCD. URBEMIS is designed to model construction emissions for land use development projects and allows for the input of project-specific information. Input parameters were based on default model settings and information provided in the project description. The modeled maximum daily construction emissions are summarized in Table 4.3-3 and described in more detail below and in Appendix D.

Table 4.3-3
Summary of Modeled Maximum Daily Short-term Construction-Generated Emissions

Source	ROG (lb/day)	NO_X (lb/day)	PM_{10} (lb/day)	CO (lb/day)
Initial Site Preparation Phase (Spring 2008 – Summer 2008)				
Total Unmitigated Emissions (Site Preparation)[1]	4.7	37.8	126.8	20.3
PCAPCD Significance Threshold	82	82	82	550
Exceed Threshold?	No	No	Yes	No
Building Construction Phase (Summer 2008 – Spring 2009)				
Asphalt	3.0	16.9	1.4	10.8
Building Construction	5.7	25.6	1.8	54.3
Architectural Coatings	66.6	0.1	-	0.9
Total Unmitigated Emissions (Building Construction)[1]	75.3	42.6	3.3	66.0
PCAPCD Significance Threshold	82	82	82	550
Exceed Threshold?	No	No	No	No

[1] Emissions modeled using the Urbemis2007 (v9.2) computer model, based on the proposed land uses and phasing information identified in the project description, default model settings.
Refer to Appendix D for detailed assumptions and modeling output files.
Source: Data modeled by EDAW 2007.

Based on the modeling conducted, project construction would result in worst-case maximum unmitigated daily emissions of approximately 75 lb/day of ROG, 43 lb/day of NO_X, 127 lb/day of PM_{10}, and 20 lb/day of CO. Daily unmitigated construction-generated emissions would not exceed PCAPCD's significance thresholds of 82 lb/day for ROG or NO_X or 550 lb/day for CO. However, unmitigated construction-generated emissions of PM_{10} would exceed PCAPCD's significance threshold of 82 lb/day. Thus, PM_{10} emissions could violate an air quality standard or contribute substantially to an existing or projected air quality violation, especially considering Placer County's nonattainment status. As a result, this impact is considered **significant**.

Mitigation Measure 4.3-1 Short-Term Construction-Generated Criteria Air Pollutant and Precursor Emissions.

In accordance with the PCAPCD, the applicant shall comply with all applicable rules and regulations as discussed previously, in addition to implementation of the following recommended mitigation measures during construction of the proposed project (Backus, pers. comm., 2006b).

- The applicant shall submit to the City Engineer and the PCAPCD and receive approval of a Construction Emission / Dust Control Plan prior to groundbreaking. This plan must address how the project meets the minimum requirements of sections 300 and 400 of Rule 228-Fugitive Dust.
- The applicant shall suspend all grading operations when fugitive dust emissions exceed District Rule 228-Fugitive Dust limitations.
- Fugitive dust emissions shall not exceed 40% opacity and not go beyond the property boundary at any time. If lime or other drying agents are utilized to dry out wet grading areas, the project applicant shall ensure such agents are controlled as to not to exceed District Rule 228-Fugitive Dust limitations.
- The project applicant shall ensure that construction equipment exhaust emissions shall not exceed Rule 202-Visible Emission limitations.
- The project applicant shall ensure compliance with all of PCAPCD's minimum dust requirements.
- Water shall be applied to control fugitive dust, as needed, to prevent impacts offsite. Operational water trucks shall be onsite to control fugitive dust. Construction vehicles leaving the site shall be cleaned to prevent dust, silt, mud, and dirt from being released or tracked off-site.
- PCAPCD-approved chemical soil stabilizers, vegetative mats, or other appropriate best management practices, in accordance with manufacturers' specifications, shall be applied to all-inactive construction areas (previously graded areas which remain inactive for 96 hours).
- Soil binders shall be spread on unpaved roads and employee/equipment parking areas, and streets shall be washed (e.g., wet broom) if silt is carried over to adjacent public thoroughfares.
- Open burning of any kind shall be prohibited.
- Idling time shall be minimized to five minutes or less for all diesel-fueled equipment.
- ARB diesel fuel shall be used for all diesel-powered equipment.
- The project applicant, or the prime contractor, shall submit to the District a comprehensive inventory (i.e., make, model, year, emission rating) of all the heavy-duty off-road equipment (50 horsepower or greater) that will be used an aggregate of 40 or more hours for the construction project prior to groundbreaking. The project applicant shall provide the District with the anticipated construction timeline including start date, name, and phone number of the project manager and onsite foreman prior to groundbreaking. The project applicant shall provide a plan for approval by the District demonstrating that the heavy-duty (> 50 horsepower) off-road vehicles to be used in the construction project, including owned, leased, and subcontractor vehicles, will achieve a project-wide fleet-average 20 percent NO_X reduction and 45 percent particulate reduction compared to the most recent ARB fleet average. Acceptable options for reducing emissions may include use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, and/or other options as they become available. Contractors can contact PCAPCD to determine it their off-road fleet meets the requirements listed in this measure.

Level of Significance After Mitigation

Compliance with the above PCAPCD-required control measures would reduce worst-case fugitive PM_{10} dust emissions by a minimum of 50%, to approximately 64 lb/day, which is below the threshold of 82 lb/day. Therefore, implementation of the mitigation measures would reduce short-term construction-generated emissions to a less-than-significant level.

IMPACT 4.3-2 Long-Term Operational (Regional) Criteria Air Pollutant and Precursor Emissions. *The proposed project would increase criteria air pollutant and precursor emissions in the region above significance thresholds. Because feasible mitigation measures are not available to reduce these emissions below the significance thresholds, this impact would be considered* ***significant and unavoidable****.*

Regional area- and mobile-source emissions of ROG, NO_X, PM_{10}, and CO associated with implementation of the proposed project were estimated using URBEMIS 2007 Version 9.2 computer program, which is designed to model emissions for land use development projects. URBEMIS allows land use selections that include project location specifics and trip generation rates. URBEMIS accounts for area emissions from the usage of natural gas, wood stoves, fireplaces, landscape maintenance equipment, and consumer products; and mobile sources emissions associated with trip generation. Regional area and mobile source emissions were estimated based on proposed land uses identified in the project description and trip generation rates obtained from the transportation analysis prepared for this project (Section 4.2, Traffic and Circulation). Project implementation would not include the construction or operation of any major stationary sources of emissions.

The modeled maximum daily operational emissions for winter and summer conditions are summarized in Table 4.3-4 and described in more detail below and in Appendix D.

Table 4.3-4
Summary of Modeled Maximum Daily Long-term Operational (Regional) Emissions

Source	ROG (lb/day)	NO_X (lb/day)	PM_{10} (lb/day)	CO (lb/day)
Winter				
Area (Natural Gas and Consumer Product Usage, Landscaping, and Application of Architectural Coatings)	3.6	5.3	-	4.4
Motor Vehicle	192.5	306.1	280.7	2,192.0
Total Unmitigated Emissions (Winter)[1]	196.1	311.4	280.7	2,196.4
PCAPCD Significance Threshold	82	82	82	550
Exceed Threshold?	Yes	Yes	Yes	Yes
Summer				
Area (Natural Gas and Consumer Product Usage, Landscaping, and Application of Architectural Coatings)	4.0	5.3	-	9.2
Motor Vehicle	151.6	221.4	280.7	1,916.7
Total Unmitigated Emissions (Summer)[1]	155.6	216.7	280.7	1,925.9
PCAPCD Significance Threshold	82	82	82	550
Exceed Threshold?	Yes	Yes	Yes	Yes

[1] Emissions modeled using the Urbemis2007 (v9.2) computer model, based on trip generation rates obtained from the transportation analysis prepared for this project, proposed land uses and phasing information identified in the project description, and default model settings.
Refer to Appendix D for detailed assumptions and modeling output files.
Source: Data modeled by EDAW 2007.

Based on the modeling conducted, project operations would result in worst-case maximum unmitigated daily emissions of approximately 196 lb/day of ROG, 311 lb/day of NO_X, 281 lb/day of PM_{10}, and 2,196 lb/day of CO. Daily unmitigated operational emissions would exceed PCAPCD's significance thresholds of 82 lb/day for ROG, NO_X, and PM_{10}, or 550 lb/day for CO during both the winter and summer periods. In addition, because PCAPCD's significance thresholds approximately correlate with reductions from heavy-duty vehicles and land use project emission reduction requirements in the SIP, project implementation would also be anticipated to conflict with current air quality planning efforts. As a result, this impact is considered **significant and unavoidable**. This conclusion is consistent with the 1991 City of Rocklin General Plan EIR, which concluded that mobile-source emissions associated with General Plan buildout would result in significant and unavoidable regional air quality impacts.

Area- and mobile-source emissions of GHGs would also be generated by the operation of the proposed project. Because there are no established thresholds for analyzing GHG emissions at the project level, and because the effect of GHG emissions as they relate to global climate change is inherently a cumulative and global issue, the impact of project-generated GHGs is discussed in the cumulative impact analysis included in Chapter 6 of this document.

Mitigation Measure 4.3-2 Long-Term Operational (Regional) Criteria Air Pollutant and Precursor Emissions.

The City shall require that emission control measures be incorporated into project design and operation. Such measures may include, but are not limited to, the following items:

- The project applicant shall provide transit enhancing infrastructure that includes transit shelters, benches, street lighting, route signs and displays, and/or bus turnouts/bulbs.
- The project applicant shall provide bicycle enhancing infrastructure that includes secure bicycle parking.
- The project applicant shall provide electric maintenance equipment, use solar, low-emissions, or central water heaters, increase wall and attic insulation beyond Title 24 requirements, and orient buildings to take advantage of solar heating and natural cooling, use passive solar designs, energy efficient windows (double pane and/or Low-E), highly reflective roofing materials, cool paving (high albedo pavement) and parking lot tree shading above that required by code, install photovoltaic cells, programmable thermostats for all heating and cooling systems, awnings or other shading mechanisms for windows and walkways, utilize day lighting systems such as skylights, light shelves, interior transom windows.
- Parking lot design shall include clearly marked pedestrian pathways between transit facilities and building entrances included in the design.
- The project applicant shall require that all diesel engines be shut off when not in use for longer than 5 minutes on the premises to reduce idling emissions.

Level of Significance After Mitigation

Due to the large size of the project and large number of vehicle trips generated, it is not anticipated that implementation of the mitigation measures identified above would reduce emissions to below the applicable thresholds; however, these measures would likely substantially reduce the level of emissions. In addition, because of existing nonattainment conditions of the project area for ozone and $PM_{10,}$ project implementation could still contribute substantially to an existing or projected violation of ambient air quality standards following implementation of the identified mitigation measures. Therefore, this impact would remain significant and unavoidable.

IMPACT 4.3-3 Exposure of Sensitive Receptors to Toxic Air Contaminant Emissions. *The delivery trucks associated with the proposed commercial uses have the potential to expose proposed residents (in the proposed Rocklin 60 project) along the site's eastern boundary to elevated diesel PM emissions, which are categorized as a toxic air contaminant. However, these emission levels would not exceed established significance thresholds. Therefore, this would be considered a* ***less-than-significant*** *impact.*

The exposure of sensitive receptors to emissions of TAC can occur during both the construction and operational phases of the project. Health-related impacts associated with short-term construction and long-term stationary and mobile source operational emissions are discussed separately, as follows:

Short-Term Construction

Construction of the project and associated infrastructure would result in short-term diesel exhaust emissions from on-site heavy duty equipment used in site grading and excavation, paving, and other construction activities. These emissions would be intermittent, vary through the site area, and be of a relatively short duration, probably ending long before any future Rocklin 60 homes are built and occupied. Diesel PM was identified as a TAC by the ARB in 1998. According to the ARB, the potential cancer risk from the inhalation of diesel PM, as discussed below, is a more serious risk than the potential non-cancer health impacts (ARB 2003).

The dose to which receptors are exposed is the primary factor used to determine health risk (i.e., potential exposure to TAC emission levels that exceed applicable standards). Dose is a function of the concentration of a substance or substances in the environment and the duration of exposure to the substance. Dose is positively correlated with time, meaning that a longer exposure period would result in a higher exposure level for the maximally exposed individual. Thus, the risks estimated for a maximally exposed individual are higher if a fixed exposure occurs over a longer period of time. According to the Office of Environmental Health Hazard Assessment (OEHHA), health risk assessments, which determine the exposure of sensitive receptors to TAC emissions, should be based on a 70-year exposure period; however, such assessments should be limited to the period/duration of activities associated with the project (Salinas, pers. comm., 2004). Thus, because the use of mobilized equipment would be temporary (i.e., less than 3% of the total exposure period for which risk is based upon) in combination with the dispersive properties of diesel PM (Zhu and Hinds 2002) and that project construction activities would not be atypical in comparison to similar development-type projects (i.e., no excessive material transport or associated truck travel), short-term construction activities would not result in the exposure of sensitive receptors to substantial TAC concentrations. This impact is considered **less than significant.**

On-site Mobile Sources

Operational activities that require the use of diesel-fueled vehicles for extended periods, such as the delivery areas for the commercial buildings, would generate diesel PM emissions that could expose sensitive receptors to toxic air contaminants. The diesel PM emissions generated by these uses would be produced primarily at single locations (i.e., the building loading docks) on a semi-regular basis. Idling trucks, including transportation refrigeration units (TRUs), increase diesel PM levels at these locations. Existing residences to the east would be located more than 500 feet from these emission sources. However, residents within the proposed Rocklin 60 residential development would be located within approximately 150 feet of the loading docks for the larger commercial buildings on the site. The occupants of these proposed residences may be exposed to elevated levels of diesel exhaust PM emissions on a reoccurring basis.

A Health Risk Assessment was prepared to determine the exposure levels for the future residents within the proposed Rocklin 60 residential development (Michael Brandman Associates 2007). A Health Risk Assessment requires the completion and interaction of four general steps; 1) quantify project-generated TAC emissions; 2) identify ground-level receptor locations that may be affected by the emissions; 3) perform air dispersion modeling analyses to estimate ambient pollutant concentrations at each receptor location using project TAC emissions and

representative meteorological data to define the transport of those emissions in the atmosphere; and 4) characterize and compare the calculated pollutant concentrations with the applicable health risk significance threshold.

The first step in completing the assessment includes identifying and quantifying the project's TAC air emissions sources. The sources of TAC emissions from this project are associated with the diesel PM emitted from the delivery truck traffic that would service the facility. Diesel PM emissions from various sources were calculated using information derived from the project description, forecasted delivery truck information, and mobile source emission factors from the CARB EMFAC2007 emissions factor model. Onsite emissions were calculated for delivery vehicle travel and idling time, and included the use of transportation refrigeration units for trucks servicing facilities handling perishables such as produce and frozen foods for retail or restaurant establishments. Likely onsite travel links were defined from the project entrances to the respective project buildings and emissions were calculated along each link. Delivery vehicles were assumed to idle for a maximum of 5 minutes per vehicle per day in keeping with the CARB airborne toxic control measures, which regulate truck idling time.

The assessment requires that a network of receptors be specified such that the impacts can be computed at the various locations surrounding the project. The future residences within the proposed Rocklin 60 residential development were identified as sensitive receptors. Once the TAC emission sources were identified, this information was integrated with the meteorological data into the air dispersion model to determine the offsite effects of the TAC emissions generation on these sensitive receptors.

Based on the modeling results, the lifetime excess cancer risk associated with operation of the proposed project was identified for the individual residences within the proposed Rocklin 60 residential development. The highest lifetime excess cancer risk for an individual residence was identified as 5.1 in a million. For the majority of the residences, the cancer risk level was identified as 1 in a million. These estimated cancer risk levels are conservatively based on a hypothetical individual exposed to carcinogenic emissions from the project site continuously, 24 hours per day, 365 days per year for a 70-year lifetime, which is very unlikely to occur in reality. The lifetime excess cancer risk associated with operation of the proposed project for the residences within the proposed Rocklin 60 residential development would not exceed the PCAPCD cancer risk significance level of 10 in a million. Therefore, this impact would be considered **less than significant**.

Mitigation Measure 4.3-3 Exposure of Sensitive Receptors to Toxic Air Contaminant Emissions.

No mitigation measures would be necessary.

Level of Significance After Mitigation

The proposed project would not expose future residents to TAC emissions in excess of PCAPCD standards. Therefore, implementation of the proposed project would result in a less-than-significant impact.

IMPACT 4.3-4 Long-Term Operational (Local) Mobile-Source Carbon Monoxide Emissions. *The proposed project would increase mobile-source carbon monoxide emissions in the local area. However, this increase would not cause local mobile-source CO emissions to exceed applicable standards. Therefore, this impact would be considered less than significant.*

CO concentration is a direct function of motor vehicle activity (e.g., idling time and traffic flow conditions); particularly during peak commute hours, and meteorological conditions. Under specific meteorological conditions, CO concentrations may reach unhealthy levels with respect to local sensitive land-uses such as residential areas, schools, and hospitals. As a result, the PCAPCD also recommends analysis of CO emissions at a local level.

Local mobile-source CO concentrations were assessed using a screening level procedure provided by SMAQMD, which are applicable to the project area. This screening level analysis conservatively estimates the background CO concentration in the project area and the project-generated pollutant concentration to anticipate the combined concentration level. Based on this analysis, the 1- and 8-hour background CO concentrations for the year 2009 were calculated to be 2.78 ppm and 1.39 ppm, respectively. Project-generated 1- and 8-hour CO emissions from peak hour daily trips were calculated to be 5.6 ppm and 3.92 ppm, respectively, which results in total (existing plus project) concentrations of 8.38 ppm and 5.31 ppm. Thus, the proposed project is not anticipated to result in or contribute to local CO concentrations that exceed the California 1-hour or 8-hour ambient air quality standards of 20 ppm or 9 ppm, respectively. As a result, the impact of long-term operational emissions of local CO associated with the proposed project would be considered **less than significant**.

Mitigation Measure 4.3-4 Long-Term Operational (Local) Mobile-Source Carbon Monoxide Emissions.

No mitigation is required.

Level of Significance After Mitigation

The proposed project would not generate significant mobile-source carbon monoxide emission impacts.

IMPACT 4.3-5 Exposure of Sensitive Receptor to Odorous Emissions. *The proposed project would introduce new odor sources into the area (e.g., trash receptacles). However, these odor sources would not be expected to adversely affect adjacent land uses. Therefore, this impact would be considered* less than significant.

The occurrence and severity of odor impacts depends on numerous factors, including: the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of the receptors. While offensive odors rarely cause any physical harm, they still can be very unpleasant, leading to considerable distress among the public and often generating citizen complaints to local governments and regulatory agencies. Projects with the potential to frequently expose a substantial number of members of the public to objectionable odors would be deemed to have a significant impact.

The construction of the proposed project would result in diesel exhaust emissions from on-site construction equipment. The diesel exhaust emissions would be intermittent and temporary and would dissipate rapidly from the source with an increase in distance. In addition, the project is not anticipated to result in the installation of any major odor emission sources (e.g., food processing plant, landfill, wastewater treatment facility) that would result in a potentially significant impact to the occupants of the proposed or existing off-site land uses. Although specific commercial uses have not yet been identified, uses considered to be minor sources of odors may be developed. Such sources typically include dry cleaning establishments and restaurants. Fast food restaurants have the potential to generate odors from the operation of charbroilers and deep fat fryers. In addition, on-site trash receptacles used by the new commercial land uses have the potential to create odors. However, while there is a potential for odors to occur, trash receptacles that contain odorous materials (e.g., restaurant food waste) are typically picked up on a daily basis. Also, the site tenants would be subject to PCAPCD Rule 205 regarding the control of nuisances. Consequently, the operation of the proposed project would not be expected to create objectionable odors that would affect a substantial number of people. This impact would be considered **less than significant**.

Mitigation Measure 4.3-5 Exposure of Sensitive Receptor to Odorous Emissions.

No mitigation measures are required.

Level of Significance After Mitigation

The proposed project would not generate significant odor impacts.

4.4 NOISE

4.4.1 EXISTING SETTING

This section includes a description of ambient noise conditions, a summary of the applicable noise regulations, and an analysis of potential noise impacts of the proposed project. Mitigation measures are recommended, as necessary, to reduce significant noise impacts. (See Appendix E for noise related information, including a copy of the technical noise study [Bollard Acoustical Consultants, Inc. 2007]).

ACOUSTIC FUNDAMENTALS

Noise is generally defined as sound that is loud, disagreeable, unexpected, or unwanted. Sound, as described in more detail below, is mechanical energy transmitted in the form of a wave because of a disturbance or vibration, and as any pressure variation in air that the human ear can detect.

Sound Properties

A sound wave is introduced into a medium (air) by a vibrating object. The vibrating object (e.g., vocal chords, the string and sound board of a guitar, or the diaphragm of a radio speaker) is the source of the disturbance that moves through the medium. Regardless of the type of source creating the sound wave, the particles of the medium through which the sound moves are vibrating in a back and forth motion at a given frequency. The frequency of a wave refers to how often the particles vibrate when a wave passes through the medium. The frequency of a wave is measured as the number of complete back-and-forth vibrations of a particle per unit of time. If a particle of air undergoes 1,000 longitudinal vibrations in 2 seconds, then the frequency of the wave would be 500 vibrations per second. A commonly used unit for frequency is cycles per second, called hertz (Hz).

Each particle vibrates as a result of the motion of its nearest neighbor. The first particle of the medium begins vibrating at, say, 500 Hz, and sets the second particle of the medium into motion at the same frequency (500 Hz). The second particle begins vibrating at 500 Hz and thus sets the third particle into motion at 500 Hz. The process continues throughout the medium; hence each particle vibrates at the same frequency, which is the frequency of the original source. Subsequently, a guitar string vibrating at 500 Hz will set the air particles in the room vibrating at the same frequency (500 Hz), which carries a sound signal to the ear of a listener that is detected as a 500 Hz sound wave.

The back-and-forth vibration motion of the particles of the medium would not be the only observable phenomenon occurring at a given frequency. Because a sound wave is a pressure wave, a detector could be used to detect oscillations in pressure from high to low and back to high pressure. As the compression (high-pressure) and rarefaction (low-pressure) disturbances move through the medium, they would reach the detector at a given frequency. For example, a compression would reach the detector 500 times per second if the frequency of the wave were 500 Hz. Similarly, a rarefaction would reach the detector 500 times per second if the frequency of the wave were 500 Hz. Thus, the frequency of a sound wave refers not only to the number of back-and-forth vibrations of the particles per unit of time but also to the number of compression or rarefaction disturbances that pass a given point per unit of time. A detector could be used to detect the frequency of these pressure oscillations over a given period of time. The period of the sound wave can be found by measuring the time between successive high-pressure points (corresponding to the compressions) or the time between successive low-pressure points (corresponding to the rarefactions). The frequency is simply the reciprocal of the period; thus an inverse relationship exists so that as frequency increases, the period decreases, and vice versa.

A wave is an energy transport phenomenon that transports energy along a medium. The amount of energy carried by a wave is related to the amplitude (loudness) of the wave. A high-energy wave is characterized by

high amplitude; a low-energy wave is characterized by low amplitude. The amplitude of a wave refers to the maximum amount of displacement of a particle from its rest position. The energy transported by a wave is directly proportional to the square of the amplitude of the wave. This means that a doubling of the amplitude of a wave is indicative of a quadrupling of the energy transported by the wave.

Sound and the Human Ear

Because of the ability of the human ear to detect a wide range of sound-pressure fluctuations, sound-pressure levels are expressed in logarithmic units called decibels (dB) to avoid a very large and awkward range in numbers. The sound-pressure level in decibels is calculated by taking the log of the ratio between the actual sound pressure and the reference sound pressure squared. The reference sound pressure is considered the absolute hearing threshold (Caltrans 1998). Use of this logarithmic scale reveals that the total sound from two individual 65-dBA sources is 68 dBA, not 130 dBA (i.e., doubling the source strength increases the sound pressure by 3 dBA).

Because the human ear is not equally sensitive to all sound frequencies, a specific frequency-dependent rating scale was devised to relate noise to human sensitivity. An A-weighted dB (dBA) scale performs this compensation by discriminating against frequencies in a manner approximating the sensitivity of the human ear. The basis for compensation is the faintest sound audible to the average ear at the frequency of maximum sensitivity. This dBA scale has been chosen by most authorities for the purpose of regulating environmental noise. Typical indoor and outdoor noise levels are presented in Exhibit 4.4-1.

With respect to how humans perceive and react to changes in noise levels, a 1 dBA increase is imperceptible, a 3 dBA increase is barely perceptible, a 6 dBA increase is clearly noticeable, and a 10 dBA increase is subjectively perceived as approximately twice as loud (Egan 1988), as presented in Table 4.4-1. Table 4.4-1 was developed on the basis of test subjects' reactions to changes in the levels of steady-state pure tones or broad-band noise and to changes in levels of a given noise source. It is probably most applicable to noise levels in the range of 50 to 70 dBA, as this is the usual range of voice and interior noise levels. For these reasons, a permanent noise level increase of 3 dBA or more is typically considered significant and/or substantial in terms of the degradation of the existing noise environment.

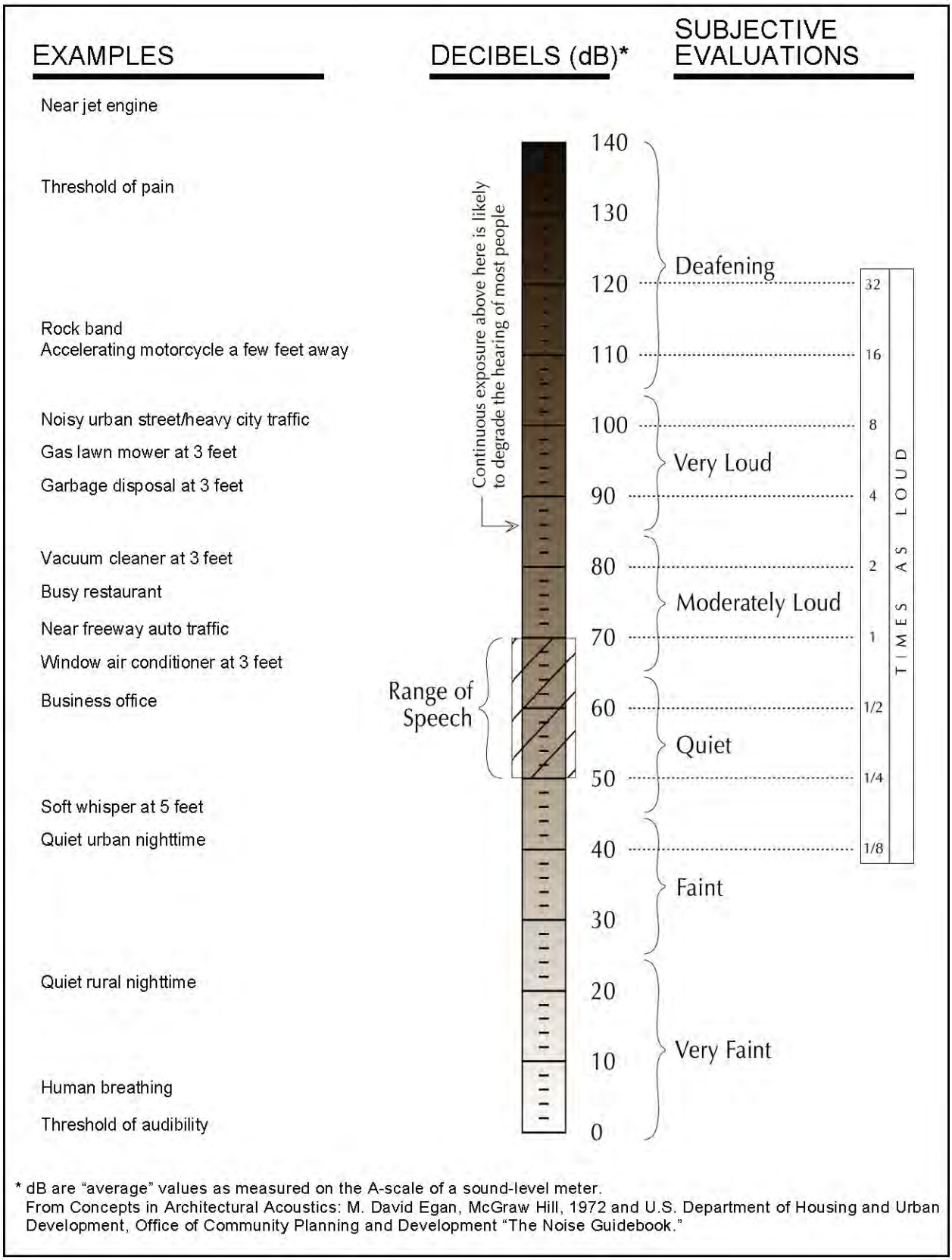
Table 4.4-1
Subjective Reaction to Changes in Noise Levels of Similar Sources

Change in Level, dBA	Subjective Reaction	Factor Change in Acoustical Energy
1	Imperceptible (Except for Tones)	1.3
3	Just Barely Perceptible	2.0
6	Clearly Noticeable	4.0
10	About Twice (or Half) as Loud	10.0

Source: Egan 1988

Sound Propagation

As sound (noise) propagates from the source to the receptor, the attenuation, or manner of noise reduction in relation to distance, is dependent on surface characteristics, atmospheric conditions, and the presence of physical barriers. The inverse-square law describes the attenuation caused by the pattern in which sound travels from the source to receptor. Sound travels uniformly outward from a point source in a spherical pattern



Source: EDAW 2007

Typical Noise Levels **Exhibit 4.4-1**

with an attenuation rate of 6 dBA per doubling of distance (dBA/DD). However, from a line source (e.g., a road), sound travels uniformly outward in a cylindrical pattern with an attenuation rate of 3 dBA/DD. The surface characteristics between the source and the receptor may result in additional sound absorption and/or reflection. Atmospheric conditions such as wind speed, temperature, and humidity may affect noise levels. Furthermore, the presence of a barrier between the source and the receptor may also attenuate noise levels. The actual amount of attenuation is dependent upon the size of the barrier and the frequency of the noise. A noise barrier may be any natural or human-made feature such as a hill, tree, building, wall, or berm (Caltrans 1998).

All buildings provide some exterior-to-interior noise reduction. A building constructed with a wood frame and a stucco or wood sheathing exterior typically provides a minimum exterior-to-interior noise reduction of 25 dBA with its windows closed, whereas a building constructed of a steel or concrete frame, a curtain wall or masonry exterior wall, and fixed plate glass windows of one-quarter-inch thickness typically provides an exterior-to-interior noise reduction of 30–40 dBA with its windows closed (Paul S. Veneklasen & Associates 1973, cited in Caltrans 2002).

Noise Descriptors

The selection of a proper noise descriptor for a specific source is dependent upon the spatial and temporal distribution, duration, and fluctuation of the noise. The noise descriptors most often encountered when dealing with traffic, community, and environmental noise are defined below (Caltrans 1998, Lipscomb and Taylor 1978).

- **L_{max}** (Maximum Noise Level): The maximum instantaneous noise level during a specific period of time. The **L_{max}** may also be referred to as the "peak (noise) level."

- **L_{min}** (Minimum Noise Level): The minimum instantaneous noise level during a specific period of time.

- **LX** (Statistical Descriptor): The noise level exceeded X% of a specific period of time.

- **L_{eq}** (Equivalent Noise Level): The energy mean (average) noise level. The instantaneous noise levels during a specific period of time in dBA are converted to relative energy values. From the sum of the relative energy values, an average energy value is calculated, which is then converted back to dBA to determine the L_{eq}. In noise environments determined by major noise events, such as aircraft overflights, the L_{eq} value is heavily influenced by the magnitude and number of single events that produce the high work levels.

- **L_{dn}** (Day-Night Noise Level): The 24-hour L_{eq} with a 10 dBA "penalty" for noise events that occur during the noise-sensitive hours between 10:00 p.m. and 7:00 a.m. In other words, 10 dBA is "added" to noise events that occur in the nighttime hours, and this generates a higher reported noise level when determining compliance with noise standards. The L_{dn} attempts to account for the fact that noise during this specific period of time is a potential source of disturbance with respect to normal sleeping hours.

- **CNEL** (Community Noise Equivalent Level): The CNEL is similar to the L_{dn} described above, but with an additional 5 dBA "penalty" added to noise events that occur during the noise-sensitive hours between 7:00 p.m. to 10:00 p.m., which are typically reserved for relaxation, conversation, reading, and television. If using the same 24-hour noise data, the reported CNEL is typically approximately 0.5 dBA higher than the L_{dn}.

- **SEL** (Sound Exposure Level): The SEL describes a receiver's cumulative noise exposure from a single impulsive noise event, which is defined as an acoustical event of short duration (0.5 second), such as a backup beeper, the sound of an airplane traveling overhead, or a train whistle, and involves a change in sound pressure above a defined reference value (usually approximately 40 dBA).

- **L_{50}** (50 percentile-exceeded sound level): The L_{50} describes the A-weighted sound level happening at 50 percent or more of the time of the measurement.

Community noise is commonly described in terms of the ambient noise level, which is defined as the all-encompassing noise level associated with a given noise environment. A common statistical tool to measure the ambient noise level is the average, or equivalent, sound level, L_{eq}, which corresponds to a steady-state A-weighted sound level containing the same total energy as a time-varying signal over a given time period (usually one hour). The L_{eq} is the foundation of the composite noise descriptors such as L_{dn} and CNEL, as defined above, and shows very good correlation with community response to noise.

Negative Effects of Noise on Humans

Negative effects of noise exposure include physical damage to the human auditory system, interference, and disease. Exposure to noise may result in physical damage to the auditory system, which may lead to gradual or traumatic hearing loss. Gradual hearing loss is caused by sustained exposure to moderately high noise levels over a period of time; traumatic hearing loss is caused by sudden exposure to extremely high noise levels over a short period. Gradual and traumatic hearing loss both may result in permanent hearing damage. In addition, noise may interfere with or interrupt sleep, relaxation, recreation, and communication. Although most interference may be classified as annoying, the inability to hear a warning signal may be considered dangerous. Noise may also be a contributor to diseases associated with stress, such as hypertension, anxiety, and heart disease. The degree to which noise contributes to such diseases depends on the frequency, bandwidth, and level of the noise, and the exposure time (Caltrans 1998).

Vibration

Vibration is the periodic oscillation of a medium or object. The rumbling sound caused by the vibration of room surfaces is called structureborne noise. Sources of groundborne vibrations include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) or human-made causes (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous, such as factory machinery, or transient, such as explosions. As is the case with airborne sound, groundborne vibrations may be described by amplitude and frequency.

Vibration amplitudes are usually expressed in peak particle velocity (PPV) or root mean squared (RMS), as in RMS vibration velocity. The PPV and RMS velocity are normally described in inches per second (in/sec). PPV is defined as the maximum instantaneous positive or negative peak of a vibration signal. PPV is often used in monitoring of blasting vibration because it is related to the stresses that are experienced by buildings (FTA 2006, Caltrans 2002).

Although PPV is appropriate for evaluating the potential for building damage, it is not always suitable for evaluating human response. It takes some time for the human body to respond to vibration signals. In a sense, the human body responds to average vibration amplitude. The RMS of a signal is the average of the squared amplitude of the signal, typically calculated over a 1-second period. As with airborne sound, the RMS velocity is often expressed in decibel notation as vibration decibels (VdB), which serves to compress the range of numbers required to describe vibration (FTA 2006). This is based on a reference value of 1 μ inch/second.

The typical background vibration-velocity level in residential areas is approximately 50 VdB. Groundborne vibration is normally perceptible to humans at approximately 65 VdB. For most people, a vibration-velocity level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels (FTA 2006).

Typical outdoor sources of perceptible groundborne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the groundborne vibration is rarely perceptible. The

range of interest is from approximately 50 VdB, which is the typical background vibration-velocity level, to 100 VdB, which is the general threshold where minor damage can occur in fragile buildings. Construction activities can generate groundborne vibrations, which can pose a risk to nearby structures. Constant or transient vibrations can weaken structures, crack facades, and disturb occupants (FTA 2006).

Construction vibrations can be transient, random, or continuous. Transient construction vibrations are generated by blasting, impact pile driving, and wrecking balls. Continuous vibrations result from vibratory pile drivers, large pumps, and compressors. Random vibration can result from jackhammers, pavement breakers, and heavy construction equipment. Table 4.4-2 describes the general human response to different levels of groundborne vibration-velocity levels.

Table 4.4-2
Human Response to Different Levels of Groundborne Noise and Vibration

Vibration-Velocity Level	Human Reaction
65 VdB	Approximate threshold of perception.
75 VdB	Approximate dividing line between barely perceptible and distinctly perceptible. Many people find that transportation-related vibration at this level is unacceptable.
85 VdB	Vibration acceptable only if there are an infrequent number of events per day.

Note: VdB = vibration decibels referenced to 1 μ inch/second and based on the root mean square (RMS) velocity amplitude.
Source: FTA 2006

EXISTING NOISE ENVIRONMENT

The project site is currently vacant. A small commercial center containing gas stations, a convenience store, and a fast food restaurant is located north of the project site across Interstate 80 on the east side of Sierra College Boulevard. The project site has approximately 1,200 feet of frontage along I-80 on its northwest edge. Sierra College Boulevard runs along the west side of the project. Several existing rural residential homes are located east of the project site, as well as to the southwest along the western side of Sierra College Boulevard. A community church is also located southwest of the project site off Sierra College Boulevard. The Sierra College campus is located approximately one mile southwest of the site. The rural residences, community church and college campus would be considered noise-sensitive land uses. It should be noted that the Rocklin 60 residential project is currently proposed on the adjacent property immediately to the east of the project site (an EIR was in process as of Fall 2007). Therefore, if approved, new residential homes would be located along the eastern property line of the project site. The lot boundaries of the nearest proposed residence would be approximately 35 feet from the eastern project site boundary.

To generally quantify the existing ambient noise environment in the project vicinity, continuous hourly noise level measurements were conducted on the project site for a period of 24 hours on January 19, 2006. A Larson Davis Laboratories (LDL) Model 820 precision integrating sound level meter was used for the noise level measurement survey. The meter was calibrated before and after use with an LDL Model CA200 acoustical calibrator to ensure the accuracy of the measurements. The equipment used meets all pertinent specifications of the American National Standards Institute for Type 1 sound level meters (ANSI 51.4).

The noise level measurement survey results are summarized in Table 4.4-3. The ambient noise monitoring survey revealed that ambient noise levels in the immediate project vicinity are elevated above the City of Rocklin noise level standards, as would be expected along the I-80 corridor.

Table 4.4-3 Summary of Measured 24-Hour Noise Levels								
Location	Date – Time	Average Measured Hourly Noise Levels, dBA						
		24-hour L_{dn}	Daytime (7:00 am - 10:00 pm)			Nighttime (10:00 pm - 7 am)		
			L_{eq}	L_{50}	L_{max}	L_{eq}	L_{50}	L_{max}
1 On project site at I-80 right-of-way	January 19, 2006	83	79	78	85-92	76	71	83-89
Source: Monitoring performed by Bollard Acoustical Consultants, Inc.								

EXISTING NOISE SOURCES

Non-Transportation (Stationary)

The project site is located near a few rural residential dwellings. There are no major stationary sources of noise in the vicinity of the proposed project. Transportation noise sources associated with Interstate 80 would dominate the existing noise environment, as discussed below.

Transportation

The ambient noise environment in the immediate project vicinity is dominated by traffic on Interstate 80. Traffic on Sierra College Boulevard also contributes to the ambient noise environment in the project vicinity, but to a far lesser extent than I-80.

Existing Noise Levels

To determine the existing traffic noise levels adjacent to the local roadways within the project vicinity, the Federal Highway Administration Highway Traffic Noise Prediction Model (FHWA-RD-77-108) was used with the California Vehicle Noise Emission Levels. The FHWA Model is based upon the California Department of Transportation Sound 32 Traffic Noise Prediction Model (Calveno) reference noise factors for automobiles, medium trucks and heavy trucks, with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, and the acoustical characteristics of the site. Traffic volumes and roadway segment information were obtained from LSA Transportation Engineers (LSA 2007).

4.4.2 REGULATORY SETTING

To limit population exposure to physically and/or psychologically damaging noise levels, the State of California, various county governments, and most municipalities in the State have established standards and ordinances to control noise. The Rocklin General Plan Noise Element provides standards regarding noise levels for uses relevant to the proposed project. In addition, noise thresholds can be derived from the CEQA guidelines. The following provides a general overview of the existing regulations which would be pertinent to this project.

STATE PLANS, POLICIES, REGULATIONS, AND LAWS

The State of California has adopted noise standards in areas of regulation not preempted by the federal government. State standards regulate noise levels of motor vehicles and freeway noise affecting classrooms, set standards for sound transmission control and occupational noise control, and identify noise insulation standards. The State has also developed land use compatibility guidelines for community noise environments as discussed below.

Title 24 of the California Code of Regulations establishes standards governing interior noise levels that apply to all new multi-family residential units in California. These standards require that acoustical studies be performed before construction at building locations where the existing L_{dn} exceeds 60 dBA. Such acoustical studies are required to establish mitigation measures that will limit maximum L_{dn} levels to 45 dBA in any habitable room. Although there are no generally applicable interior noise standards pertinent to all uses, many communities in California have adopted an L_{dn} of 45 as an upper limit on interior noise in all residential units.

The State of California General Plan Guidelines (State of California 2003), published by the State Governor's Office of Planning and Research (OPR), provides guidance for the acceptability of projects within specific CNEL/L_{dn} contours. Table 4.4-4 presents acceptable and unacceptable community noise exposure limits for various land use categories. Generally, residential uses are considered to be acceptable in areas where exterior noise levels do not exceed 60 dBA CNEL/L_{dn}. Residential uses are normally unacceptable in areas exceeding 70 dBA L_{dn} and conditionally acceptable within 55 to 70 dBA L_{dn}. Schools are normally acceptable in areas up to 70 dBA CNEL and normally unacceptable in areas exceeding 70 dBA CNEL. Commercial uses are normally acceptable in areas up to 70 dBA CNEL. Between 67.5 and 77.5 dBA CNEL, commercial uses are conditionally acceptable, depending on the noise insulation features and the noise reduction requirements. The guidelines also present adjustment factors that may be used to arrive at noise acceptability standards that reflect the noise control goals of the community, the particular community's sensitivity to noise, and the community's assessment of the relative importance of noise pollution.

Table 4.4-4
City of Rocklin General Plan Noise Compatibility Guidelines

Land Use Category	Community Noise Exposure (L_{dn} or CNEL, dBA)			
	Normally Acceptable[1]	Conditionally Acceptable[2]	Normally Unacceptable[3]	Clearly Unacceptable[4]
Residential - Single Family, Duplex, Mobile Home	<60	60-70	70-75	75+
Residential - Multiple Family	<65	65-70	70-75	75+
Transient Lodging, Motel, Hotel	<65	65-70	70-80	80+
School, Library, Church, Hospital, Nursing Home	<65	65-70	70-80	80+
Auditorium, Concert Hall, Amphitheater		<70		70+
Sports Arenas - Outdoor Spectator Sports		<75		75+
Playground, Neighborhood Park	<70		70-75	75+
Golf Courses, Stable, Water Recreation, Cemetery	<75		75-80	80+
Office Building, Business Commercial and Professional	<70	70-75	75+	
Industrial, Manufacturing, Utilities, Agriculture	<75	75-80	75+	

1 Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.
2 New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.
3 New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.
4 New construction or development should generally not be undertaken.
Source: State of California Governor's Office of Planning and Research 2003

LOCAL PLANS, POLICIES, REGULATIONS, AND LAWS

The City of Rocklin General Plan Noise Element does not contain quantitative noise level limits for commercial uses affecting residential uses. The following include the existing policies, laws, and regulations established in the City of Rocklin General Plan, as applicable to the proposed project.

Goal: To protect residents from health hazards and annoyance associated with excessive noise levels.

- **Policy 1.** To use adopted noise compatibility guidelines to evaluate compatibility of proposed new development.
- **Policy 2.** To require noise analysis of proposed development projects as part of the environmental review process and to require mitigation measures that reduce noise impacts to acceptable levels.
- **Policy 3.** To require noise buffering or insulation in new development along major streets and highways, and along railroad tracks.
- **Policy 4.** To control noise sources in residential areas by restricting truck traffic to designated truck routes.
- **Policy 5.** To monitor noise generating land uses to assure compliance with acceptable noise levels.
- **Policy 6.** To encourage sound mitigation, including but not limited to sound walls, along existing highways where noise is determined to exceed adopted standards.

4.4.3 IMPACTS AND MITIGATION MEASURES

METHOD OF ANALYSIS

To assess potential construction-, area-, and stationary-source noise impacts, sensitive receptors and potential sensitive receptors and their relative exposure were identified. Noise (and vibration) levels of specific equipment expected to be used in project construction or operation were determined and resultant noise levels at sensitive receptors were calculated assuming documented noise (and vibration) attenuation rates.

The FHWA traffic noise prediction model was used to model traffic noise levels along affected roadways, based on the trip distribution estimates obtained from the traffic analysis prepared for this project (LSA 2007), Caltrans, and site reconnaissance data (LSA 2007; Bollard Acoustical Consultants, Inc. 2007). The project's contribution to the baseline traffic noise levels along area roadways was determined by comparing the predicted noise levels from the centerline of the near travel lane with and without project-generated traffic.

The significance of short-term and long-term noise impacts was determined based on comparisons with applicable standards. Mitigation measures along with their relative effectiveness were provided for significant or potentially significant noise impacts.

THRESHOLDS OF SIGNIFICANCE

In accordance with CEQA Guidelines Appendix G and the City of Rocklin Noise Element, noise impacts are considered significant if implementation of the proposed project under consideration would result in any of the following:

- Exposure of persons to or generation of noise levels in excess of applicable standards. Specifically, exterior and interior noise levels of 60 dBA L_{dn} and 45 dBA L_{dn}, respectively, for residential uses exposed to noise sources.
- Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.
- A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project, typically defined as 3 dBA or greater.
- A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, where the project would expose people residing or working in the area to excessive noise levels.
- For a project within the vicinity of an active private airstrip, where the project would expose people residing or working in the project area to excessive noise levels.

IMPACTS AND MITIGATION MEASURES

IMPACT 4.4-1 **Construction-Generated Temporary Increases in Ambient Noise Levels.** *Construction activities would result in temporary increases in ambient noise levels for existing and, potentially, for proposed residents (if approved and occupied prior to project construction) directly adjacent to the eastern site boundary. However, these construction noise levels would be intermittent and would be attenuated with the installation of the eastern perimeter wall. As a result, this impact is considered* ***less than significant****.*

Construction at the project site would include site grading, clearing, and excavation associated with the site preparation phase; paving; building construction; and the application of architectural coatings, in addition to other miscellaneous activities. The specific on-site equipment required for construction is not known at this time, but is anticipated to include scrapers, excavators, loaders, backhoes, haul trucks, and other miscellaneous construction equipment. Noise would also be generated during the construction phase by increased truck traffic onsite. A project-generated noise source would include onsite truck traffic associated with the transport of heavy materials and equipment to and from internal construction sites and the movement of heavy construction equipment on the project site.

During the construction phases of the project, noise from construction activities would contribute to the noise environment in the immediate project vicinity. Activities involved in construction would generate maximum noise levels, as indicated in Table 4.4-5, ranging from 75 to 80 dBA at a distance of 50 feet, with feasible noise control (e.g., mufflers). Construction activities would be of short duration and temporary in nature. As described in Chapter 3, Project Description, market conditions may affect the schedule of site construction. Currently, the first phase of construction would include the mass grading of the entire site and completion of major site work (including, but not limited to, the eastern perimeter wall, the offsite detention basin and other necessary offsite infrastructure improvements) and would likely include construction of the major anchor tenant facilities, additional buildings and the majority of the parking field and access aisles. This entire phase is likely to conclude within two years of initiation. The remaining construction schedule would consist of building the remaining retail square footage available within the Retail Promenade District, as well as remaining unconstructed pad buildings adjacent to the freeway.

Table 4.4-5 Typical Construction Equipment Noise Levels		
Type of Equipment	Noise Level in dBA at 50 feet	
	Without Feasible Noise Control	With Feasible Noise Control[1]
Dozer or Tractor	80	75
Excavator	88	80
Scraper	88	80
Front End Loader	79	75
Backhoe	85	75
Grader	85	75
Truck	91	75

[1] Feasible noise control includes the use of intake mufflers, exhaust mufflers and engine shrouds operating in accordance with manufacturers specifications.

Source: US Environmental Protection Agency 1971

According to the City of Rocklin General Plan Noise Element, sensitive noise receptors include single family residences and churches, both of which are located (or proposed to be located) in close proximity to the project site. The nearest residential dwelling to the project site is located approximately 325 feet east of the site's northeastern boundary. The nearest residence to the west is approximately 550 feet from the project site and the Lifehouse Church is located approximately 300 feet to the southwest. In addition, the Rocklin 60 residential development is proposed to be located immediately east of the project site, with the nearest proposed residential structure to be located approximately 50 feet from the project boundary.

Assuming a standard noise attenuation rate of 6 dBA per doubling of distance from the source to the receptor, exterior noise levels at the nearest existing residence to the east and at the Lifehouse Church to the southwest would be approximately 65 dBA with feasible noise control in place. Using this same noise attenuation rate, the short-term, exterior noise levels at the nearest existing residence to the west is estimated to be approximately 60.5 dBA with feasible noise control in place. For the residence to the east and the church to the southwest, the L_{dn} is estimated to be 62.7 dBA. For the residence to the west, the L_{dn} is estimated to be 58.6 dBA.

The City's General Plan Noise Element does not identify a short-term, construction-noise-level threshold. However, the Noise Compatibility Guidelines included in the Noise Element identify the normally acceptable single-family residential noise level for existing uses as up to 60 dBA $L_{dn,}$ and the conditionally acceptable single-family residential noise level as up to 70 dBA $L_{dn.}$ For churches, the normally acceptable noise level is up to 65 dBA $L_{dn,}$ and the conditionally acceptable noise level is up to 70 dBA L_{dn}. The project's short-term construction noise impacts at the nearest existing residence to the east would be considered conditionally acceptable according to the City's Noise Element thresholds. For the church and the nearest existing residence to the west, the project's short-term construction noise impacts would be considered normally acceptable. This distinction between short-term and long-term noise sources is a typical one in both CEQA documents and local noise ordinances, which generally recognize the reality that short-term noise from construction is inevitable and cannot be mitigated beyond a certain level. Thus, local agencies frequently tolerate short-term noise at levels that they would not accept for permanent noise sources. A more severe approach would be impractical, and might preclude the kind of construction activities that are inevitable from time to time in urban environments. Most residents of urban areas recognize this reality, and expect to hear construction activities on occasion.

For the nearest existing residence to the east, the estimated noise level of 62.7 dBA L_{dn} has been calculated without the proposed perimeter wall along the site's eastern boundary. Following the installation of this perimeter wall, which would occur as part of the first phase of project construction, the noise levels experienced at this existing residence would be reduced by between 10 and 15 dBA, or substantially below the City's noise threshold of 60 dBA L_{dn}. Due to the short-term nature of the construction noise exposure and the intermittent frequency of construction noise, the existing noise sensitive receptors (i.e., residential and church land uses) would not experience excessive noise levels during project construction. Therefore, the noise generated from typical construction activities would result in a **less-than-significant** impact for the existing residential and church uses in the area surrounding the project site.

If the Rocklin 60 project is constructed before the proposed project, residences within the western portion of the development would be exposed to construction noise. The closest residential structures would be located within approximately 50 feet of the project's eastern boundary. However, the Rocklin 60 project would be required to construct a sound wall along the entire length of its western boundary prior to project occupation. As part of this installation, the Rocklin 60 developer would be required to grade the slope between the proposed project and the Rocklin 60 project in order to transition between the different grades of the two projects. Notably, it seems very unlikely, for at least two reasons, that the Rocklin 60 project would be constructed before the Rocklin Crossings project (assuming both are approved). First, the Rocklin Crossings project is ahead of the Rocklin 60 process in terms of processing within the City of Rocklin. Thus, the Rocklin 60 project's draft EIR is expected to trail this EIR by at least a few months, as would be the case with project approval. Second, the housing market is down at present, and is not expected to recover until 2009 or perhaps later. Thus, the market for new homes at the Rocklin 60 site is not expected to be robust enough in the period immediately following project approval (if it occurs) to justify the immediate construction of large numbers of houses. In contrast, the developer of Rocklin Crossings is facing a strong retail market, has executed lease agreements with major tenants, and has stated its intention to develop the property as soon as all necessary approvals and permits are in hand. The project applicant and the Rocklin 60 developer have an agreement to share the cost of constructing this wall. With the sound wall in place along the project's eastern boundary, the construction noise levels experienced by residents within the Rocklin 60 project would be below the City's established thresholds. Therefore, this impact would be considered **less than significant**.

Mitigation Measure 4.4-1 Construction-Generated Temporary Increases in Ambient Noise Levels

No mitigation measures are necessary

Level of Significance after Mitigation

The exposure of residents to high noise levels would be limited in duration due to the installation of the eastern perimeter wall during the first phase of construction. Therefore, the project's short-term construction noise impacts would not be considered excessive in nature and would be considered less than significant.

IMPACT 4.4-2 Construction Blasting Noise. *If construction activities include blasting, the intermittent noise levels could be considered excessive for adjacent land uses, if the blasting activities are unexpected. As a result, this impact is considered* ***significant****.*

Construction at the site could require blasting activities if hard rock areas can not be easily excavated with typical construction equipment. Blasting activities could generate intermittent noise in excess of the normally acceptable levels identified in the City's Noise Compatibility Guidelines. These blasting noise levels could be considered excessive if they occur unexpectedly or during noise sensitive hours. Therefore, this impact would be considered **significant**.

Mitigation Measure 4.4-2 Construction Blasting Noise

a. If blasting activities are to occur in conjunction with the improvements, the contractor shall conduct the blasting activities in compliance with state and local regulations. The contractor shall obtain a blasting permit from the City of Rocklin prior to commencing any on-site blasting activities. The permit application shall include a description of the work to be accomplished and a statement of the necessity for blasting as opposed to other methods considered including avoidance of hard rock areas and safety measures to be implemented such as blast blankets. The contractor shall coordinate any blasting activities with Police and Fire Departments to insure proper site access and traffic control, and public notification including media, nearby residents and businesses, as determined appropriate by the Rocklin Police and Fire Departments. Blasting specifications and plans shall include a schedule that outlines the time frame in which blasting will occur in order to limit noise and traffic inconvenience.

b. Construction blasting activities shall be subject to the City of Rocklin Construction Noise Guidelines, including limiting construction-related noise generating activities within or near residential areas to the less noise sensitive daytime hours (between 7:00 a.m. and 7:00 p.m. on weekdays, and between 8:00 a.m. and 7:00 p.m. on weekends).

Level of Significance after Mitigation

With implementation of the identified mitigation measures, the exposure of residents to high noise levels associated with blasting activities would be minimized. As with other sources of short-term noise events (the use of saws and other equipment at construction sites), CEQA documents and local noise ordinances typically allow greater noise levels from temporary blasting activities than would be acceptable from permanent noise sources. Because certain properties, to support planned urban land uses, cannot be developed without blasting, some level of intermittent noise from blasting is considered an unavoidable aspect of the urban environment in areas where development is coming on-line. A more severe approach would be impractical, and might preclude the kind of construction activities that are inevitable from time to time in urban environments. Here, the time of day restrictions should ensure that noise impacts from blasting would occur when the vast majority of people are awake, and many residents are away at their jobs. For all of these reasons, the project's short-term construction blasting noise impacts would be reduced to a less-than-significant level.

IMPACT 4.4-3 Traffic-Generated Permanent Increases in Ambient Noise Levels. *The proposed project would not result in a noticeable increase in traffic noise levels at off-site sensitive receptors. Therefore, this impact is considered* ***less than significant****.*

The increase in daily traffic volumes resulting from implementation of the proposed project would generate increased noise levels along nearby roadway segments. To assess noise impacts due to project-related traffic increases on the existing local roadway network, traffic noise levels were predicted at a representative distance for both baseline (all approved future projects) with and without project conditions.

The FHWA traffic noise prediction model was used to predict existing plus project traffic noise levels at a representative distance of 50 feet from the project area roadway centerlines. Table 4.4-6 shows the predicted traffic noise level increases on the local roadway network for baseline conditions with and without the project. Appendix E provides the complete inputs and results to the FHWA model for each of the no project and plus project conditions.

Table 4.4-6 Summary of Modeled Baseline Traffic Noise Levels With & Without Project				
Roadway	Segment	L_{dn} @ 50 Feet (dBA) [1]		
		Baseline	Baseline + Project	Change
Taylor Road	King Rd & Horseshoe Bar Rd	69.99	70.23	0.24
Taylor Road	Horseshoe Bar Rd & Sierra College Blvd	68.05	68.28	0.23
Pacific Street	Sierra College Blvd & Dominguez Rd	67.32	67.50	0.18
Pacific Street	Dominguez Rd & Rocklin Rd	69.47	69.53	0.06
Rocklin Road	Pacific St & Granite Dr	70.62	70.68	0.06
Rocklin Road	I-80 & Sierra College Blvd	68.22	68.69	0.47
Rocklin Road	Sierra College Blvd & Barton Rd	65.29	66.04	0.75
Barton Road	Rocklin Rd & Brace Rd	63.11	63.78	0.67
Horseshoe Bar Rd	I-80 & Brace Rd	65.53	65.57	0.04
Brace Road	I-80 & Barton Rd	63.72	63.84	0.12
Brace Road	I-80 & Sierra College Blvd	62.98	62.98	0.00
Sierra College Blvd	English Colony Way & King Rd	67.83	68.50	0.67
Sierra College Blvd	King Rd & Taylor Rd	68.16	68.97	0.81
Sierra College Blvd	Taylor Rd & I-80	70.27	71.02	0.75
Sierra College Blvd	I-80 & Dominguez Rd	68.07	70.23	2.16
Sierra College Blvd	Dominguez Rd & Rocklin Rd	69.34	70.31	0.97
Granite Drive	Dominguez Rd & Sierra College Blvd	64.59	64.60	0.01
Granite Drive	Dominguez Rd & Rocklin Rd	65.85	65.88	0.03
Dominguez Road	Taylor Rd & Granite Dr	61.49	61.67	0.18
King Road	Sierra College Blvd & Taylor Rd	65.14	65.14	0.00

1 Distances to traffic noise contours are measured in feet from the centerlines of the roadways. Traffic noise levels are predicted at a standard distance from the roadway centerlines and do not account for shielding from existing noise barriers or intervening structures. Traffic noise levels may vary depending on actual setback distances and localized shielding.

2 Baseline + Approved + Project traffic volumes for Interstate 80 were not included in the traffic study.

Source: Data modeled by EDAW 2007 using FHWA-RD-77-108 with inputs from LSA 2007.

As indicated in Table 4.4-6, the proposed project would not result in traffic noise level increases exceeding 3 dBA on project-area roadways, when compared to no-project conditions. With respect to how humans perceive and react to changes in noise levels, a 3 dBA increase is considered barely perceptible. Therefore, the proposed project would not result in a substantial increase in traffic noise levels at off-site sensitive receptors and this impact would be considered **less than significant**.

Mitigation Measure 4.4-3 Traffic-Generated Permanent Increases in Ambient Noise Levels

No mitigation measures are required.

Level of Significance after Mitigation

Significant traffic-generated noise impacts would not be anticipated with project implementation.

IMPACT 4.4-4 Exposure of Sensitive Receptors to Excessive Stationary- or Area-Source Noise Levels. *The truck deliveries associated with the proposed commercial uses would generate substantial noise levels, which could affect the proposed residential uses immediately to the east of the project site. Therefore, this impact would be considered* ***significant****.*

The noise sources and levels typically associated with the various components of commercial land uses are discussed individually below.

Truck Delivery Noise

The identity of the remaining tenants, as well as the location and size of the remaining tenant buildings, has not yet been determined. The total size of the remaining tenants, combined with the Wal-Mart Supercenter and Home Depot, would not, in any event, exceed 543,500 square feet. It is currently anticipated that the remaining tenants would be primarily located directly north of the proposed Wal-Mart Supercenter, although a single building may be located between the Supercenter and the proposed Home Depot building. Some of the remaining tenant buildings may have separate loading docks located in the rear of the buildings.

The proposed home improvement store, large retail/grocery store, and the remaining smaller commercial buildings along the eastern site boundary would all have truck loading dock facilities in the rear of the buildings. In order to utilize the loading dock facilities, trucks would arrive, stop, couple and decouple trailers, back into loading docks, be unloaded, and depart the site. The trailers would consist of enclosed trailers with food (some refrigerated) and merchandise for each of the commercial buildings, and flatbeds carrying lumber to the home improvement store. According to project representatives, worst case daily truck activity at these stores would conservatively consist of approximately 15 semi-trailer trucks per day and approximately 3 semi dual-trailer flatbed trucks per day for delivery of materials at the home improvement store. In addition, 6 semi-trailer trucks delivering dry grocery goods and general merchandise per day and 3 refrigerated semi-trailer truck deliveries per day would occur at the Wal-Mart Supercenter. Approximately 15 smaller 2-axle vender trucks would also make deliveries to these stores each day. Therefore, for this analysis, it was assumed that up to 27 truck deliveries and 15 small truck deliveries could occur in a given day (Bollard Acoustical Consultants, Inc. 2007).

Based on an evaluation of the project site plan, delivery trucks would likely enter the site from the roadway along the southern edge of the project site and traverse north behind the stores along the project's eastern border and then return to the site’s southern exit. The trucks would be closest to the noise-sensitive receivers during passages directly behind the stores. Specifically, truck pass-bys would be approximately 70 feet from the approximate center of the nearest residential backyards proposed to the east. Truck pass-bys en route to the loading dock areas are expected to be relatively brief, and are estimated to produce an average Sound Exposure Level (SEL) of approximately 87 dBA at a distance of 50 feet. Smaller truck pass-by’s would produce an average SEL of approximately 80 db at 50 feet. Relative to the louder and greater number of heavy truck deliveries, the noise generation of the smaller (2-axle) trucks is not anticipated to appreciably affect overall truck pass-by noise levels. The typical L_{max} level due to a truck pass-by has been measured to be approximately 75 dBA at a distance of 50 feet. Because the SEL represents a single impulsive noise event over a short duration (0.5 second), it is typically higher than the L_{max} level, which represents the maximum instantaneous noise level during a specific period of time.

Primary noise sources associated with loading dock operations at the proposed large retail/grocery store would most likely be heavy trucks stopping (air brakes), backing into the loading docks (back-up alarms), and pulling out of the loading docks (revving engines). Two below-grade truck loading docks are proposed for the Wal-Mart Supercenter, each with three individual side-by-side loading bays. The bay doors would be equipped with sealed gaskets to minimize noise generation from off-loading trailers.

If the heavy truck engines idle and/or trailer refrigeration units cycle on and off while the trucks are being unloaded, then these would be additional sources of noise at the loading dock location. Once the trucks have backed into the loading dock, they are unloaded from the inside of the store using a fork lift or hand cart, and most of that unloading noise is contained within the building and truck trailer.

Not all trucks are unloaded at loading docks, as beverage, bread, potato chip, and other venders often utilize hand carts to unload their products through rear doors (as opposed to depressed dock areas). Flatbed lumber trailers would be unloaded using forklifts in the area behind the home improvement store. Noise from these operations also contributes to the overall truck delivery noise environment.

Due to the fairly intensive truck unloading operations which would occur adjacent to the eastern site boundary, it is not feasible to assess the noise of different operations (i.e., lumber unloading, loading docks, truck pass-bys, refrigeration trucks, etc.), independently. As a result, the noise generation of each of these sources was combined to arrive at a cumulative assessment of truck delivery noise. The results of this assessment indicate that a typical busy hour of overall truck activity along the eastern site boundary would generate median (L_{50}) and maximum (L_{max}) noise levels of 60 dBA and 80 dBA, respectively, at a reference distance of 50 feet from the effective noise center of the truck unloading activities. An exception to these levels is made for refrigeration trucks, in which median noise levels would be approximately 5 dBA higher, or 65 dBA L_{50}. Maximum noise levels associated with refrigeration trucks were not found to be higher than maximum noise levels for non-refrigeration trucks.

The reference noise levels cited above are propagated to the nearest proposed residences to the east assuming standard spherical spreading treating the noise source as a stationary point. This standard assumption leads to a 6 dBA decrease in noise levels for each doubling of distance. For example, the reference level of 60 dBA L_{50} at 50 feet from the source would decrease to 54 dBA L_{50} at a distance of 100 feet, and to 48 dBA L_{50} at a distance of 200 feet.

The distances from the approximate noise center of the truck delivery areas to the nearest proposed residences in the Rocklin 60 residential development to the east vary. For example, proposed Lot 38 is located closer to the project than proposed lots 46-47, 66-67, and 92-93. Proposed lots 145 and 146 are located even closer to the eastern site boundary. Table 4.4-7 shows the approximate distances from the effective noise centers of the truck delivery areas to the nearest proposed residences to the east, and the corresponding noise levels associated with the combined truck delivery operations.

Based on the predicted average and maximum noise levels associated with truck deliveries identified in Table 4.4-7, a noise barrier analysis was performed for this project. The barrier analysis took into account the relative elevations of the commercial truck activity areas as well as the elevations of the proposed residences to the east. It should be noted that a noise barrier is proposed by the project applicant and that the barrier is to

Table 4.4-7
Predicted Truck Delivery Noise Levels at Nearest Proposed Residences

Lots(s)	Distance (feet)	Predicted L_{50} Without/With Refrigeration Trucks (dBA)	Predicted L_{max} (dBA)
38	70	57/62	77
46–47, 66–67, 92–93, 117–118	120	52/57	72
145–146	70	57/62	77

Notes:
[1] Lot locations are shown in Figure 1a of the Environmental Noise Assessment prepared for this project (Bollard Acoustical Consultants, Inc.2007) (Appendix E).
[2] Distances shown are from approximately the noise center of truck activity areas to the backyards of the nearest residences.
[3] Predicted L_{50} values based on a reference level of 60 dBA at 50 feet.
[4] Predicted L_{max} values based on a reference level of 80 dBA at 50 feet.
Source: Bollard Acoustical Consultants, Inc. 2007

be located relative to the elevation of the commercial site. This is important in that the proposed residential area would be at a lower elevation than the commercial site, thereby improving the efficiency of the noise barrier constructed at the commercial site. The results of the barrier analysis are summarized in Table 4.4-8, with the detailed results shown in Appendix E (Bollard Acoustical Consultants, Inc. 2007).

Table 4.4-8
Barrier Heights Required to Satisfy Exterior Noise Standards at Nearest Residences

Lots(s)	Noise Barrier Height (feet) to Achieve:	
	45 dBA L_{50} Without / With Refrigeration Trucks	65 / 75 dBA L_{max}
38	7 / 16	7 / 6
46–47	6 / 11	6 / 0
66–67	6 / 11	6 / 0
92–93	6 / 11	6 / 0
117–118	6 / 13	6 / 0
145–146	9 / 16	9 / 6

Notes:
[1] Cumulative commercial noise levels do not include refrigerated trailer unit noise.
Source: Bollard Acoustical Consultants, Inc. 2007

The results of the noise barrier analysis indicate that, without refrigeration trucks present, noise barriers ranging in height from 6 to 9 feet along the eastern site boundary could be utilized to reduce truck unloading activity noise to below the City's Noise Element standards (Bollard Acoustical Consultants, Inc. 2007). With the use of refrigeration trucks, additional noise controls would be necessary to ensure the City's noise thresholds are not exceeded. The barrier heights identified in Table 4.4-8 with the use of refrigeration trucks assume that no additional noise controls are implemented. However, with the implementation of the additional noise control measures included in Mitigation Measure 4.4-4 below, a perimeter noise barrier height of greater than nine feet would not be necessary. Because the noise generated by the proposed truck delivery operations could generate noise levels in excess of applicable standards, the noise impacts from on-site trucking activity is considered **significant**.

Mechanical Equipment Noise

The heating and air conditioning (HVAC) systems for the site buildings would consist of packaged rooftop systems. The units would be relatively evenly distributed across the roof of the buildings, starting about 30 feet in from the edges of the roof. These HVAC units, which typically stand about 4 to 5 feet tall, would be shielded from view by the project building parapets. Such rooftop HVAC units typically generate noise levels of approximately 50 dBA L_{50} at a reference distance of 100 feet from the building, including shielding by the building. During nighttime hours, the air conditioning requirements of the facilities decrease significantly, with reference levels being reduced to less than 45 dBA L_{50}. Given the distance between the rooftop HVAC units and the nearest existing residences to the east and the proposed residences in the Rocklin 60 residential development, and the shielding provided by the rooftop parapet, impacts from stationary source noise from mechanical equipment would be **less than significant**.

To quantify the noise emissions from food cold storage refrigeration equipment, noise level measurements conducted at a similar large grocery store were utilized. At a distance of 50 feet from the food cold storage equipment, a noise level of 66 dBA L_{50} was recorded. This equipment is proposed to be located on the roof of the large retail/grocery store, approximately 300 feet west of the nearest proposed residences and substantially farther away from the existing residences to the east. At this distance, the food cold storage equipment is predicted to generate noise levels of 50 dBA L_{50}, not including shielding by the rooftop and parapet. After

consideration of this shielding, cold storage equipment noise levels are predicted to be below the recommended 45 dBA L_{50} nighttime noise criteria. As a result, noise impacts associated with this stationary source would be **less than significant**.

Parking Lot Noise

The majority of the on-site parking for the proposed project would be located on the west side of the largest proposed buildings, well removed from the existing and proposed residences to the east. Nonetheless, there is a smaller parking area and rows of parking along the eastern project boundary, as indicated in Exhibit 3-2.

Assuming all of the approximately 200 spaces in the parking area located at the northeastern portion of the project site are filled and emptied in one hour, a total of 400 parking lot events would occur in that area during a very busy hour. The approximate center of activity of the parking area would be approximately 65 feet from the residential property line to the east and approximately 70 feet from the nearest backyard locations of the proposed residential development. A typical SEL due to automobile arrivals/departures, including car doors slamming and people conversing is approximately 70 dB and maximum parking lot noise levels are typically 63 dB, at a distance of 50 feet. At the nearest outdoor activity areas, the predicted median hourly and maximum noise levels were computed to be 49 dB L_{50} and 51 dB Lmax. Interior levels within the nearest proposed residences would be at least 15 dB lower, or approximately 33 dB L_{50} and 36 dB Lmax. The predicted levels, which include a -9 dB offset to account for the recommended property line noise barrier for truck delivery noise, would not exceed the City's noise level standards identified in Table 4.4-4 for this parking area. Because the parking lot activities would not expose offsite residents to noise levels in excess of applicable standards, this impact would be considered **less than significant**.

Parking Lot Sweeper Noise

As mentioned above, the majority of the on-site parking lot areas for the proposed project would be located on the west side of the largest proposed buildings, well removed from the residences to the east. In addition, parking lot sweeper noise varies and is dependent upon the actual sweeper truck equipment, as well as the truck operator. However, the proposed intervening buildings along with the recommended eastern property line noise barrier are predicted to provide significant shielding of sweeper truck noise. Also, the noise generated by the sweeper truck equipment would be substantially lower than the noise generated from heavy truck deliveries. Therefore, the sweeper truck equipment noise would be considered a relatively negligible noise source on the site and it would not expose offsite residents to excessive noise levels. This impact would be considered **less than significant**.

Garden Center Noise

The project includes garden centers at both the proposed Wal-Mart and Home Depot stores. The garden center for the Wal-Mart is located at the northwestern portion of the building and the garden center for the Home Depot is located at the southern portion of that building. The public address (PA) systems at the garden centers are anticipated to generate lower noise levels than the truck delivery and unloading activities. The PA system speakers typically face down towards the customers in the garden centers and would not be directed toward the residences to the east. As a result, the PA systems would not expose offsite residents to excessive noise levels and this impact would be considered **less than significant**.

Other Noise Sources

Other noise sources located behind the commercial center could include cardboard baling and trash compaction machinery, and garbage collection. These noise sources are predicted to be less intensive than the truck delivery activities and the noise barrier recommended for those operations would provide similar noise reduction from these ancillary noise sources.

In addition, the long-term operation of the proposed project would result in the use of property maintenance equipment (e.g., leaf blowers, lawn mowers, and trimmers). According to the EPA, noise attributable to such equipment could result in noise levels of approximately 80 to 90 dBA at 3 feet from the source, depending on the exact type and size of the maintenance equipment (U.S. Environmental Protection Agency 1971). Thus, property maintenance activities occurring at the proposed project site could result in noise levels of approximately 65 dBA at 50 feet from the proposed project limits. However, noise from property maintenance would be intermittent and of limited duration (e.g., less than 1 to 2 hours per day during the daytime). Also , landscaping and maintenance would be primarily focused on the west-facing side of the shopping center, where customers enter and exit, and would be minimal as landscaped or vegetated area is not a predominant feature of the project. As in the case of other stationary- and area-sources of noise, the proposed sound wall, intervening structures, and vegetation would substantially diminish the offsite noise levels generated from property maintenance equipment. Because the use of property maintenance equipment on the site would not expose offsite residents to excessive noise levels, this impact would be considered **less than significant**.

Mitigation Measure 4.4-4 Exposure of Sensitive Receptors to Excessive Stationary- or Area-Source Noise Levels

- The noise barrier proposed to be constructed along the site's eastern boundary shall be constructed of masonry block, pre-cast concrete panels, or other massive materials.
- The height of the noise barrier along the entire eastern boundary shall be sufficient to ensure that the proposed project is consistent with City's exterior and interior noise levels of 60 dBA L_{dn} and 45 dBA L_{dn}, respectively, for residential uses exposed to noise sources.
- Solid noise barriers shall extend along the cold food unloading area of the large retail/grocery store loading dock to further shield refrigeration trucks while being unloaded. Refrigeration trucks shall be required to park within those shielded loading dock areas while on the site.
- All rooftop mechanical equipment shall be completely screened from view of existing or proposed residences by the proposed building parapet.
- The noise mitigation measures shall be designed by an acoustical engineer consistent with the Noise Element's acceptable noise levels for residential land uses.

Level of Significance after Mitigation

With implementation of the identified mitigation measures, the noise levels at the existing and potential future residences adjacent to the site would be consistent with City standards for residential land uses. Therefore, operational noise impacts would be reduced to less-than-significant levels.

IMPACT 4.4-5 Exposure of Sensitive Uses to Vibration Levels. *The vibration levels generated by the proposed construction activities would not expose adjacent future residences to excessive vibration levels and the project's operations would not generate any vibration sources. Therefore, this impact is considered* ***less than significant****.*

Construction activities have the potential to result in varying degrees of temporary groundborne vibration, depending on the specific construction equipment used and operations involved. Vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance. Table 4.4-9 displays vibration levels for typical construction equipment.

Table 4.4-9 Typical Construction-Equipment Vibration Levels		
Equipment	PPV at 25 feet (in/sec)[1]	Approximate L_v at 25 feet[2]
Large Bulldozer	0.089	87
Caisson Drilling	0.089	87
Trucks	0.076	86
Jackhammer	0.035	79
Small Bulldozer	0.003	58

[1] Where PPV is the peak particle velocity

[2] Where L_v is the velocity level in decibels (VdB) referenced to 1 μ inch/second and based on the root mean square (RMS) velocity amplitude.

Source: Federal Transit Administration 2006

As discussed above, on-site construction equipment could include dozers and trucks. According to Federal Transit Administration (FTA), vibration levels associated with the use of a large bulldozer is 0.089 inches per second (in/sec) peak particle velocity (PPV) and 87 vibration decibels [VdB referenced to 1 microinch per second (μin/sec) and based on the root mean square (RMS) velocity amplitude] at 25 feet, as shown in Table 4.4-9. Using FTA's recommended procedure for applying a propagation adjustment to these reference levels, predicted worst-case vibration levels of approximately 0.03 in/sec PPV and 81 VdB at the closest proposed off-site sensitive receptor (approximately 50 feet from the eastern boundary of the project site) could occur from use of a large bulldozer. These vibration levels would not exceed Caltrans' recommended standard of 0.2 in/sec PPV (California Department of Transportation 2002) with respect to the prevention of structural damage for normal buildings. Vibration levels could exceed the FTA's maximum-acceptable vibration standard of 80 VdB (Federal Transmit Administration 2006) with respect to human annoyance for residential uses. However, this exceedance would occur intermittently and for very short durations, depending upon the type of construction activities being performed. Therefore, project construction would not be expected to expose offsite sensitive receptors to vibration levels that would be considered excessive. The long-term operation of the proposed project would not include any vibration sources. Thus, short-term construction and long-term operations would not expose people to excessive groundborne vibration or groundborne noise levels. As a result, this impact is considered **less than significant**.

Mitigation Measure 4.4-5 Exposure of Sensitive Uses to Vibration Levels

No mitigation measures are necessary.

Level of Significance after Mitigation

The proposed project's vibration impacts would be considered less than significant.

IMPACT 4.4-6 Land Use Compatibility with On-Site Noise Levels *The project would not result in exposure of sensitive land uses to noise levels in excess of the applicable land-use compatibility noise standards. In addition, the project site is not located near an airport and would not expose people to excessive aircraft-generated noise. Therefore, land use compatibility impacts associated with on-site noise levels would be* ***less than significant.***

Noise levels within the project site are influenced largely by vehicle traffic on Interstate 80. The compatibility of proposed land uses with respect to vehicle traffic and aircraft noise under the proposed project is discussed below.

Roadway Traffic Noise Levels

Measured noise levels on the project site near the Interstate 80 right of way are 83 dBA L_{dn} (see Table 4.4-3). This noise level is in excess of the normally acceptable land use compatibility standard for industrial or commercial-type land uses of 75 dBA L_{dn} (see Table 4.4-4). However, this noise level was measured immediately adjacent to the roadway (approximately 100 feet from the centerline of the near travel lane). Assuming a typical 3 dBA reduction in noise levels per doubling of distance from a line-source (e.g., roadway), predicted noise levels at the proposed commercial buildings closest to the freeway would be 80 dBA L_{dn}. This noise level is further reduced by the noise attenuation provided by the building itself. Because the entrances to these buildings would typically face away from the freeway, the noise levels at the entrances would be reduced to between 65 and 70 dBA L_{dn}. Because the on-site noise levels at the active area of the proposed commercial buildings would be below the 75 dBA L_{dn} acceptable noise level for the proposed land use, the proposed project would not expose people to noise levels in excess of applicable standards. This impact would be considered **less than significant**.

Airport Noise Levels

The project is not located within 2 miles of an airport land use plan or a public airport, or in the vicinity of an active private airport. The Holsclaw's short take-off and landing airstrip, located parallel to I-80 to the northeast, is the nearest private airstrip, but is inactive. Finally, the proposed project does not involve the siting of any sensitive land use. Thus, the project would not expose people residing in the project area to excessive noise levels. As a result, **no impact** is anticipated to occur.

Mitigation Measure 4.4-6 Land Use Compatibility with On-Site Noise Levels

No mitigation measures are required.

Level of Significance after Mitigation

The on-site noise levels at the active areas of the proposed commercial buildings would be within acceptable noise level standards for the proposed land use and no aircraft-related noise impacts are anticipated with project implementation.

4.5 POPULATION AND HOUSING

This section documents the existing population and housing conditions in the City of Rocklin and evaluates the effects on those conditions that would result with project implementation. This section also focuses on any population and housing changes that could trigger adverse physical effects in the City or the region.

4.5.1 EXISTING SETTING

POPULATION

From 1990 to 2000, the population of the City of Rocklin increased from 19,033 to 36,330, representing a 91-percent increase over the 10-year period (U.S. Census Bureau 2000). Population has continued to grow at a relatively rapid pace. The current population as of January 1, 2006 is estimated to be 50,920 (California Department of Finance Table E-5a 2006).

The *City of Rocklin General Plan* (City General Plan) identified the City's planning area as all of the area within the City boundaries (approximately 12 square miles), plus an additional 9 square miles outside the City boundaries that are included within the City's sphere of influence. As of September 2003, approximately 19.8 square miles are within the City limits, with an additional 1.2 square miles outside the City boundaries, but within the City's sphere of influence. The population projections in the City General Plan were prepared in 1990 based on population projections included in the City's 1988 Public Facilities Master Plan, which assumed a growth rate of 8 percent through 2010. The City General Plan projected the population within Rocklin, including its sphere of influence, would be approximately 48,610 people by 2010 (City of Rocklin 1991). The City's existing population exceeded this projection by 2,310 people in 2006.

HOUSING

Rocklin is a community with a low vacancy rate and relatively small households, with housing prices and a residential population that have increased dramatically in the recent past. The U.S. Census Bureau reports that the number of housing units in Rocklin increased from 7,481 in 1990 to 14,421 in 2000 (U.S. Census Bureau 2000). The City's housing growth rate was approximately 93 percent, with the supply and composition of housing changing very little in this 10-year period. In 1990, 68 percent of housing units were single-family detached structures. This increased to 71 percent in 2000. The State Department of Finance estimated a 2003 housing inventory of 18,048 with a similar distribution of housing types as in 2000 (City of Rocklin, 2004). The number of housing units in Rocklin is anticipated to increase with the construction of new and proposed residential projects, including the proposed 179-unit Rocklin 60 residential project located directly adjacent to the project site. Median home prices within the city increased by 31.7 percent in a 1-year period (December 2004 to December 2005), from $350,000 to $461,000 (Sacramento Bee 2006). The median home price decreased slightly in 2007 to $449,000 (City of Rocklin 2007).

According to the California Department of Housing and Community Development (HCD) (2000), a housing vacancy rate of 5 percent is considered normal. Vacancy rates below 5 percent indicate a housing shortage in a community. The U.S. Census Bureau reports that Rocklin had a vacancy rate of 1.7 percent for owner-occupied units and 17.1 percent for rental units in 2000. The high vacancy rate for rentals could be attributed to the fact that many large apartment complexes were under construction at the time of the Census and were not fully occupied (City of Rocklin 2004). Placer County had a vacancy rate of 1.2 percent for owner-occupied units and 6.4 percent for rental units in 2000.

A survey conducted by the City in September 2001 indicated that the vacancy rate for apartments (as opposed to all rental units which include single-family homes, condominiums and townhomes, apartments, and other dwellings available for rent) is actually significantly lower than the overall rental vacancy rate documented by the Census. Of the 27 apartment complexes surveyed, the vacancy rate ranged from 0 to 4%. In addition, nearly all of

the publicly-assisted developments surveyed were fully occupied and had waiting lists, reflecting the significant need for affordable rental housing (City of Rocklin 2004).

Regional Housing Needs Allocation

A Regional Housing Needs Plan (RHNP) is mandated by the State of California (Government Code Section 65584) for regions to address housing issues and needs based on future growth projections for the area. The RHNP is developed by the Sacramento Area Council of Governments (SACOG) and allocates to cities and counties their "fair share" of the region's projected housing needs based on household income groupings over the planning period for each specific jurisdiction's housing element. The RHNP also identifies and quantifies the existing housing needs for each jurisdiction. Table 4.5-1 shows Rocklin's portion of the regional housing allocation according to the four income groups.

Table 4-5.1
City of Rocklin Regional Housing Needs Allocation for 2000–2007

Income Grouping	Projected Housing Units (2007)
Very low	876
Low	610
Moderate	640
Above moderate	1,227
Total	3,353

Source: City of Rocklin 2004

SACOG anticipates that a total of 3,353 housing units, allocated to income groups as listed above, would be needed to meet regional housing needs for Rocklin during the current planning period (2000–2007) (City of Rocklin 2004).

EMPLOYMENT

Employment growth is one of the primary determinants of housing demand. Working-age individuals will often choose a place to live based on their current or prospective places of employment. Therefore, employment trends are an important indicator of housing demand. The rate of employment growth, and the types of jobs most likely to be created, would determine how much housing would be needed by type and cost. For example, an economy based on seasonal tourism will generate different housing needs for local workers than an economy based on government, education, research, and technology.

As of 2006, the total employment within the City was 24,900 people and the unemployment rate was 2.5% (City of Rocklin 2007). Per the 2000 census, the two largest occupational categories for residents of the City were managerial/professional and sales/technical/administrative. These categories accounted for 44 percent and 31 percent of the employed residents, respectively. Other occupational categories in the city include services (10.8%), production and repair (7.1%), operators/fabricators/laborers (7.2%). Larger employers in the Rocklin area include high technology firms, such as Hewlett Packard, NEC, and Oracle. With over 5,000 employees, Hewlett Packard is by far the largest employer in the Rocklin area (City of Rocklin 2004).

4.5.2 REGULATORY SETTING

CITY OF ROCKLIN GENERAL PLAN

The following policy from the Land Use Element of the City General Plan (1991) is applicable to the proposed project:

- **Policy LU-37:** To attract job generating land uses that will provide a variety of employment opportunities for those who live, or are likely to live, in the community or South Placer subregion.

4.5.3 IMPACTS AND MITIGATION MEASURES

METHOD OF ANALYSIS

The examination of population and housing conditions in this section is based on a review of the plans for the proposed project; review of available population and housing projections from the City, the U.S. Census Bureau, and other sources; and review of applicable elements and policies from the City General Plan.

THRESHOLDS OF SIGNIFICANCE

A population and housing impact is considered significant, as defined by the State CEQA Guidelines (Appendix G), if the proposed project would:

- induce substantial unplanned population growth in an area, either directly (by proposed new homes and businesses) or indirectly (through the extension of roads or other infrastructure);
- generate a substantial demand for new housing, the construction of which could cause significant environmental impacts; or
- displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

The project site is currently vacant and the proposed project would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere. This issue area will not be evaluated further in this DEIR.

IMPACTS AND MITIGATION MEASURES

IMPACT 4.5-1 Increase in Housing Demand during Construction. *Project implementation would increase construction employment within the City of Rocklin for the duration of the project's construction activities. Because an adequate labor force is available in the local region, this temporary increase in employment would not be expected to substantially increase the local demand for housing. This impact is considered* ***less than significant****.*

Project implementation would increase construction employment within the City of Rocklin for the duration of the project's construction activities. This temporary increase in employment could increase the demand for temporary housing. However, because the location of construction jobs moves frequently, construction workers tend to travel longer distances to a construction site, rather than move to the location of the project for short periods. According to the latest labor data available from the U.S. Census Bureau (2000), 1,164 residents in Rocklin and 10,860 residents in Placer County are employed in the construction industry. Construction workers serving the project would be expected to come from Rocklin and from nearby communities in Placer and Sacramento counties. Due to the size of the construction industry in the region, the local labor supply is expected

to be of sufficient size to meet the project's construction labor needs without requiring substantial employees from out of the region. Local construction workers that already have housing in the region would be expected to commute to the site while construction is ongoing. For construction workers located outside of the region, the temporary nature of the work would typically discourage a permanent relocation. Therefore, the anticipated temporary increase in construction employment would not be expected to result in a substantial demand for new housing within the City or region. This impact is considered **less than significant**.

Mitigation Measure 4-5.1 Increase in Housing Demand during Construction.

No mitigation measures are necessary.

Level of Significance After Mitigation

The project's temporary demand for housing associated with construction employment would be considered a less-than-significant impact.

IMPACT 4.5-2 Increase in Housing Demand during Operations. *The proposed project could directly and indirectly induce population growth in Rocklin by generating employment for approximately 800 people. However, adequate housing is available within the City and the surrounding region to accommodate this population growth. Therefore, the project's contribution to population growth and its effect on the available housing supply would be considered a* ***less-than-significant*** *impact.*

The proposed project is generally consistent with the City's General Plan and by extension, the employment, commercial development, and housing assumptions evaluated in the City's General Plan EIR. The proposed project would require a General Plan Amendment to change approximately 1.23 acres from retail commercial/medium density residential to retail commercial. However, this General Plan amendment affects a very small portion of the proposed project site. Implementation of the proposed project would generate employment opportunities for current and future residents consistent with the General Plan's goals and policies. Also, new housing has been constructed in the recent past and is being constructed within the City, which could accommodate planned employment growth, consistent with the General Plan land use designations and the City's Housing Element requirements. The City's Housing Element identifies a number of multi-family housing developments that have been approved and completed in recent years including The Meridian (452 units), Sunset Summit (344 units), The Winstead (208 units), Stanford Heights (170 units), and Emerald Pointe (164 units). The 2004 Housing Element also identified two multi-family projects totaling 542 units as being under construction and a third project providing an additional 192 units as being approved (City of Rocklin 2004). Therefore, the project would not be expected to induce substantial unplanned population growth in either the City or in the counties of Sacramento or Placer.

The proposed project would generate new employment within the City of Rocklin, which could contribute to the demand for housing. At full buildout, the site is expected to employ approximately 800 people. The employment growth anticipated with the proposed project would represent an increase in total employment within the City of approximately 3.2%. However, due to the project's location along the primary transportation corridor within Placer County, employees for the project would be drawn from throughout the region. Also, due to the relatively high median home prices within the City and the majority of the project's employment consisting of lower-paying service/retail jobs, only a relatively small percentage of the project's employees may come from within the City. Employees would logically be expected to reside in communities along the Interstate 80 corridor in both Placer and Sacramento counties. Due to the density of urban development within these communities, a wide variety of housing options are available for project employees. For Placer County in particular, the rental unit vacancy rate was 6.4 percent in 2000. The expected dispersal of employees across the region would minimize the effects of increased housing demands within the City. For these reasons, the proposed project would not be expected to generate a substantial demand for new housing. This impact would be considered **less than significant**.

Mitigation Measure 4-5.2 Increase in Housing Demand during Operations.

No mitigation measures are necessary.

Level of Significance After Mitigation

The demand for housing associated with project operations would be considered a less-than-significant impact.

4.6 UTILITIES AND PUBLIC SERVICES

This section provides an overview of existing utilities and public services for the City of Rocklin and the proposed project area, including water supply, wastewater service, solid waste management, electrical service, natural gas service, telephone service, fire protection, police protection, public schools, and parks. Impacts are evaluated in relation to increased demand for utilities and public services associated with the proposed project and actions needed to provide the services that could potentially lead to physical environmental effects.

Analysis provided in this section is based on a review of agency documents and consultation with local public service providers. Impacts related to stormwater management and water quality are addressed in Section 4.10, Hydrology and Water Quality.

4.6.1 EXISTING SETTING

WATER SUPPLY

This section addresses groundwater, and local, area, and regional water resource issues. Information in this Draft EIR has been excerpted from descriptions contained in the PCWA *American River Pump Station EIS/EIR* (PCWA and Reclamation, 2001) and the *American River Basin Cumulative Report* prepared by Reclamation as part of the referenced EIS/EIR (August 2001). The analysis from these documents pertaining to surface water supply is incorporated herein.

Background

Water service would be provided to the site by the Placer County Water Agency (PCWA). The PCWA was created under State legislation adopted in 1957 by the California Legislature. PCWA carries out a broad range of responsibilities, including water resource planning and management, retail and wholesale supply of irrigation water and drinking water, and production of hydroelectric energy.

The City of Rocklin is located entirely within PCWA Zone 1, which includes Rocklin and the rest of the Loomis Basin, the City of Lincoln, an industrial corridor along Highway 65, and residential areas south of Baseline Road and west of Roseville. Agricultural lands near Highway 65 are within Zone 5, and the PCWA has determined that the sources of water to meet demands in Zone 1 and Zone 5 were the same. PCWA does not have significant amounts of groundwater rights for use in Zones 1 and 5, and relies on surface water entitlements, which include:

- 100,400 acre-feet of water per year (afy) from the Yuba/Bear River system that is purchased from PG&E. This is PCWA's primary source of supply for Zone 1. This has been PCWA's primary source of supply for Zone 1 since PCWA began retailing water in 1968. The term of this contract is to 2013, but PCWA expects the contract to be renewed after the expiration of the present term. This water supply has a high reliability during normal, single-dry, and multiple-dry years, but the supply is fully utilized. For example, between 1987 and 1992 the State experienced five years of drought, during which many areas in the State had reduced supplies. During that period, PCWA had a full Yuba/Bear River supply each year. 1977 was the only year in which PCWA had to impose drought restrictions on its customers due to reduced PG&E supply. PCWA's *Urban Water Management Plan* was adopted on December 15, 2005, and contains a water shortage contingency analysis that includes a five stage rationing plan that would be invoked during a declared water shortage.

- 120,000 afy from the Middle Fork Project on the American River. PCWA's Middle Fork Project (MFP) water right permits provide that this water supply may be diverted from the American River at either Auburn or at Folsom Reservoir. This water supply has historically been very reliable, even during drought periods. PCWA has done extensive modeling of the MFP system to determine its reliability during drought events

using California's hydrologic record, which dates back to 1921. The conclusion of that analysis is that the MFP can provide 120,000 afy, even in dry years as severe as the 1976-1977 hydrologic event.

PCWA is currently completing the permanent American River Pump Station (ARPS) and designing the Auburn Tunnel Pump Station and the Ophir Water Treatment Plant project (PCWA 2006) in order to have the necessary facilities in place to fully exercise their rights to this American River water. When completed, the ARPS will divert for treatment 35,500 afy of MFP water rights water, some of which will also be delivered to the existing Foothill Water Treatment Plant. Diversions from the MFP at the American River Pump Station location were previously evaluated in the *American River Pump Station Final EIS/EIR, American River Basin Cumulative Impact Report*, 2001.

- 35,000 afy from the Central Valley Project water supply contract with the U.S. Bureau of Reclamation. This water supply has been cut back up to 25 percent during single-dry and multiple-dry years. This water was originally to be provided to PCWA at Auburn Reservoir but the contract as amended now provides for its diversion at Folsom Dam or other locations mutually agreed on by the parties. However, PCWA is pursuing a diversion at the Sacramento River in accordance with the Water Forum Agreement in order to ensure the long-term availability of this supply, as described in more detail below.

  According to PCWA's October 2005 Draft *Integrated Water Resources Plan*, PCWA plans to supplement its CVP contract supply with groundwater in dry years to improve the reliability to the point where the full contract amount can be relied upon to serve the urban development needs.

- 5,000 afy purchased from South Sutter Water District (SSWD). This supply is only available when it is surplus to SSWD's needs, and this water would be made available only as a supplemental supply to agricultural customers in Zone 5. Water is not expected to be available from this source during dry years. Additionally, this source is considered temporary because it is expected that the available supply will eventually be fully utilized by SSWD.

The total water available to Zones 1 and 5 is 255,400 afy of permanent water supply and 5,000 afy of temporary water. Out of that permanent supply, PCWA has contracted to deliver up to 25,000 afy to San Juan Water District for use within the Placer County portion of its service area and up to 30,000 afy to Roseville. Deliveries to the San Juan Water District and the City of Roseville would only occur during surplus water years.

In 2004, PCWA used 112,768 af to meet the needs of its Zone 1 and Zone 5 customers. In addition to this amount, to date PCWA has approved applications for water service totaling an additional 5,753 afy, resulting in a total current committed demand of 118,521 afy. In 2004, PCWA delivered 13,562 af to San Juan and 465 af to Roseville.

Table 4.6-1 summarizes PCWA's existing water supply entitlements and demands, and shows the total surface water available for future demands.

PCWA's permanent water supply includes the 35,000 afy of Central Valley Project water from the American River described above. PCWA is authorized through a contract with Reclamation to take 35,000 afy of Central Valley Project contract water at Folsom Reservoir or other places that are agreed to by the affected parties. PCWA is currently pursuing a 35,000 afy diversion at the Sacramento River in accordance with the Water Forum Agreement. A separate EIR/EIS is currently in process for the water diversion project and an initial alternatives analysis has now been completed (*Sacramento River Water Reliability Study Initial Alternatives Report*). The Draft EIR/EIS is currently still in production and is projected for public release some time in late 2007 (Placer County 2007).

There is a reasonable certainty that the water supply from the Sacramento River will become available in the future. First, as noted above, PCWA has Middle Fork American River water rights. Thus, the Sacramento River diversion entitlement is not analogous to the uncertain State Water Project (SWP) "entitlements" – a term no

longer used -- that the appellate courts have said included substantial amounts of "paper water." (See *Planning and Conservation League v. Department of Water Resources* (2000) 83 Cal. App. 4th 892, see also *Santa Clarita Organization for Planning the Environment v. County of Los Angeles* (2003) 106 Cal. App. 4th 715) (Placer County 2007).

Table 4.6-1
Water Supply Entitlements and Demands

Source	Total Water Supply (afy)
Entitlements	
Yuba/Bear River water through PG&E	100,400
Middle Fork Project on the American River	120,000
Central Valley Project through the U.S. Bureau of Reclamation	35,000
Total Entitlements	255,400 [1]
Demands	
2004 usage by Zones 1 and 5	112,768
Approved applications for water service	5,753
Total Demand	118,521 [2]
Surface water availability for future demands	136,879

Source: PCWA 2006
[1] The total entitlements sum shown here does not include the 5,000 afy from South Sutter Water District because this supply is only available when it is surplus to SSWD's needs, and would be made available only as a supplemental supply to agricultural customers in Zone 5.
[2] The 2004 delivery to San Juan was 13,562 af, and the 2004 delivery to Roseville was 465 af; however, because of the surplus nature of the water supply contracts to these areas, these figures are not included in permanent demand for PCWA.

Second, quite notably, the Sacramento River diversion project has the support of both the Water Forum Agreement signatories and, it appears, the U.S. Congress. The Water Forum Agreement represents a regional consensus that water purveyors, such as PCWA, with unexercised water rights on the American River could reduce the environmental impacts of their future diversions based on those rights if they agreed instead to pursue diversions of like amounts of water from the Sacramento River. Because of local environmentalist support for this approach, the Sacramento River supply is less likely to encounter environmental opposition than would supplies taken from the American River. Thus, on page 14 of the Introduction and Summary of the Water Forum Agreement (January 2000), "expansion of Sacramento River diversion and treatment facilities" is listed as one of the major water supply projects that will receive Water Forum support upon signing the Water Forum Agreement, which has long since occurred. The project is also contemplated by federal legislation known as Public Law 106-554, Appendix D, Division B, Section 103 (April 24, 2000). Subdivision (a) of Section 103 provides:

The Secretary of the Interior shall conduct a feasibility study for a Sacramento River, California, diversion project that is consistent with the Water Forum Agreement among the members of the Sacramento, California, Water Forum dated April 24, 2000, and that considers –

(1) consolidation of several of the Natomas Central Mutual Water Company's diversions;

(2) upgrading fish screens at the consolidated diversion;

(3) the diversion of 35,000 acre-feet of water by the Placer County Water Agency;

(4) the diversion of 29,000 acre-feet of water for delivery to the Northridge Water District;

(5) the potential to accommodate other diversions of water from the Sacramento River, subject to additional negotiations and agreement among the Water Forum signatories and potentially affected parties upstream on the Sacramento River; and

(6) an inter-tie between the diversions referred to in paragraphs (3), (4), and (5) with the Northridge Water District's pipeline that delivers water from the American River.

Third, for reasons suggested above in discussing the Water Forum Agreement, the Sacramento River diversion project is relatively benign from an environmental perspective. Essentially, the project would take water from the Sacramento River rather than the American River, thereby avoiding potential adverse environmental impacts on the American River, which, with its lower flows, is much more environmentally sensitive than the Sacramento River (Placer County 2007).

The Sacramento River diversion project must overcome regulatory hurdles before it can come to fruition. First, the project must complete the environmental review processes under both CEQA (with PCWA as lead agency) and the National Environmental Policy Act (NEPA) (with Reclamation as the federal lead agency) (Placer County 2007).

Among the approvals the project will need are (i) an exchange agreement between PCWA and Reclamation, (ii) an application from Reclamation to the State Water Resources Control Board for an additional point of "rediversion" at the Sacramento River diversion project site, and (iii) actions by PCWA and Reclamation amending their water delivery contract to provide for delivery at the site. The project must also obtain a "Section 404" wetlands fill permit under the Clean Water Act from the United States Army Corps of Engineers (USACE). As the federal lead agency, Reclamation is obligated under section 7 of the federal Endangered Species Act to consult with both the United States Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) to determine whether the direct or indirect effects of the project could jeopardize the continued existence of any federally listed endangered or threatened species or cause the destruction or adverse modification of the designated critical habitat of any such species. Given the ecological pressures on both aquatic and terrestrial species from continuing population growth and agricultural activities in California, there is always the chance that these environmental processes and Endangered Species Act (ESA) requirements could lead to delays, which could postpone the acquisition by PCWA of this water supply. Further, although it is not anticipated, there is always the chance that alternatives other than PCWA's entire 35,000 afy could be approved (Placer County 2007).

The local agencies participating in the Sacramento River diversion project, namely, the City of Sacramento, PCWA, the City of Roseville, and Sacramento Suburban Water District (SSWD) intend to try to minimize the indirect effects of the water supply on federally listed terrestrial species by agreeing that they will not undertake to provide new water service from Sacramento River diversion project facilities to any new projects unless such new development can demonstrate that it is in compliance with the ESA. Under such a self-imposed limitation, the partners in the Sacramento River diversion project would not provide water to any developer who cannot prove "ESA compliance" in connection with its development plans (Placer County 2007).

Finally, virtually all water supplies in California that have yet to be perfected suffer from some uncertainty due to combination of evolving environmental factors. One such factor is possible future species listings under the ESA and its State analogue, the California Endangered Species Act (CESA), which could affect both Central Valley Project (CVP) and SWP operations, as well as the timing and extent of other water diversions throughout California (Placer County 2007).

WATER CONVEYANCE AND TREATMENT

The only facility that PCWA currently has to deliver water to its service area from its American River supplies is the temporary American River Pump Station at Auburn. Under an agreement between PCWA and Reclamation, Reclamation is required to install temporary pumps in the American River so that PCWA can access up to 25,000

AFA of its MFP water at a rate of 50 cubic feet per second (cfs). Because of flooding concerns that necessitate the seasonal removal of the temporary pumps, and other technical limitations, PCWA estimates that it can only reliably divert up to 13,000 AFA with the current configuration installed by Reclamation.

As limited by the temporary American River Pump Station, the total current raw water delivery capacity available to Zones 1 & 5 (western Placer County) is 113,400 AFA on a permanent basis and 118,400 AFA on a temporary basis in normal/wet years.

Progress by PCWA and Reclamation is being made in completing a new permanent American River Pump Station. On June 13, 2003, Reclamation entered into a contract to construct Phase I of the American River Pump Station. Completion of this project will increase PCWA's raw water delivery capacity to Zone 1 and western Placer County to 135,900 AFA on a permanent basis in normal/wet years. Subtracting 113,563 AFA of current and committed demands will leave 22,337 AFA of uncommitted raw water delivery capacity available for new development once the permanent American River Pump Station is complete in 2008.

In the vicinity of the proposed project, existing water conveyance facilities are located west of Interstate 80 in Taylor Road and in Sierra College Boulevard, Rocklin Road, and Barton Road. PCWA has indicated that the 20-inch water main in Taylor Road by way of Sierra College Boulevard would serve the proposed project; however, the agency has stated that there is a large demand currently placed on this pipeline from existing development in the surrounding area (PCWA 2006).

On the project site, the Eastside Canal pipeline traverses parcels abutting Interstate 80. This pipeline delivers raw untreated water for irrigation purposes to existing customers down stream of the site.

PCWA treats water for the City of Rocklin at two treatment facilities, the Foothill Water Treatment Plant (WTP) and Sunset WTP. The Foothill WTP is located one mile south of Newcastle, northeast of the City. In addition to serving the City, this plant serves Penryn and Loomis. PCWA completed the most recent expansion of its Foothill WTP in 2005 and treatment plant capacity of this facility was increased from 27 mgd to 55 mgd. The Sunset WTP plant is located northeast of the City. The maximum design flow for the Sunset WTP is 8 mgd. The total treatment capacity for the Sunset/Foothill water treatment system is 63 mgd. PCWA has indicated that the project would be served by the Foothill WTP via the 20-inch pipeline in Taylor Road. (PCWA 2006.)

WASTEWATER COLLECTION AND TREATMENT

Wastewater treatment for the City of Rocklin is provided by the South Placer Municipal Utility District (SPMUD) through its membership in the South Placer Wastewater Authority (SPWA). SPMUD and the SPWA operate sewer collection, conveyance, and treatment facilities and provide sewer maintenance and engineering services. In the vicinity of the proposed project there is a 6-inch sewer main along Sierra College Boulevard.

SPMUD's 1986 Sewer Master Plan concluded that there would be increasing greenfield development activity, in addition to infill development, in the northwest portion of the City and in the areas east of Interstate 80. The plan envisioned that Rocklin would have a total of 52,604 sewered equivalent dwelling units at ultimate buildout. SPMUD has planned for growth in the City and the sizing of sewer infrastructure has been based on long-term plan projections (City of Rocklin 2005).

The Dry Creek Wastewater Treatment Plant provides wastewater treatment facilities for the SPMUD. This plant serves the Dry Creek Basin, consisting of the cities of Roseville, Rocklin, and Loomis, as well as the surrounding unincorporated areas. The Dry Creek Wastewater Treatment Plant's current design capacity is 18 mgd Average Dry Weather Flow (ADWF) and 45 mgd Average Wet Weather Flows (AWWF). The plant's flows average 12 mgd ADWF and 30 mgd AWWF. The Dry Creek Wastewater Treatment Plant provides tertiary level wastewater treatment through the process of screening, grit removal, primary clarification, aeration, secondary clarification, full nitrification capacity, filtration, chlorination and dechlorination. The plant discharges into Dry Creek under

standards established by the Central Valley Regional Water Quality Control Board. An additional regional wastewater treatment facility, the Pleasant Grove Wastewater Treatment Plant, was recently constructed with an initial design capacity of 12 mgd ADWF and 30 mgd AWWF, respectively.

SOLID WASTE

In western Placer County, Auburn-Placer Disposal Service provides garbage pickup services. The company also provides pickup service for recyclable materials. The project site is within the service area of Auburn-Placer Disposal Service.

Once collected, solid waste is transported to the Western Regional Sanitary Landfill at the southeast corner of Athens Avenue and Fiddyment Road, west of the City. The 281-acre landfill is operated by the Western Placer Waste Management Authority (WPWMA), a joint powers authority that includes Placer County and Roseville, Rocklin, and Lincoln. Waste disposal services at the landfill are provided to these cities, as well as for Auburn, Colfax, and Loomis. An additional 465 acres of land for landfill expansion is located to the west of the current landfill site. The additional acreage is not yet permitted for landfill uses.

The landfill accepts municipal solid waste from the adjacent Western Regional Materials Recovery Facility (MRF), as well as sewage sludge and other materials. The landfill is permitted to accept Class II and Class III wastes. At present, the Western Regional Sanitary Landfill is permitted to accept 1,900 tons per day (tpd) of solid waste. The landfill has a total capacity of 36 million cubic yards and a remaining capacity of 29 million cubic yards. At the current remaining capacity, the landfill could continue to accept waste until 2036. (California Integrated Waste Management Board 2005.)

RECYCLING FACILITIES

The WPWMA developed the 29-acre MRF adjacent to the Western Regional Sanitary Landfill to recover recyclable materials from the waste stream within the County. The MRF has the flexibility to handle all waste, whether mixed waste from the Auburn-Placer Disposal Service, or source-separated recyclables from other recycling programs in the community. The MRF recovers recyclable materials such as glass, metals, paper, plastics, wood waste and other compostable materials. Unrecyclable solid waste received at the MRF is then disposed of at the adjacent Western Regional Sanitary Landfill. Currently, the MRF diverts approximately 40% of the material received from the landfill. To continue meeting recycling goals, the MRF is currently undergoing an expansion that is scheduled for completion in fall 2007. This expansion will double its processing capacity and increase the amount of recyclable materials recovered from the waste stream by about 20 percent. (WPWMA 2007.)

ELECTRICAL SERVICE

PG&E provides electrical service to the City through State-regulated public utility contracts. PG&E delivers approximately 81,923 million kilowatt-hours of electricity to its 13 million customers throughout the 70,000-square-mile service area in northern and central California. Two 60 kilovolt (kV) lines supply three electric substations that serve the City planning area electric distribution load. Existing substations within the planning area include the Rocklin Substation on South Grove Street and the Del Mar Substation on Corporation Yard Road located along Sierra Meadows Drive. The third substation is the Pleasant Grove Substation located on Industrial Boulevard north of Sunset Boulevard.

The City recently worked with PG&E and the State Public Utilities Commission to design and locate a 115-kV transmission line corridor through the City. The preferred PG&E route located the line along the Union Pacific Railroad right-of-way between the Roseville city limits and Sierra Meadows Drive to the Delmar substation (City of Rocklin 2005).

PG&E has existing 12 kV and 21 kV overhead power lines on the west side of Sierra College Boulevard. In addition, 12 kV overhead power lines are located in the southern portion of the project property.

NATURAL GAS SERVICE

PG&E provides natural gas service to the City through State-regulated public utility contracts. Gas is delivered to the City and the proposed project area through portions of PG&E's 46,000 miles of natural gas pipelines. In the project area, gas transmission lines are located along Granite Drive, east of the project site and along Rocklin Road, south of the site.

TELECOMMUNICATIONS

Telephone service is provided to the area by Pacific Bell. There is an existing underground telephone cable on the east side of Sierra College Boulevard.

Cable service for the proposed project is provided to the area by Wave Broadband Services. In the project vicinity, underground conduit runs parallel to Interstate 80.

FIRE AND EMERGENCY MEDICAL RESPONSE

The project site is served by the Rocklin Fire Department. The following information on the department was obtained, in part, from the department's website (City of Rocklin Fire Department 2006). The department provides fire prevention, suppression, emergency medical, and technical rescue services to the City. In addition to emergency response and rescue, the department maintains the fire stations, fire apparatus, and water systems essential for fighting fires in the community. The department also conducts weed abatement and fuel modification programs, and provides a variety of public safety and educational programs.

The Rocklin Fire Department currently has 45 full-time personnel, including administration, prevention, and suppression staff, with an additional volunteer firefighting and support force. The department maintains a service ratio of one employee per 1,000 residents. The Rocklin Fire Department operates three fire stations:

- Fire Station No. 1 at 4060 Rocklin Road
- Fire Station No. 2 at 3401 Crest Drive.
- Fire Station No. 3 at 2001 Wildcat Boulevard

A fourth station is now in the planning stage at the future intersection of Park Drive and Valley View Parkway. The nearest fire station to the project site is Fire Station No. 1 approximately 2 miles southwest of the project site.

The Rocklin Fire Department responded to approximately 3,000 calls in 2005. Response times averaged less than five minutes 80 percent of the time. The City also belongs to a statewide mutual aid system, through which fire suppression assistance is provided to a member agency when it has exhausted its own resources. Bordering fire jurisdictions participate with the City in the statewide mutual aid system.

Funding for department operations comes from the City's general fund. In addition, the City collects a Capital Improvements Fee on new construction for the development of new capital facilities including fire stations, equipment, and engines.

American Medical Response (AMR) provides ambulance services to the City, and maintains response times under 10 minutes for the majority of calls. AMR serves western Placer County and strategically locates ambulances throughout the region, including within the City (City of Rocklin 2005).

LAW ENFORCEMENT

The Rocklin Police Department provides law enforcement services for the project site. The Police Department is headquartered at 4080 Rocklin Road, approximately 2 miles southwest of the project site. The following information on the department was obtained, in part, from the department's website (Rocklin Police Department 2006). As of September 2006, the department employed approximately 57 sworn officers, 37 administrative personnel, 15 reserve police officers, and citizen volunteers. The department has a number of units and specialties including: uniformed patrol, traffic enforcement, neighborhood and school resources, investigations, canine units, crime prevention programs, dispatch, records, evidence, and animal control. The City is divided geographically into four patrol beats and 35 Reporting Districts. The department currently provides a service ratio of 1.2 sworn officers per 1,000 people.

The Rocklin Police Department responds to approximately 3,000 incidents per month. The department currently has a response time of just over four minutes for Priority 1 calls, which range from office alarms to burglaries and violent felonies. For calls deemed an imminent danger, the response time is generally substantially lower than four minutes. In 2005, the City's crime rate was approximately 27.2 crimes per 1,000 people. The City also has an interagency agreement with the Placer County Sheriff's Department, whereby each agency provides supplementary support in the other's jurisdiction.

Funding for department operations comes from the City's general fund. The department is currently working on a five-year strategic plan to address additional growth in the City (Nottoli pers. comm. 2006). New police services, including officers and equipment, are funded on an as-needed basis through approval from the City Council.

PUBLIC SCHOOLS

The Placer County Office of Education oversees 18 school districts and the provision of education to students from kindergarten through 12th grade (Placer County Office of Education 2006). The project site is within the boundaries of the Loomis Union School District (grades kindergarten through eight) and the Placer Union High School District (grades 9 through 12).

Loomis Union School District

The Loomis Union School District serves the City in areas east of Sierra College Boulevard, south of Pacific Street, east of Del Mar Avenue, and north of Pacific Street. The Loomis Union School District currently operates five elementary schools (Loomis Union School District 2006):

- Loomis Elementary at 3505 Taylor Road
- Franklin Elementary at 7050 Franklin School Road
- Placer Elementary at 8650 Horseshoe Bar Road
- Penryn Elementary at 6885 English Colony Way
- H. Clarke Powers Elementary at 3296 Humphrey Road

For the 2005-2006 school year, the Loomis Union School District had an enrollment of approximately 2,157 student (Education Data Partnership 2006). The district is currently exceeding its design capacity of 1,884 students. Elementary school students in the project area attend Franklin Elementary School, approximately 2.1 miles southwest of the project site.

Placer Union High School District

Students within the Loomis Union School District attend Del Oro High School at 3301 Taylor Road, which is part of the Placer Union High School District. The Placer Union High School District encompasses approximately 900 square miles in Placer County. The district serves the communities of Loomis, Penryn, Newcastle, Ophir, Auburn,

Bowman, Christian Valley, Meadow Vista, Applegate, Weimar, Foresthill, Colfax, Dutch Flat, and Alta (Placer Union High School District 2006).

During the 2005-2006 school year, enrollment at Del Oro High School was 1,622 students and the school's capacity was 1,650 students (California Department of Education 2006). Del Oro High School is approximately 2.5 miles northeast of the project site. However, the district has an open enrollment policy that allows students to request attendance at any district school site, as space is available.

School Funding

The school district is funded by 50 percent State and 50 percent local sources. The district can receive local funding through developer impact fees, tax revenue from Mello-Roos districts, and General Obligation bonds. Developer impact fees comprise the major source of funding for the district. The statutory fee (Level I) as of January 2006 is $2.63 per square foot for residential construction and $0.42 per square foot for commercial/industrial construction. Developer fees may be used to finance new schools and equipment, and to reconstruct existing facilities.

The proposed project would not construct residential uses and it is anticipated that the majority of employees would be hired from the local and regional population base. Therefore, the project is not expected to result in substantial population growth that would increase the use of parks and recreational facilities, libraries, or other public facilities; result in the need for new facilities; or increase the long-term demand for these services. As such, public service impacts related to parks and recreational facilities, libraries, and other public facilities are not evaluated further in this Draft EIR.

4.6.2 REGULATORY SETTING

STATE

Senate Bill 610

SB 610 (Section 21151.9 of the Public Resources Code and Section 10910 et seq. of the Water Code) requires the preparation of "water supply assessments" (WSA) for large developments (e.g., for projects of 500 or more residential units, 500,000 square feet or more of retail commercial space, or 250,000 square feet or more of office commercial space). These assessments, prepared by "public water systems" responsible for service, address whether there are adequate existing or projected water supplies available to serve proposed projects, in addition to urban and agricultural demands and other anticipated development in the service area in which the project is located. Where a WSA concludes that insufficient supplies are available, the WSA must lay out steps that would be required to obtain the necessary supply. The content requirements for the assessment include, but are not limited to, identification of the existing and future water suppliers and quantification of water demand and supply by source in five-year increments over a 20-year projection. This information must be provided for average normal, single-dry, and multiple-dry years. The absence of an adequate current water supply does not preclude project approval, but does require a lead agency to address a water supply shortfall in its project approval findings.

A WSA has been prepared for the project by PCWA and is included as Appendix F. The conclusions of the WSA are summarized in the Impacts and Mitigation Measures portion of this section.

California Integrated Waste Management Act

To minimize the amount of solid waste that must be disposed of by transformation and land disposal, the State Legislature passed the California Integrated Waste Management Act (CIWMA) of 1989 (AB 939), effective January 1990. According to the CIWMA, all cities and counties were required to divert 25 percent of all solid

waste from landfill facilities by January 1, 1995, and 50 percent by January 1, 2000. Each city is required to develop solid waste plans demonstrating integration of the CIWMA plan with the county plan. The plans must promote (in order of priority) source reduction, recycling and composting, and environmentally safe transformation and land disposal.

California Public Utilities Commission

California Public Utilities Commission (CPUC) Decision 95-08-038 contains the rules for the planning and construction of new transmission facilities, distribution facilities, and substations. The decision requires permits for the construction of certain power line facilities or substations if the voltages would exceed 50 kV or the substation would require the acquisition of land or an increase in voltage rating above 50 kV. Distribution lines and substations with voltages less than 50 kV do not need to comply with this decision; however, the utility must obtain any nondiscretionary local permits required for the construction and operation of these projects. CEQA compliance is required for construction of facilities constructed in accordance with the decision.

Building Energy Efficiency Standards

The project would be required to comply with Title 24 of the California Code of Regulations regarding energy efficiency. Energy efficiency standards were developed in 2005, partly in response to the State's energy crisis, as well as Assembly Bill 970, which requires improving residential and nonresidential building energy efficiency, minimizing impacts to peak energy usage periods, and reducing impacts on overall state energy needs.

State School Funding

California Education Code Section 17620 authorizes school districts to levy a fee, charge, dedication, or other requirement against any development project for the construction or reconstruction of school facilities, provided that the district can show justification for levying of fees. California Government Code Section 65995 limits the fee to be collected to the statutory fee unless a school district conducts a Facility Needs Assessment (Government Code Section 65995.6) and meets certain conditions.

Senate Bill 50 (Chapter 407, Statutes of 1998) instituted a new school facility program by which school districts can apply for State construction and modernization funds. This legislation imposed limitations on the power of cities and counties to require mitigation of school facilities impacts as a condition of approving new development. It also provided the authority for school districts to levy fees at three different levels:

Level I fees are the current statutory fees allowed under Education Code Section 17620. As mentioned above, this code section authorizes school districts to levy a fee against residential and commercial construction to fund school construction or reconstruction. These fees are adjusted every two years in accordance with the statewide cost index for Class B construction as determined by the State Allocation Board. As of January 2006, the maximum Level I fees are $2.63 per square foot for residential construction and $0.42 per square foot for commercial construction.

Level II developer fees are outlined in Government Code Section 65995.5. This code section allows a school district to impose a higher fee on residential construction if certain conditions are met. These conditions include having a substantial percentage of students on multitrack year-round scheduling, having an assumed debt equal to 15 to 30 percent of the district's bonding capacity (the percentage is based on revenue sources for repayment), having at least 20 percent of the district's teaching stations housed in relocatable classrooms, and having placed a local bond on the ballot in the past 4 years that received at least 50 percent plus one of the votes cast. A Facility Needs Assessment must demonstrate that the need for new school facilities for unhoused pupils is attributable to projected enrollment growth from the construction of new residential units over the next five years.

Level III developer fees are outlined in Government Code Section 65995.7. This code section authorizes a school district that has been approved to collect Level II fees to collect a higher fee on residential construction if State funding becomes unavailable. This fee is equal to twice the amount of Level II fees. However, if a district

eventually receives state funding, this excess fee may be reimbursed to the developers or subtracted from the amount of state funding.

Quimby Act

The Quimby Act (California Government Code Section 66477) was established by the California legislature in 1965 to preserve open space and parkland in the rapidly urbanizing areas of the state. This legislation was in response to California's increased rate of urbanization and the need to preserve open space and provide parks and recreation facilities for California's growing communities. The Quimby Act authorizes local governments to establish ordinances requiring developers of new subdivisions to dedicate land for parks, pay an in-lieu fee, or perform a combination of the two.

The Quimby Act provides two standards for the dedication of land for use as parkland. If the existing area of parkland in a community is greater than 3 acres per 1,000 persons, then the community may require dedication based on a standard of up to 5 acres per 1,000 persons residing in the subdivision. If the existing amount of parkland in a community is less than 3 acres per 1,000 persons, then the community may require dedication based on a standard of only 3 acres per 1,000 persons residing in the subdivision. The Quimby Act requires a city or county to adopt standards for recreational facilities in its general plan recreation element if it is to adopt a parkland dedication/fee ordinance.

The City collects Quimby Act in-lieu fees. These fees contribute to a fund that would be used to acquire properties for parkland. The City's standards for parkland dedication under the Quimby Act are provided in the discussion of local regulations below.

LOCAL

City of Rocklin General Plan

The following goals and policies from the Public Facilities and Services Element of the City General Plan (1991) are applicable to the proposed project:

Goal: To ensure that adequate public services and facilities are provided to meet the needs of residents of the City.

- **Policy 1:** To maintain the provision of adequate public services and facilities to the exiting areas of the City and to ensure that new development is served by a full range of public services.

- **Policy 2:** To cooperate with school districts serving the City to meet their adopted district standards and State standards. All residential development project applications shall be evaluated for the impact on school services and facilities. Where an impact is found, the project may be conditioned to the extent and in the manner allowed by law, to mitigate the impact, such as requiring payment of school district fees and participation in a community facilities district to fund school facilities.

- **Policy 6:** To require garbage collection services to ensure the maintenance of health standards.

- **Policy 7:** To maintain existing public services and provide new facilities consistent with community needs.

- **Policy 8:** To require developer participation in providing public services and facilities (including equipment) where development proceeds in advance of the City's ability to provide the services of facilities. Participation could consist of the formation of assessment districts, payment of fees, and/or the construction and dedication of facilities.

- **Policy 17:** To encourage the undergrounding of existing and proposed utility lines, where possible.

- **Policy 18:** To encourage programs to reduce, recycle, and reuse solid waste materials to the extent possible.

The following policy from the Open Space, Conservation, and Recreation Element of the City General Plan (1991) is applicable to the proposed project:

- **Policy 5:** To encourage energy conservation in new developments.

The following policies from the Community Safety Element of the City General Plan (1991) are applicable to the proposed project:

- **Policy 10:** To enforce the City building code, fire code, and City ordinances in regard to fire safety and fire protection.

- **Policy 13:** To require new annexations, and projects proposing land use changes to the General Plan resulting in higher densities or intensity, to annex into the City's existing Community Facilities District No. 1 for the maintenance of fire suppression service, or to create other financing districts as necessary.

- **Policy 15:** To encourage residential development to locate within approximately two road miles from a fire station, and to encourage high density commercial development to be located approximately one and one-half road miles from a fire station, unless special fire suppression measures are incorporated into the development.

4.6.3 IMPACTS AND MITIGATION MEASURES

METHOD OF ANALYSIS

Impacts on utilities and public services that would result from the project were identified by comparing existing service capacity against future demand associated with project implementation. When possible, a quantitative comparison was used to determine impacts of the proposed project on future demands. Evaluations of potential utilities and public service impacts are based on a review of documents pertaining to the proposed project area, including the City General Plan (1991) and the WSA for the project (PCWA 2006). Additional information was obtained through consultation with appropriate agencies and field review of the project site and surroundings.

THRESHOLDS OF SIGNIFICANCE

Pursuant to CEQA Guidelines Appendix G, a utilities impact is considered significant if implementation of the proposed project under consideration would do any of the following:

- Create a water supply demand in excess of existing entitlements and resources;

- Result in the determination by the wastewater treatment provider that serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments;

- Exceed wastewater treatment requirements of the applicable RWQCB;

- Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;

- Require or result in the construction of new storm water drainage facilities, the construction of which could cause significant environmental effects;

- Require or result in the construction of new or expanded landfill facilities, the construction of which could cause significant environmental effects; or

- Exceed capabilities of electrical, natural gas service or telecommunications providers to serve the project.

A public service impact is considered significant if implementation of the proposed project under consideration would do any of the following:

- result in substantial adverse physical impacts associated with the provision of or need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios, response times, or other performance objectives for

  - fire protection,
  - police protection,
  - schools,
  - parks, and
  - other public facilities;

- create circumstances where existing services and facilities could not meet established performance standards (i.e., response times, provider per resident ratios); or

- result in the increased use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.

IMPACTS AND MITIGATION MEASURES

IMPACT 4.6-1 Increased Demand for Water Supply, Treatment, and Conveyance Facilities. *PCWA has sufficient water supplies to meet existing and projected future uses in addition to the proposed project's demands under all water year types (e.g., normal, single-dry, and multiple-dry years). The project site would be served by the Foothill WTP and the proposed project's estimated maximum daily water treatment demands would not exceed the plant's permitted capacity. This impact would be* ***less than significant****. However, the project would require the construction of water conveyance facilities to ensure adequate water conveyance to the site. The construction of these conveyance facilities could cause short-term environmental impacts. These short-term impacts would be considered* ***significant****.*

On September 7, 2006, the PCWA Board of Directors discussed and approved the City's request to provide a water supply analysis for the proposed project. A WSA has been prepared for the proposed project consistent with Water Code Section 10912 (Appendix F). This assessment includes a determination as to whether the projected water supplies available would meet the water demand associated with the proposed project, in addition to the existing and planned future uses. According to the WSA assessment, project development would require 130 afy, with a maximum daily demand of 230,000 gallons per day and a fire flow of 4,000 gallons per minute (gpm).

Based on the information provided in the WSA, sufficient water supplies are available to serve the project during normal, single-dry, and multiple-dry years based on existing the integrated use of existing surface water entitlements, recycled water and demand reduction resources and groundwater. This conclusion is based on a total current committed demand of 118,521 afy and an available supply of 255,400 afy. This latter supply figure assumes that the 35,000 afy diversion from the Sacramento River will be available in the future. However, even without this supply, PCWA has sufficient excess water supply to meet the proposed project's water demands from the American River Pump Station project, expected to be completed in 2008 (or from the temporary American River Pump Station if the permanent facility is delayed).

The project site would be served by the Foothill WTP. PCWA completed the most recent expansion of the Foothill WTP in 2005 and the capacity of this facility was increased from 27 mgd to 55 mgd. Combined with the Sunset WTP, which has a capacity of 8 mgd, the Foothill/Sunset system has a treatment capacity of 63 mgd. In 2005, the maximum daily demand for the Foothill/Sunset system was 50 mgd, leaving 13 mgd of unused capacity that is available to serve new demands. The proposed project would require an estimated 0.23 mgd of water treatment; therefore, the proposed project would not exceed the plant's permitted capacity.

The project's water supply would be provided from the 20-inch pipeline in Taylor Road via the 20-inch pipeline in Sierra College Boulevard and the 16-inch pipeline in the Croftwood Access Road. The Taylor Road pipeline currently has a large demand placed upon it from existing development and the water demands of the proposed project and other zoned and planned development cannot be served solely from this pipeline under Placer County Water Agency (PCWA) pressure and velocity criteria (PCWA 2006). To provide adequate water conveyance to the project site, some or all of the following off-site conveyance facilities within existing roadway rights-of-ways may need to be constructed or partially funded by the project (subject to reimbursement):

- Installation of a 16-inch water main in Barton Road that would begin its connection from the existing 16-inch water main near La Vista Road and travel south to connect with the existing 12-inch water main in Barton Road at Rutherford Canyon Road.

- Installation of a 12-inch water main in Wells Avenue that would begin its connection from the existing 12-inch water main in Barton Road and travel east to connect with the existing 12-inch water main in Wells Avenue at Rickety-Rack Road.

- Installation of a parallel 12-inch water main in Rutherford Canyon Road that would begin its connection from the proposed 16-inch water main in Barton Road and travel east to connect with the proposed parallel 12-inch water main in Laird Road.

- Installation of a parallel 12-inch water main in Laird Road that would begin its connection from the proposed parallel 12-inch water main in Rutherford Canyon Road and travel south to connect with the proposed parallel 12-inch water main in Wells Avenue.

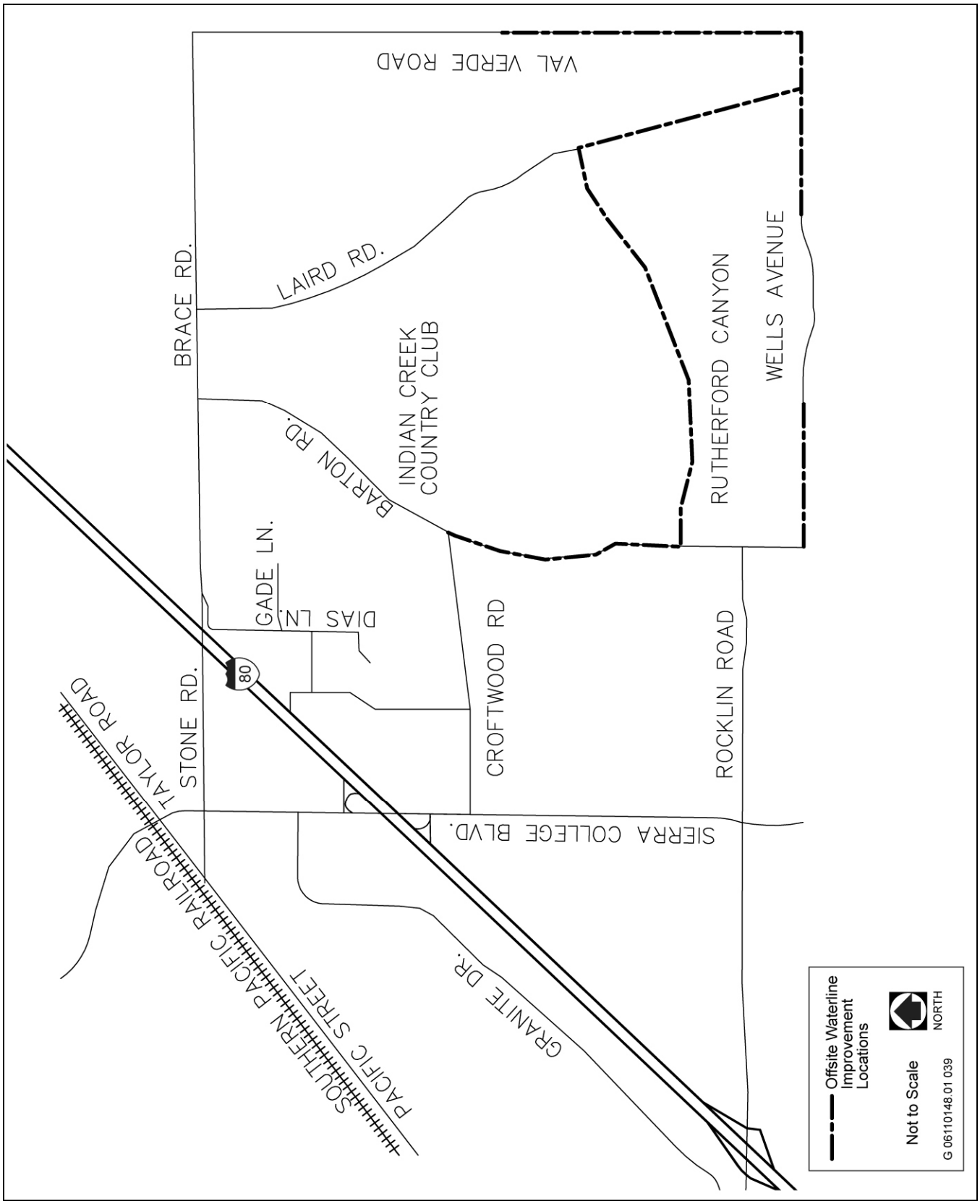
- Installation of a parallel 12-inch water main in Wells Avenue that would begin its connection from the existing 12-inch water main in Wells Avenue from Morgan Place and travel east to connect with the proposed 12-inch water main at Laird Road.

- Installation of a parallel 12-inch water main in Wells Avenue that would begin its connection from the proposed parallel 12-inch water main in Laird Road and travel east to connect with the proposed parallel 18-inch water main in Val Verde Road.

- Installation of a parallel 18-inch water main in Val Verde Road that would begin its connection from the proposed parallel 12-inch water main in Wells Avenue and travel north to connect to a proposed pressure reducing station in Val Verde and then connect to the existing 24-inch water main in Val Verde Road at Dick Cook Road, or

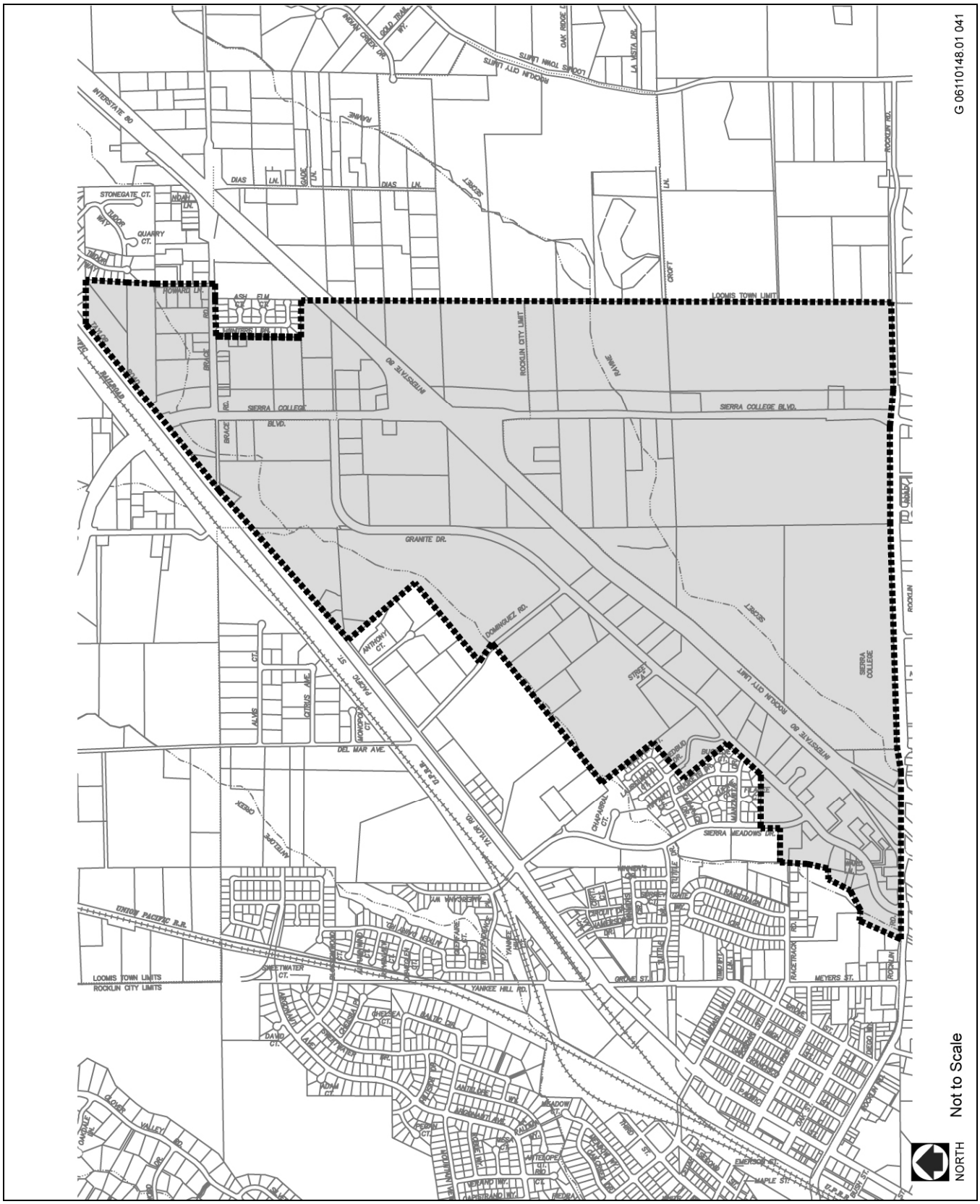
- Installation of other improvements intended to accomplish the same purpose (supplying water with adequate pressure to the project site).

Off-site conveyance facilities are shown in Exhibit 4.6-1. These PCWA improvements are intended to ensure that PCWA's system can provide service for and meet the water demands (as it pertains to peak fire flow) of the proposed project and other commercial developments that may or are expected to occur within the area of benefit, further identified as the Sierra College Boulevard/Interstate 80 interchange area (as depicted in Exhibit 4.6-2) without adversely affecting the pressure or velocity requirements of PCWA's system elsewhere.



Source: City of Rocklin 2007

Offsite Water Line Improvements **Exhibit 4.6-1**



Source: Placer County Water Agency, 2007

Area Affected by Water Line Improvements **Exhibit 4.6-2**

All of these pipelines would be installed within existing roadway rights-of-way, consistent with PCWA standards. Due to their relatively small size, the pipelines could be installed relatively quickly with standard trenching equipment. However, the trenching activities would generate air emissions, including particulate matter and ozone, contributing to regional air pollution. If homes or schools are located near the construction area, they could be disturbed by dust. Construction activities would also generate substantial noise. If residents or other sensitive receptors are located near construction areas, they could be disturbed by noise. Minor traffic delays could occur if a lane closure is required for this trenching activity. Because the trenching would occur within existing paved and/or gravel roadway rights-of-way, no impacts on biological or cultural resources would be anticipated. The potential temporary construction impacts associated with installation of water line improvements would be considered **significant**.

The project applicant would be required to relocate the Eastside Canal pipe that traverses the portion of the property abutting Interstate 80 within the project site. PCWA would require the canal pipe to be relocated before construction of the proposed project to avoid being located under permanent structures. The project applicant would be required to prepare plans and enter into a Facilities Agreement with the PCWA to relocate the canal pipe. The existing canal pipe would remain in service until the replacement pipe is in service.

Once the above-described Sacramento River diversion is in place, PCWA would have sufficient water supplies to meet their existing and projected future demands in addition to the proposed project's water demands under all water year conditions (e.g., normal, single-dry, and multiple-dry years). Because the project, if approved by the City Council, is expected to be built out within a very few years, the project should receive all the water it needs from the permanent American River Pump Station. Although PCWA provides binding commitments to supply water to new development on a first come, first served, basis, PCWA anticipates that the project will be ready for water hookup years before all of the 35,500 afy is spoken for and the new Sacramento River diversion is needed. The recent slow-down in the housing market has caused PCWA to adjust backward in time its former estimate for when the Sacramento River water supply will be needed. The most current estimate is that this new supply will not be needed until approximately 2015 or possibly later. Once the ARPS supply is fully allocated, the remaining unapproved development anticipated within PCWA's service area will, in all likelihood, have to rely on the Sacramento River supply.

The project site would be served by the Foothill WTP and the proposed project's estimated maximum daily water treatment demands would not exceed the plant's permitted capacity. In addition, the project includes the relocation of the portion of the Eastside Canal on the project site necessary to ensure its long-term operation. Because the proposed project would be served by a water treatment plant that has adequate capacity to meet the project's projected demand and would not require the construction of a new water treatment plant, the proposed project's water supply and treatment facility impacts would be considered **less than significant**. However, construction of the necessary off-site water conveyance facilities to serve the project could result in adverse environmental impacts. These offsite construction impacts would be considered **significant**.

Mitigation Measure 4.6-1 Increased Demand for Water Supply, Treatment, and Facilities

The mitigation measures recommended in Chapter 4 of this Draft shall be applied (where applicable) to mitigate any water conveyance construction impacts, if significant, to less-than-significant levels. For example, PCAPCD measures shall be implemented to minimize fugitive dust and construction equipment emissions, and construction equipment shall be effectively muffled and limited to daytime operations. As part of any necessary encroachment permits for work within the roadway, construction traffic control plans shall be prepared and implemented in order to minimize construction traffic hazards.

Level of Significance after Mitigation

The project's impacts on water supply, treatment, and conveyance facilities would be reduced to a less-than-significant impact following implementation of the identified mitigation measures.

IMPACT 4.6-2 Demand for Wastewater Treatment and Conveyance Facilities. *Implementation of the project would increase the demand for wastewater treatment and conveyance facilities. Existing wastewater treatment facilities and the planned wastewater conveyance facilities currently under construction would be adequate to serve the project. This impact is considered* ***less than significant****.*

Based on the project's estimated water demand, the maximum wastewater generation at the site is estimated to be 0.12 mgd. SPMUD has planned for growth in the City and sized the City's sewer infrastructure to meet this growth (City of Rocklin 2005). The project wastewater infrastructure would connect to, and be served by, the wastewater trunk lines currently being installed south of the project site for the Croftwood Subdivision project (The Planning Center 1991 and South Placer Municipal Utility District 2005). This new trunk line and the other conveyance facilities have adequate capacity to accommodate the proposed project's anticipated wastewater demands (South Placer Municipal Utility District 2005).

Wastewater generated by the project would be treated at the Dry Creek Wastewater Treatment Plant. The project's wastewater generation would represent approximately 0.6 percent of the treatment plant's total capacity. This increased demand would not be expected to adversely affect the wastewater treatment plant's capacity. Because the proposed project would be served by a wastewater treatment plant that has adequate capacity to meet the project's projected demand and would not require the construction of a new wastewater treatment plant, the proposed project's wastewater impacts would be considered **less than significant**.

Mitigation Measure 4.6-2 Demand for Wastewater Treatment and Conveyance Facilities

No mitigation is necessary.

Level of Significance after Mitigation

The project's impacts on wastewater treatment and conveyance facilities would be considered less than significant.

IMPACT 4.6-3 Increased Generation of Solid Waste. *The proposed project would incrementally increase the amount of solid waste generated in the City. However, adequate long-term landfill disposal capacity is available at the Western Regional Sanitary Landfill, which would receive the solid waste generated from the project site. Therefore, the project's impacts on solid waste disposal would be considered* ***less than significant****.*

The California Integrated Waste Management Board (CIWMB) provides average per-capita solid waste disposal rates that range from 0.3 tons per employee per year for general merchandise stores to 3.1 tons per employee per year for food stores (CIWMB 2007). Based on a worst-case waste generation scenario of 3.1 tons of waste per year per employee and a total of approximately 800 employees, the project would generate approximately 2,480 tons of waste per year.

Solid waste collected from the project site would be sorted at the Western Regional Materials Recovery Facility with the remaining refuse taken to the Western Regional Sanitary Landfill. The landfill is permitted to accept 1,900 tpd of solid waste. On a daily basis, the worst-case waste volume generated by the proposed project (approximately 6.8 tpd) would represent approximately 0.3% of the landfill's maximum daily disposal capacity. The landfill has a total capacity of 36 million cubic yards and a remaining capacity of 29 million cubic yards. The estimated closure date for the landfill is approximately 2036 (CIWMB 2005). The worst-case waste volume generated by the proposed project until landfill closure would reduce the total life span of the landfill by less than 30 days. Therefore, the landfill has sufficient permitted capacity to accommodate the project's solid waste disposal needs. The project would also be required to comply with all federal, State, and local statutes and regulations related to solid waste reduction and recycling. Because the proposed project would not require the construction of new or expanded landfill facilities, this impact would be **less than significant**.

Mitigation Measure 4.6-3 Increased Generation of Solid Waste

No mitigation is necessary.

Level of Significance after Mitigation

The project's impacts on solid waste services would be considered less than significant.

IMPACT 4.6-4 Increased Demand for Electricity. *Implementation of the proposed project would increase the demand for electricity and electrical infrastructure. The project area would be supplied with electrical services by PG&E. Electrical services are currently being provided adjacent to the project site and extension of these services to the site would not cause any physical disturbances beyond that already anticipated at the project site. For these reasons, the provision of electrical services to the project site would result in* ***less-than-significant*** *impacts.*

Implementing the proposed project would increase electrical demand in the project area. PG&E provides electrical services to the City through State-regulated public utility contracts and would provide electric service within the project site. In the project area, PG&E has existing 12-kV and 21-kV overhead power lines on the west side of Sierra College Boulevard. In addition, 12-kV overhead power lines are located in the southern portion of the property. New power lines within the project site would connect to the existing service lines, with the ultimate on-site configuration to be approved by PG&E. No new off-site electrical lines would be required for development of the proposed project.

As part of the project approval process, the project applicant would be required to coordinate with the City and PG&E regarding the extension and locations of on-site infrastructure. The proposed electrical utility improvements would be required to comply with all existing City, PG&E, and CPUC requirements, and applicable Uniform Building Code requirements. PG&E staff have indicated that they would be able to serve the project and the project would not adversely affect their ability to provide services within the area. Because the proposed project would not cause an exceedance of PG&E's electrical service capabilities, the project's impact on electrical services would be considered **less than significant**.

Mitigation Measure 4.6-4 Increased Demand for Electricity

No mitigation is necessary.

Level of Significance after Mitigation

The project's impacts on electrical services would be considered less than significant.

IMPACT 4.6-5 Increased Demand for Natural Gas. *Implementation of the proposed project would increase the demand for natural gas. PG&E would provide natural gas to the project site through existing utility easements. Therefore, this impact would be* ***less than significant****.*

Implementing the proposed project would increase natural gas demand in the project area. PG&E provides natural gas services to the City through State-regulated public utility contracts and would provide natural gas to the project site. Natural gas lines are in the vicinity of the project site parallel to existing road rights-of-way. Project development would connect to extensions of the existing off-site service lines, with the ultimate configuration to be approved by PG&E. If PG&E determines additional off-site infrastructure is required for development of the proposed project, the project applicant would be required to coordinate with PG&E. All new off-site infrastructure would be installed in existing utility rights-of-way. On-site service lines would be sized to meet the demands of the project and public utility easements would be dedicated for all underground facilities. The on-site location of the natural gas infrastructure would be identified in the final project design. As part of the project

approval process, the project applicant would be required to coordinate with and meet the requirements of the City and PG&E regarding any extensions of off-site infrastructure and the locations of on-site infrastructure. Because the proposed project would connect to existing off-site service lines consistent with the requirements of PG&E and the City, it would not exceed the capabilities of PG&E to serve the project site and this impact would be considered **less than significant**.

Mitigation Measure 4.6-5 Increased Demand for Natural Gas

No mitigation is necessary.

Level of Significance after Mitigation

The project's impacts on natural gas services would be considered less than significant.

IMPACT 4.6-6 Required Extension of Telecommunications Services. *Implementation of the proposed project would require extension of existing telecommunication services. Pacific Bell and Wave Broadband Services would provide telephone and cable services, respectively, to the project site and upgrade existing facilities, as necessary, to serve the project. This impact would be* ***less than significant****.*

Telecommunications infrastructure is currently located throughout the City and in the vicinity of the project site. Telephone service would be provided by Pacific Bell from an existing underground telephone cable located on the east side of Sierra College Boulevard. Cable service for the proposed project would be provided by Wave Broadband Services from an underground conduit that runs parallel to Interstate 80.

As part of the project approval process, the project applicant would be required to coordinate with and meet the requirements of Pacific Bell and Wave Broadband Services regarding the extension and locations of on-site infrastructure. All new on-site infrastructure would be required to be installed in conformance with City, Pacific Bell and Wave Broadband Services standards. Because the proposed project would connect to existing telecommunications infrastructure adjacent to the project site, it would not exceed the capabilities of telecommunications providers to serve the project site and this impact would be considered **less than significant**.

Mitigation Measure 4.6-6 Required Extension of Telecommunications Services

No mitigation is necessary.

Level of Significance after Mitigation

The project's impacts on telecommunication services would be considered less than significant.

IMPACT 4.6-7 Increased Demand for Fire Protection and Emergency Medical Services. *Development of the proposed project would increase the demand for fire protection and emergency medical services. The proposed project would be required to be designed and constructed consistent with the Uniform Fire Code requirements and the project applicant would be required to pay impact fees to offset the increased demand. Therefore, this impact would be* ***less than significant****.*

Development of the proposed project would result in increased demand for fire protection and emergency medical services. The project would increase the potential for fires and medical emergencies due to the high concentration of people, structures and vehicles on the project site. Fire Station No. 1, which is located approximately 2 miles to the southwest, is the nearest fire station to the project site. Response times within the City generally average five minutes or less, 80 percent of the time.

The project applicant would be required to incorporate Uniform Fire Code requirements into the project's design. This includes the installation of fire hydrants spaced according to the distribution of buildings on the site, the installation of sprinkler systems in buildings, the provision of multiple emergency vehicle access points, and the inclusion of fire extinguishers and other fire suppression equipment within individual buildings. The water system supplying the fire hydrants would be required to meet specific pressure and water flow duration requirements, as dictated in the Uniform Fire Code.

The City of Rocklin requires new development projects to pay specific impact fees (a portion of which is directed to the Fire Department). In addition, the project would be required to annex into the City-wide Community Facility District No. 1 and pay yearly City-wide Fire Department impact fees, which are adjusted, as needed. The City Fire Department has indicated that the department has no concern regarding the proposed project (Petitclerc 2005).

Due to the project's direct access to Interstate 80 and Sierra College Boulevard, fire and emergency medical response vehicles could easily access the site from multiple directions. The project would not include any components that would impede the Fire Department's current response times and would not be expected to include any unique uses that would substantially increase the demand for fire protection facilities or equipment. The project designs would be required to incorporate all Uniform Fire Code requirements and the project applicant would be required to pay its fair share of costs through the payment of the Public Facilities Impact Fees. In addition, the project would generate sales tax revenues that could support additional fire protection requirements deemed necessary by the City Council. For these reasons, the project's impacts on fire protection services would be **less than significant**.

Mitigation Measure 4.6-7 Increased Demand for Fire Protection Services

No mitigation is necessary.

Level of Significance after Mitigation

The project's impacts on fire protection services would be considered less than significant.

IMPACT 4.6-8 Increased Demand for Police Protection Services. *Development of the proposed project would increase the demand for police protection services. The City would add personnel to the police department on an as-needed basis to meet service goals and the project includes the implementation of site security measures to minimize new demands on law enforcement. Therefore, this impact would be* ***less than significant****.*

Development of the proposed project would result in increased demand for police protection services. The project could increase petty theft, vandalism, and car-related crimes that are typically associated with large shopping centers and parking lots. In order to minimize crime at the project site, the project includes the implementation of security measures that are intended to ensure the safety of employees and the public. In particular, the proposed Wal-Mart Supercenter would install closed-circuit camera systems (surveillance cameras) inside and outside the store; would provide a parking lot patrol during the day and nighttime hours; would use a plainclothes patrol inside the store, and would have a risk control team responsible for safety and security issues at the site.

The project site is currently served by the Rocklin Police Department, which is headquartered at 4080 Rocklin Road, approximately 2 miles southwest of the project site. The department currently has a response time of just over four minutes for Priority 1 calls. The department is currently working on a five-year strategic plan to address additional growth in the City (Nottoli pers. comm. 2006). Funding for department operations comes from the City's general fund. New police services, including officers and equipment, are funded on an as-needed basis through approval from the City Council.

Due to the project's direct access to Interstate 80 and Sierra College Boulevard, police patrol vehicles could easily access the site from multiple directions. The project would not include any components that would impede the Police Department's current response times and because of the onsite security measures, would not be expected to substantially increase the demand for police protection facilities or equipment. In addition, the project would generate sales tax revenues that could support additional police protection requirements deemed necessary by the City Council. For these reasons, the project's impacts on law enforcement services would be **less than significant**.

Mitigation Measure 4.6-8 Increased Demand for Police Protection Services

No mitigation is necessary.

Level of Significance after Mitigation

The project's impacts on police protection services would be considered less than significant.

IMPACT 4.6-9 Increased Demand for Public School Facilities and Services. *The proposed project is not expected to result in substantial population growth or new student generation. The project would be subject to development impact fees that would provide the legal maximum required level of funding under State law. The payment of school impact fees is deemed to be full and adequate mitigation under CEQA (Government Code Section 65996). As a result, the project would have a* ***less-than-significant*** *impact on school services and facilities.*

The project site is within the Loomis Union School District and Placer Union High School District. The proposed project does not include a residential component and the majority of employees are anticipated to be hired from the local and regional population base. Therefore, the project is not expected to result in substantial population growth or new student generation.

The project would be subject to development impact fees. As allowed by State law, the project applicant would be required to pay the State-mandated school impact fees. As of January 2006, developers are charged Level I fees of $0.42 per square foot for commercial development. This fee is typically an insufficient amount to fund 100 percent of new school facility construction. However, the California Legislature has declared that the school impact fee is deemed to be full and adequate mitigation under CEQA (Government Code Section 65996). Section 65996 does not provide for remediation of existing deficiencies in school services. With payment of the State-mandated school impact fees, the project's impacts on school services and facilities would be considered **less than significant**.

Mitigation Measure 4.6-9 Increased Demand for Public School Facilities and Services

No mitigation is necessary.

Level of Significance after Mitigation

The project's impacts on public school facilities and services would be considered less than significant.

4.7 AESTHETICS

This section describes the existing aesthetic setting of the project site, the regulatory background that applies to the project, and the potential visual impacts on aesthetic resources associated with implementation of the proposed project. In accordance with CEQA Guidelines Section 15125(a), the environmental baseline, as analyzed in this EIR, is the environmental setting as it existed at the time the Notice of Preparation was published, November 16, 2006. Therefore, the following discussion describes the site's aesthetic resources as they were on November 16, 2006. However, it should be noted that the Interstate 80/Sierra College Boulevard Interchange Improvement Project was initiated following release of the Notice of Preparation and extensive grading and excavation work has been initiated along the western and northern portions of the project site to accommodate the interchange project's lane construction and soil borrow requirements. These changes have altered the aesthetic character of the project site's northern and western boundaries.

4.7.1 EXISTING SETTING

The following text describes the existing visual character of the project site and surrounding land. The descriptions of existing conditions are accompanied by photographs of representative views taken during a site visit on October 18, 2006. The locations of project site viewpoints are shown in Exhibit 4.7-1.

VISUAL CHARACTER OF THE PROJECT SITE

The project site includes rolling terrain with elevations ranging from 320 to 360 feet above mean sea level. The project site and vicinity are predominantly large open spaces historically used for orchard production. The site consists of expansive grasslands and scattered oak woodlands.

The site, and the surrounding area, are located in one of the last major visual open space areas one views as they travel along Interstate 80 from east to west. The area to the east along the interstate continues a pattern of open spaces interspersed with small communities. The area to the west becomes more urbanized as one travels through Rocklin to Roseville and into Sacramento County.

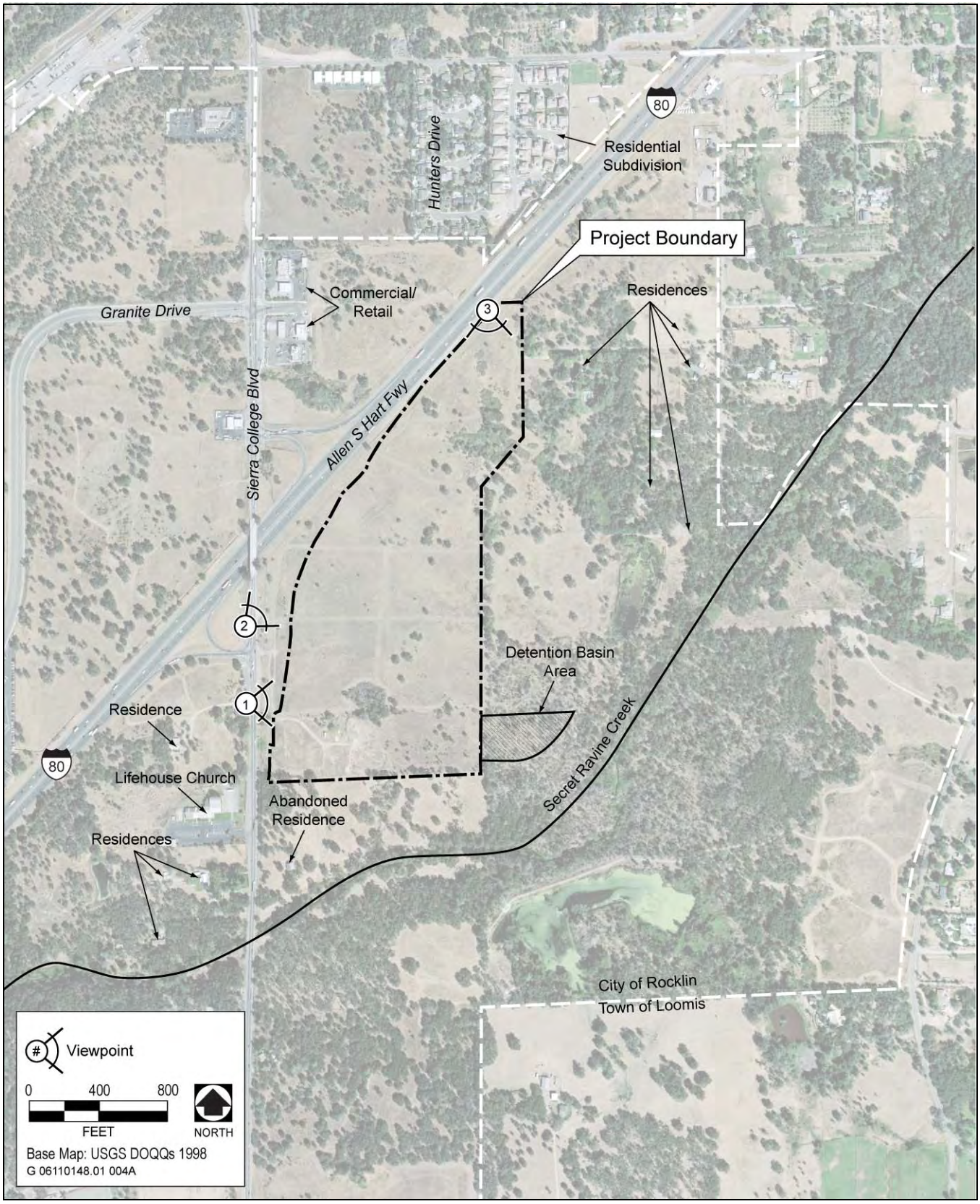
VISUAL CHARACTER OF THE SURROUNDING AREA

The land surrounding the project site consists of the Interstate 80 freeway, Sierra College Boulevard, and relatively undeveloped land interspersed with rural residences. Existing retail-commercial and residential land uses exist to the north of the project site across Interstate 80. Areas south, east, and west of the project site consist of large open spaces interspersed with oak woodlands and rural residences. The general character of the surrounding area is described below.

- **North:** Interstate 80, a 6-lane highway, borders the project site to the north. Areas north of Interstate 80 consist of retail-commercial establishments, some with signage directed at travelers along Interstate 80, and a residential subdivision along Hunters Drive (Exhibit 4.7-1). In general, areas north of the project site include pockets of development interspersed within open grasslands and scattered oak woodlands.

- **East:** Areas east of the project site consist of large areas of relatively undeveloped land interspersed with rural residences, oak woodlands and a dense riparian corridor along Secret Ravine. The Sierra Nevada foothills along with groves of oak trees and oak woodlands can be seen in the distant background.

- **South:** Areas south of the project site consist of large areas of open grasslands and dense oak woodlands with Secret Ravine ranging between 400 and 800 feet south of the project site. A small abandoned residence is located approximately 400 feet south of the project site and 100 feet east of Sierra College Boulevard (Exhibit 4.7-1).



Source: EDAW 2007

Viewpoint Locations
Views of the Project Site **Exhibit 4.7-1**

- **West:** Sierra College Boulevard borders the project site to the west. Areas west of Sierra College Boulevard consist of grasslands and oak woodlands interspersed with rural residences, the Lifehouse Church and Interstate 80 (Exhibit 4.7-1).

Distant views of the site from Interstate 80 are limited by topography, intervening vegetation and the presence of elevated features such as the Interstate 80/Sierra College Boulevard interchange. However, as eastbound and westbound motorists approach the site on Interstate 80, the northern portion of the site is clearly visible. With a peak elevation of 360 feet above mean sea level near the north central portion of the site, it rises slightly above the elevation of the freeway, which increases as traveling eastward from 340 feet at Sierra College Boulevard to 350 feet above mean sea level near the site's northeastern boundary. The highpoint in the north central portion of the site blocks views of the site's southern portion from motorists on Interstate 80. This same topographic screening occurs for the commercial/retail and residential uses to the north of Interstate 80, which gradually decrease in elevation from approximately 340 feet adjacent to the freeway to 320 feet above mean sea level near Taylor Road.

The project site is clearly visible to motorists traveling northbound and southbound on Sierra College Boulevard between Interstate 80 and the southern boundary of the project site. Because of intervening vegetation and existing commercial/retail development north of Interstate 80, the site is only visible for southbound travelers on Sierra College Boulevard north of Interstate 80 for a very short duration. Views from the south of the project site along Sierra College Boulevard are screened by the existing vegetation, including oak trees and oak woodlands, paralleling the east side of Sierra College Boulevard. Views from the east are largely screened by the relatively dense woodland vegetation to the east of the project site.

Three viewpoint locations discussed below were chosen to represent areas that were most sensitive to visual change (Exhibit 4.7-1). The general nature of views of the project site is described from these locations.

View from Sierra College Boulevard (Viewpoint 1)

This viewpoint is located adjacent to the western boundary of the project site (Exhibit 4.7-1). As can be seen in Exhibit 4.7-2, the foreground is dominated by gently rolling grasslands interspersed with oak trees extending to the east. Rows of oak trees and oak woodland are visible in the mid-distant view, which screen views extending further to the east. Distant background views, where they are available, consist of oak woodlands.

Views from the Interstate 80/Sierra College Boulevard Interchange (Viewpoint 2)

This viewpoint is located at the northwest corner of the project site (Exhibit 4.7-1). As can be seen in Exhibit 4.7-3, an abandoned road and existing powerlines on the site are the dominant foreground views. The project site's grasslands gradually slope downward toward the freeway, which is only partially visible on the left side of the viewpoint. Mid-distant views from this viewpoint include natural landscape consisting of scattered oak trees and denser oak woodlands. Because of the oak tree and woodland density, views from ground level to areas further to the east are limited. Distant views from this viewpoint are dominated by the Sierra Nevada foothills and oak woodlands.

Views from Interstate 80 (Viewpoint 3)

This viewpoint is located at the northern edge of the project site (Exhibit 4.7-4). Foreground views are dominated by the freeway shoulder and the elevated grasslands along the site's northern boundary. Mid-distant views consist of scattered oak woodlands. Because of the elevated foreground topography, views from ground level to areas further to the south and east are limited.

View from Sierra College Boulevard south of Interstate 80 looking east

Representative Photograph (Viewpoint 1) **Exhibit 4.7-2**

View from Sierra College Boulevard / Interstate 80 interchange looking northeast

Representative Photograph (Viewpoint 2) **Exhibit 4.7-3**

View from Interstate 80 westbound east of the Sierra College Boulevard / Interstate 80 interchange looking south

Representative Photograph (Viewpoint 3) **Exhibit 4.7-4**

4.7.2 REGULATORY SETTING

CALIFORNIA SCENIC HIGHWAY PROGRAM

The California Department of Transportation (Caltrans) manages the California Scenic Highway Program. The goal of the program is to preserve and protect scenic highway corridors from changes that would affect the aesthetic value of the land adjacent to highways. No State-designated scenic highways are located in the vicinity of the project site (Caltrans 2006).

CITY OF ROCKLIN GENERAL PLAN

The Open Space, Conservation and Recreation Element of the City of Rocklin General Plan (1991) includes the following relevant policies related to visual resources.

- **Policy 1.** To encourage the protection of natural resource areas, scenic areas, hilltops, open space areas and parks from encroachment or destruction by incompatible development through the use of conservation easements, buffers, setbacks or other measures. Developments shall be required to provide usable land areas outside of conservation easements or established natural resource buffers.

- **Policy 20.** To consider development projects in terms of their visual qualities and compatibility with surrounding areas, especially those urbanizing areas abutting rural or semi-rural areas.

In addition, the City of Rocklin Municipal Code requires that all projects other than individual residences undergo design review (Municipal Code Section 17.72.020). As part of the design review process, the project applicant is required to provide detailed information regarding the project's architectural design including architectural elevations and renditions of all buildings, signs, light poles, walls and fences, and other structures, including

materials to be used and color schemes. A landscape plan, including the location, type, quantity and size of plant materials to be used needs to be submitted as well as a description of site signage including dimensions, illumination and the lettering style of all signs (Municipal Code, Section 17.72.050).

4.7.3 IMPACTS AND MITIGATION MEASURES

METHOD OF ANALYSIS

This visual impact analysis evaluated the visual changes that would occur at the project site using the standards of quality, consistency, and symmetry typically used for a visual assessment. The visual impacts are compared against the thresholds of significance discussed below.

THRESHOLDS OF SIGNIFICANCE

The project would cause a significant impact related to aesthetic resources, as defined by the State CEQA Guidelines (Appendix G), if it would:

- have a substantial adverse effect on a scenic vista;
- substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;
- substantially degrade the existing visual character or quality of the site and its surroundings; or
- create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

IMPACTS AND MITIGATION MEASURES

IMPACT 4.7-1 Impacts on Scenic Vistas. *Views on or near the project site are not considered scenic vistas. Therefore, development of the project site would not alter or obscure a scenic vista. This impact would be* ***less than significant****.*

A scenic vista is generally considered a view of an area that has remarkable scenery or a resource that is indigenous to the area. The project site itself does not include unique aesthetic resources that would be categorized as a scenic vista. The open grasslands and scattered oak trees that make up the project site are consistent with surrounding properties that contain similar visual resources. Although the current land uses provide views of a grassland/oak woodland landscape that is representative of the Sierra foothills region, the project site does not contain resources that are exemplary or unique to the area or the region.

Project buildings could briefly obscure views of the Sierra Nevada foothills for east bound travelers on Interstate 80. However, the project site would be within the view of eastbound travelers for less than 10 seconds and the commercial development on the project site would be consistent with other freeway oriented commercial developments along the length of Interstate 80 within the region. The project buildings could also briefly obscure views of the Sierra Nevada foothills for travelers on Sierra College Boulevard. However, this would be for a relatively short duration and these travelers would generally not be looking to the east while traveling northbound or southbound. For the existing rural residences and the church located west of the project site, views to the east are currently obstructed by existing vegetation. Therefore, development of the project site would not be expected to adversely affect views of scenic vistas from these land uses. The proposed project would not have a substantial adverse effect on a scenic vista and this impact is considered **less than significant**.

Mitigation Measure 4.7-1 Impacts on Scenic Vistas

No mitigation measures would be necessary.

Level of Significance After Mitigation

Impacts on scenic vistas would be considered less than significant.

IMPACT 4.7-2 Damage to Scenic Resources within a State Scenic Highway. *The project site is not visible from a State Scenic Highway and would not damage scenic resources. The project would result in* ***no impacts*** *to scenic resources within a scenic highway.*

A scenic resource is generally a resource, landmark, or area that has been noted for its outstanding scenic qualities and is thereby protected because of those qualities. A scenic resource within a State Scenic Highway is a resource that is noted for its outstanding scenic qualities and is visible from a State-designated Scenic Highway. The project site is not located along nor is it visible from a Scenic Highway segment. Therefore, the proposed project would not substantially damage scenic resources within a State Scenic Highway and **no impact** on scenic resources would occur.

Mitigation Measure 4.7-2 Damage to Scenic Resources within a State Scenic Highway

No mitigation measures would be necessary.

Level of Significance After Mitigation

No impacts would occur to a state scenic highway.

IMPACT 4.7-3 Changes in Visual Character. *The project would convert views of an approximately 50-acre grassland/woodland landscape to urban development. Conversion from an open grassland/oak woodland landscape to urban development would substantially alter the visual character of the project area. This change would result in a* ***significant and unavoidable*** *impact to the visual character of the area.*

The project site consists of an open grassland/oak woodland landscape. Implementation of the project would result in the conversion of this landscape to urban uses (i.e., commercial/retail development). Conversion from an open grassland/oak woodland landscape to urban development would substantially alter the visual character of the project area.

The built character of the proposed buildings would be representative of the Craftsman and Prairie Style architectural influences. These design styles tend to use natural looking materials, low-pitched and gable roof elements, battered pilasters of natural or manufactured stone, and a strong horizontal compositional emphasis. Individual buildings would be grouped into one of two distinct design districts. The Retail Promenade District would be located adjacent to the eastern property line and would contain the largest retail spaces and components of the project. The Retail Village Cluster District would include the areas immediately adjacent to the freeway and/or at the primary entrance into the project. Exhibits 3-4 and 3-5 identify conceptual elevations for the buildings proposed on the site.

The site's landscaping plan includes the identification of specific landscape zone concepts for individual zones within the project site. For the project frontage east of Sierra College Boulevard and south of Interstate 80, the purpose of the landscaping is to soften and create a visual transition between passing vehicle traffic and the project site. For the project frontage along Interstate 80, the landscaping is intended to create view corridors into the site from the freeway and Sierra College Boulevard. For the area directly adjacent to the eastern boundary, the

landscaping is intended to provide a buffer from the proposed residential uses within the proposed Rocklin 60 development. This zone is proposed to be densely planted with evergreen trees to provide a screen between the properties. The interior landscaping is intended to facilitate pedestrian and vehicle traffic patterns, provide a shade canopy, and enhance the visual character of the development.

Following development, the site would have an architecturally consistent, highly landscaped appearance that would sharply contrast with the undeveloped, oak-studded grasslands that are currently present on the site. This transition in visual character would represent a transition from rural to urban in the region. The conversion of the project site to urban uses was anticipated in the Environmental Impact Report prepared for the 1991 City of Rocklin General Plan (City of Rocklin 1991). The General Plan EIR stated that the conversion of open grasslands and hill areas to mixed urban development with implementation of the General Plan land uses would result in a significant and unavoidable visual impact. The project would extend this ongoing visual conversion of the Interstate 80 corridor.

In addition to the travelers on Interstate 80 and Sierra College Boulevard, the single resident living directly to the west and the several residents living to the east of the project site on Makabe and Dias Lanes would be directly affected by the changes in the project's visual character. Although existing vegetation surrounding these homes would generally screen their views of the site, views from these residences would not be completely obscured. Following construction, the residence to the west would have a relatively direct view of the project entrance. Views for residences to the east would primarily consist of the sound wall along the project's eastern boundary and the tops of the commercial buildings that would extend above the sound wall. The buildings would generally range between 24 and 28 feet high and would be set back approximately 60 feet from the sound wall.

If the proposed Rocklin 60 residential development is constructed to the east of the project site, it would introduce some new residents to the area that would be directly affected by the change in the site's visual resources. However, the perceived visual effect on these potential future residents is directly dependent upon whether the Rocklin 60 project is constructed before or after the proposed project. If the proposed project is constructed first, the residents purchasing homes within Rocklin 60 would be fully aware of the visual character of the commercial development to the west prior to their home purchase. If Rocklin 60 is constructed first, the change in the western viewshed from the homes within this development would be substantially altered when the proposed project is constructed. However, only the homes along the western boundary of Rocklin 60, a total of approximately 23 homes, would tend to be affected because these homes would have direct views of the site. For homes located further to the east, the western homes would screen their views of the site.

Views from the Lifehouse Church located to the southwest of the project site on the west side of Sierra College Boulevard would change with the conversion to urban uses. However, relatively dense woodlands located directly east of this church effectively screen large portions of the site. The change would only be noticeable when churchgoers are looking directly to the northeast. Views of the site would generally be obscured for residences located further to the south on the west side of Sierra College Boulevard due to intervening topography and vegetation.

The land uses to the north of Interstate 80 would experience changes in their views of the site. For the commercial uses on Sierra College Boulevard, views of the site are partially screened by the Sierra College Boulevard interchange, the existing freeway, and intervening vegetation. For the residences on Hunters Drive directly to the north, backyard views would generally be screened by existing property fences, the freeway and intervening vegetation. However, the site would likely be clearly visible from second-story windows. Because views from these areas would be looking at the site from across Interstate 80, the change in the visual environment would not be expected to be particularly adverse.

An open grassland/woodland landscape, especially in an urbanizing setting, is valued for its visual relief. Some residents in the vicinity and travelers on Interstate 80 may not perceive this as a substantial degradation of the visual character or quality of the site because one common type of viewshed found in the area (open grasslands)

would be replaced by another common local viewshed (commercial uses). Other area residents and travelers through the area would perceive changes in the visual environment attributable to project development as adverse due to the loss of an aesthetically pleasing view. Based on the visual resource impact conclusions of the General Plan EIR, the visual prominence of the site from Interstate 80 and Sierra College Boulevard, and the potential for motorists and occupants of adjacent land uses to perceive the project changes as a substantial degradation of the existing visual character and/or quality of the site and its surroundings, this impact would be considered **significant and unavoidable**.

Mitigation Measure 4.7-3 Changes in Visual Character

- The project applicant shall comply with the requirements of the City's design review process in order to ensure that development of the site is of a high quality and does not create visual incompatibilities.

- The project applicant shall submit for City review and approval a detailed site landscaping plan that softens views of the site from Interstate 80 and Sierra College Boulevard by creating a visual transition between passing vehicle traffic and the project site and minimizes the scale of the proposed commercial buildings. The landscape plan shall effectively screen parking areas, service zones, trash enclosures and mechanical equipment. The landscape plan shall also ensure that the City's parking lot shade requirements are met.

- The project's landscaping plan includes the planting of trees on the site's eastern perimeter. This planting shall extend along the entire eastern perimeter and shall consist of a continuous row of evergreen trees. This row of trees shall have sufficient density to create a continuous visual screen between the project site and the adjacent rural residential land uses to the east (or the Rocklin 60 residential subdivision, if it is constructed in the future). The trees shall be capable of growing a sufficient height above the project's proposed sound wall (i.e., 20- to 25-foot tall trees) to effectively screen views of the project site from the adjacent land uses.

Level of Significance After Mitigation

The proposed mitigation measures would minimize the project's adverse changes to the site's visual character. In addition, design, architectural, site development, and landscaping standards would be required and reviewed by the City of Rocklin Design Review Board to ensure that urban development on the project site remains within certain aesthetic guidelines. However, there is no mechanism to allow implementation of the project while avoiding the conversion of the local viewshed from open grasslands/woodlands to urban development. Therefore, this impact would remain significant and unavoidable.

IMPACT 4.7-4 Impacts from Lighting and Reflective Surfaces. *The project would require new lighting throughout the project site and could construct facilities with reflective surfaces that could inadvertently cause light and glare for motorists on Interstate 80 and Sierra College Boulevard, and adjacent land uses under day and nighttime conditions. In addition, the degree of darkness in the City of Rocklin and on the project site would diminish as a result of development, potentially diminishing the visibility of stars and other features of the night sky. This impact is considered* ***significant****.*

Under current conditions the project site does not generate any significant sources of light, glare, or light trespass into the night sky. Development of the project would involve lighting of parking areas, buildings (i.e., store fronts), and other facilities associated with the proposed project. A substantial increase in the amount of nighttime light and glare would result from the development of the project site, potentially diminishing the visibility of stars and other features of the night sky. In addition, nighttime lighting in the parking areas, or the presence of reflective surfaces on buildings in this area (e.g., reflective window glazing), would increase light and glare for adjacent land uses and motorists on Interstate 80 and Sierra College Boulevard during day and nighttime conditions. Because the project would create a substantial new source of light in the project area and could develop facilities with reflective surfaces that would adversely affect day and/or nighttime views in the area, this is considered a **significant** impact.

Mitigation Measure 4.7-4 *Impacts from Lighting and Reflective Surfaces.*

- All exterior lighting fixtures shall be aimed downward and shall include shielding to prevent offsite light spillover.

- The project applicant shall submit a detailed lighting and photometric plan to the City as part of the design review process. This lighting plan shall ensure that proposed exterior lighting prevents unnecessary glare or reflection and that the lighting does not cause any nuisance, inconvenience, or hazard of any kind on adjoining streets or properties.

- The project applicant shall adhere to the Rocklin Crossings General Development Guidelines and all City of Rocklin design review requirements, as applicable, regarding the appropriate use of building materials, lighting, and signage to prevent light and glare from adversely affecting motorists and adjacent land uses.

Level of Significance After Mitigation

With implementation of these mitigation measures, the project's light and glare impacts would be reduced to a less-than-significant level.

4.8 PUBLIC HEALTH AND HAZARDS

This section addresses potential impacts related to hazardous materials and hazards associated with historic and current use of the project site and surrounding areas. This section is based in part on a review of the Phase I Environmental Site Assessment (ESA) and the Phase II Soils Sampling and Testing Program prepared by Wallace-Kuhl & Associates (2005). The potential for impacts on fire personnel and other emergency responders is addressed in Section 4.6, Utilities and Public Services, of this Draft EIR. The impacts of airborne toxics risks are discussed in Section 4.3, Air Quality, of this Draft EIR.

4.8.1 ENVIRONMENTAL SETTING

DEFINITIONS OF TERMS

For purposes of this section, the term "hazardous materials" refers to both hazardous substances and hazardous wastes. A "hazardous material" is defined in the Code of Federal Regulations (CFR) as "a substance or material that … is capable of posing an unreasonable risk to health, safety, and property when transported in commerce" (49 CFR 171.8). California Health and Safety Code Section 25501 defines a hazardous material as follows:

> "Hazardous material" means any material that, because of its quantity, concentration, or physical, or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. "Hazardous materials" include, but are not limited to, hazardous substances, hazardous waste, and any material which a handler or the administering agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment.

"Hazardous wastes" are defined in California Health and Safety Code Section 25141(b) as wastes that:

> … because of their quantity, concentration, or physical, chemical, or infectious characteristics, [may either] cause, or significantly contribute to an increase in mortality or an increase in serious illness [, or] pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.

LAND USES AND CONDITIONS ON THE PROJECT SITE

The project site is located within a predominantly rural residential area and consists of gently rolling hills, a former homestead site, a former rural residence, and fallow land. Wallace-Kuhl & Associates completed a Phase 1 ESA for the site in January 2005 (Wallace-Kuhl & Associates 2005). During completion of the Phase 1 ESA, Wallace-Kuhl & Associates reviewed historical U.S. Geological Survey (USGS) topographic maps dated 1944, 1954, 1967, and 1981, with coverage of the project area. No evidence was observed on the maps to suggest that the property was disturbed by intensive human activities such as quarrying, subsurface or surface mining, or dredging. Wallace-Kuhl & Associates also reviewed historic aerial photos of the property dating back to 1962. The historic aerial photos showed no aboveground storage tanks (ASTs) or underground storage tank (UST) fueling islands. Wallace Kuhl & Associates did not notice any stained or odoriferous soils or areas of stressed vegetation on the property surface.

The Takuma Japanese homestead site is south of Interstate 80 in the northern portion of the site. A vent pipe, fill port, and dispenser pipe of a UST were observed on the homestead site. A 550-gallon underground storage tank was identified by Wallace-Kuhl & Associates. The UST was removed on December 14, 2004, which was observed by Wallace-Kuhl & Associates. No residual contamination was documented following its removal.

A former rural residential site consisting of a house, two sheds, and a well pump house was located in the southeast portion of the project site. This rural residence has since been demolished. The former Takuma Japanese homestead site likely had a water supply well; however, no well was identified by Wallace-Kuhl & Associates.

On-Site Fill Soils

A significant amount of fill soil is located east of the former rural residential site. The fill soil area is approximately 190 feet wide (east to west) and 290 feet long (north to south) and estimated to be approximately 18,000 cubic yards. No stained or odoriferous soils were observed at the ground surface. Given the soils unknown origin, a Phase II soils sampling and testing program was conducted concurrently with the Phase I ESA to evaluate fill soil for metals and potential agricultural chemical residuals, including organochlorine pesticides (e.g., dichlorodiphenyltrichloroethane [DDT]) and metals. A total of 26 soil samples were collected from the fill soil from variable depths so as to represent the range of fill soil conditions.

Because heavy metals are naturally occurring in soils, any soils analysis will produce detections of metals. To determine health risks associated with persistent containments, it is also necessary to compare detected chemical residual concentrations to their U.S. Environmental Protection Agency (EPA) health-based Preliminary Remedial Goals (PRGs) criteria. PRGs are a screening tool often used to initially evaluate whether a particular site may require additional study or remediation due to persistent pesticide residuals in soil.

Laboratory test results detected metals concentrations and organochlorine compounds in the soil samples well below their EPA health-based PRGs values. The majority of the detected metals concentrations are also consistent with or lower than the median, naturally occurring background metals concentrations in soil.

Use of Agricultural Chemicals on the Project Site

Wallace-Kuhl & Associates discussed past agricultural operations on the project site with Doug Mitani, the now-retired Placer County Agricultural Commissioner. Mr. Mitani confirmed that areas on the project site and in the project vicinity have historically supported orchards. The Placer County Agricultural Commissioner's Office has no records of Restricted Use Permits (often associated with registered agricultural chemical applications to crops), Notice of Violation, Cease or Desist Orders, or similar documentations on file for the project site (Wallace-Kuhl & Associates 2005). However, Mr. Mitani concluded that given the age of agricultural development in the past, persistent compounds were likely used on the project site; that is, these compounds possibly leave residues that remain in the environment without breaking down such as organochlorine pesticides (e.g., DDT, Toxaphene, and Dieldrin).

The Phase II soils sampling and testing program addressed the potential for concentrations of persistent pesticides. In addition, lead and arsenic are also potential persistent contaminants (particularly on historic orchard sites), as lead arsenates were commonly applied to orchard trees prior to development of organochlorine compounds. The detected compound concentrations for organochlorine pesticides, arsenic, and lead found in the samples collected from the property are all below their EPA health-based PRG values.

Soil samples were also compared to the naturally occurring background concentrations of metals in soil. The detected arsenic concentrations found in four of the 15 soil samples from the site, and lead concentrations found in one of the 15 soil samples are above the median naturally occurring background metals concentrations in soil; although elevated, as previously discussed, these samples are below their PRG values.

POLE-MOUNTED TRANSFORMERS

Pole-mounted transformers may contain polychlorinated biphenyls (PCBs). PCBs are considered hazardous materials because of their toxicity; they have been shown to cause cancer in animals, along with effects on the

immune, reproductive, nervous, and endocrine systems, and studies have shown evidence of similar effects in humans (EPA 2004).

Overhead electrical power lines powered at 12 kilovolts (kVs) and 21 kVs bound the project site on the west side of Sierra College Boulevard. There are also12 kV overhead power lines that bisect the southern portion of the property.

No high-voltage, tower-mounted electrical transmission lines powered at 230 kV to 480 kV or capacitors were observed on or adjacent to the site. Per the 2005 Wallace-Kuhl & Associates Phase 1 ESA, several pole-mounted electrical transformers and one concrete-pad mounted transformer exist on the site. However, as a part of the recently initiated Interstate 80/Sierra College Boulevard Interchange Improvement Project, the pad mounted transformer and several pole mounted transformers were relocated off of the project site, but one pole mounted transformer still exists on the project site. No obvious evidence of transformer leakage beneath or around the transformers was observed during the Phase I ESA.

To obtain information pertaining to the potential PCB content of the on-site and nearby electrical transformer, Pacific Gas and Electric (PG&E) was contacted by Wallace-Kuhl & Associates. The PG&E representative indicated that no database exists at PG&E to ascertain a transformer's status regarding its PCB content, although some transformers are tagged "Non-PCB." The pole mounted transformer on the project site is not tagged on the exterior to signify that it does not contain PCB, and is therefore of unknown PCB content. Any leakage or problems with the on-site transformer are the responsibility of PG&E. Refer to additional information presented later in this section on laws pertaining to PCBs, including the labeling of transformers.

RESULTS OF RECORDS SEARCH FOR HAZARDOUS MATERIALS

A Phase I ESA was prepared by Wallace-Kuhl & Associates in January 2005 for the project site. The purpose of the Phase I ESA was to document recognized environmental concerns (RECs) on the subject property related to current and historical uses of the area and to evaluate the potential for a release of hazardous materials from on-site or off-site sources that could significantly affect environmental conditions at the project site. The site reconnaissance and records search conducted for the Phase I ESA did not find documentation or physical evidence of RECs in soil or groundwater associated with the use of the proposed project site.

The site was not listed on any county, State, or federal government lists as a contaminated site. There were no known contaminated municipal groundwater wells, active or inactive landfills, or producing California Division of Oil and Gas petroleum wells located on, adjacent to, or within 0.5 mile of the proposed site.

No confirmed, State or federal "Superfund" sites were identified within one mile of the property. One potential State Superfund site, Forest Products Manufacturing, is located at 4315 Dominguez Road over one-half mile west of the project site. Forest Products Manufacturing operated as a wood coating facility, and the site had paint film in dry evaporation ponds, paint solids in drums, and paint solids around paved areas. Mercury was identified as the primary hazardous component of the wastes. The Forest Products Manufacturing site was satisfactorily remediated in 1993 under DTSC oversight.

Three facilities registered for use and/or storage of reportable quantities of hazardous materials, including USTs, are located within one-half mile of the project site (Unocal, 7-Eleven Convenience Store, and Highbridge Ranch):

- The Unocal service station is located at 4390 Sierra College Boulevard, approximately 600 feet northwest of the project site. The station was remodeled and all fuel dispensing equipment was replaced in July 1998. Approximately 967 tons of contaminated petroleum hydrocarbon soils from the former UST locations were overexcavated and removed from the site. Additionally, 14,400 gallons of contaminated petroleum hydrocarbon groundwater was removed and transported to a facility for treatment and disposal. Twelve groundwater monitoring wells have been installed since 1998. Four of the six on-site groundwater monitoring

wells contained detectable concentrations of Methyl Tertiary Butyl Ether (MtBE). The groundwater monitoring well closest to the site contained no total petroleum hydrocarbons as diesel, gasoline, MtBE, or Benzene, Toluene, Ethylbenzene and Xylene (BTEX). Quarterly monitoring of the wells has revealed that groundwater flows in a northwest direction, away from the site. Presently quarterly groundwater monitoring is being conducted on the site.

- The 7-Eleven Convenience Store is located at 4181 Sierra College Boulevard, approximately 500 feet northwest of the site. MtBE has been identified in on-site soils, and is currently undergoing a preliminary site assessment.

- The Highbridge Ranch was historically located at 4436 Sierra College Boulevard, approximately 1,500 feet west of the project site. According to the State Water Resources Control Board (SWRCB) Hazardous Substance Storage Container Database, a historical listing of UST sites, this site had one 550-gallon UST. The UST was installed in 1950 and contained regular gasoline. The site is listed as a farm and, as such, has a farm-exempt status. Since the UST is considered farm exempt, no definitive information is on file with any agency regarding the UST. The UST was removed in 2002, and subsequent soil sample analysis indicate no detectable concentrations of petroleum hydrocarbons as diesel, gasoline or BTEX. The Placer County Environmental Health Department has no other records, such as business plans, hazardous materials disclosures, or hazardous materials releases, for the site. Based on groundwater monitoring at the Unocal service station, which is located to the northwest of the site, groundwater flows at the Highbridge Ranch site are assumed to be to the northwest and away from the proposed project.

EDAW searched the EPA's Envirofacts web site and the SWRCB's GeoTracker web site to identify toxic releases, hazardous waste, or other violations that could affect the site (U.S. Environmental Protection Agency 2006, State Water Resources Control Board 2006). The Envirofacts web site presents information from several regulatory agencies and databases, including those for the EPA, California Department of Toxic Substances Control (DTSC), and Office of Emergency Services, and contains a variety of environmental information maintained by EPA, such as the locations of releases of more than 650 toxic chemicals. No records of any toxic releases, hazardous waste, or other violations were found that would affect the site (U.S. Environmental Protection Agency 2006, State Water Resources Control Board 2006).

DTSC maintains a hazardous waste and substances site list (Cortese list) pursuant to Government Code Section 65962. As of October 2006, the project site is not on this list (DTSC 2006).

HAZARDS ASSOCIATED WITH MOSQUITOES

Mosquitoes are blood-sucking insects whose biting habits can create irritating and unpleasant conditions for outdoor activities. In addition, some types of mosquitoes have the ability to transmit organisms that cause diseases in humans. All species of mosquitoes require standing water to complete their growth cycle; therefore, any body of standing water represents a potential mosquito breeding area. Water quality also affects the productivity of a potential mosquito breeding areas. Typically, greater numbers of mosquitoes are produced in water bodies with poor circulation, higher temperatures, and higher organic content (i.e., poor water quality) than in water bodies having good circulation, lower temperatures, and lower organic content. In addition, irrigation and flooding practices may influence the level of mosquito production associated with a water body. Typically, greater numbers of mosquitoes are produced in water bodies with water levels that slowly increase or recede than in water bodies with water levels that are stable or that rapidly fluctuate. Mosquito larvae prefer stagnant water and the protected microhabitats provided by stems of emergent vegetation (U.S. Army Corps of Engineers 1998).

In 1915, the California State Legislature enacted the Mosquito Abatement Act, which allowed local mosquito abatement organizations to form into specific special districts. Mosquito control in the United States has evolved from reliance on insecticide application for control of adult mosquitoes (adulticide) to integrated pest management programs that include surveillance, source reduction, larvicide, and biological control, as well as public relations

and education. Biological control includes use of many predators (dragonfly nymphs and other indigenous aquatic invertebrate predators such as predacious mosquitoes) that eat larvae and pupae; however, the most commonly used biological control adjuncts are mosquito fish. Mosquito fish are easily reared and therefore have become the most common supplemental biological control agent used in mosquito control.

The City is located within the Placer Mosquito Abatement District (MAD). Although Placer MAD was formed in 1996 by the Placer County Board of Supervisors, the district was not able to obtain funding (except in the City of Lincoln) until 2000, when a ballot measure was passed district-wide. The Placer MAD service area includes Lincoln, Rocklin, Roseville, Loomis, and the unincorporated areas west of Auburn (Placer County 2005).

Placer County mosquito technicians are certified by the California Department of Health Services in pesticide usage and mosquito and vector identification. The Placer MAD uses constant surveillance to locate mosquito breeding sources and to solve mosquito problems using physical, biological and chemical means along with public education (Placer County 2005).

In Placer County, mosquito abatement efforts are primarily focused on controlling mosquitoes that can transmit West Nile Virus. The spread of West Nile Virus has increased concern over mosquito abatement for the protection of wildlife, domestic animals, and humans. West Nile Virus is transmitted to humans and animals through a mosquito bite. In 2005, 34 confirmed cases of West Nile Virus were documented in Placer County (Placer County 2005).

FIRE PROTECTION AND EMERGENCY RESPONSE SERVICES

Incident command and management responsibility at the scene of hazardous materials incidents within the City of Rocklin have been assigned to the Rocklin Fire Department (City of Rocklin Resolution No. 2004-226). All Rocklin Fire Department personnel have been trained to the First Responder Operational level. In addition, several personnel have been trained to the Hazardous Materials Specialist level. The Rocklin Fire Department is staffed with its own Mass Decontamination Response Team, which provides mutual aid support to Hazardous Materials Response Teams within Placer County and to surrounding areas. (Rocklin Fire Department 2006.)

Hazardous materials incidents, even minor ones, usually require a multi-agency response. The City of Roseville Fire Department and Placer County Interagency Hazardous Materials Response Teams provide mutual-aid response to the City, when requested.

According to the California Department of Forestry and Fire Protection's (CDF's) Fire Resource Assessment Program (FRAP), the project site is located in a "mixed interface" zone for wildland fires. These are areas where rural structures are adjacent to vast areas of vegetation, causing a greater threat of wildland fires during the fire season. The CDF also identifies wildland fire areas and Very High Fire Hazard Severity Zones for all counties in California. None of these areas or zones are located in the City (California Resources Agency 2003). However, areas north of the City are identified as High Fire Hazard Severity Zones and scattered areas in the western and northernmost part of Placer County are identified as Very High Fire Hazard Severity Zones. In addition, the City is not in a State Responsibility Area, which is defined as part of the state where the CDF is the primary service responsible for providing basic wildland fire protection assistance (CDF 1998).

4.8.2 REGULATORY SETTING

FEDERAL

U.S. Environmental Protection Agency

EPA is the agency primarily responsible for enforcement and implementation of federal laws and regulations pertaining to hazardous materials. Applicable federal regulations pertaining to hazardous materials are contained

mainly in CFR Titles 29, 40, and 49. Hazardous materials, as defined in the CFR (see "Definitions of Terms" above), are listed in 49 CFR 172.101. Management of hazardous materials is governed by the following laws:

- Resource Conservation and Recovery Act of 1976 (RCRA) (42 U.S. Code [USC] 6901 et seq.);
- Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA, also called the Superfund Act) (42 USC 9601 et seq.); and
- Superfund Amendments and Reauthorization Act (SARA) of 1986 (Public Law 99–499).

These laws and associated regulations include specific requirements for facilities that generate, use, store, treat, and/or dispose of hazardous materials. EPA provides oversight and supervision for federal Superfund investigation/remediation projects, evaluates remediation technologies, and develops hazardous materials disposal restrictions and treatment standards.

Hazardous Substances

Hazardous substances are a subclass of hazardous materials. They are regulated under CERCLA and SARA (and the federal Clean Water Act for water resources). Under CERCLA, EPA has authority to seek the parties responsible for releases of hazardous substances and ensure their cooperation in site remediation. CERCLA also provides federal funding (the "Superfund") for remediation. SARA Title III, the Emergency Planning and Community Right-to-Know Act, requires companies to declare potential toxic hazards to ensure that local communities can plan for chemical emergencies. EPA maintains a National Priority List of uncontrolled or abandoned hazardous waste sites identified for priority remediation under the Superfund program. EPA also maintains the Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) database, which contains information on hazardous waste sites, potential hazardous waste sites, and remedial activities across the nation.

Hazardous Wastes

Hazardous wastes, although included in the definition of hazardous materials and hazardous substances, are regulated separately under RCRA. A waste can legally be considered hazardous if it is classified as ignitable, corrosive, reactive, or toxic. Title 22, Section 66261.24 of the California Code of Regulations (CCR) (i.e., 22 CCR 66261.24) defines characteristics of toxicity. Under RCRA, EPA regulates hazardous waste from the time that the waste is generated until its final disposal ("cradle to grave"). RCRA also gives EPA or an authorized state the authority to conduct inspections to ensure that individual facilities are in compliance with regulations, and to pursue enforcement action if a violation is discovered. EPA can delegate its responsibility to a state if the state's regulations are at least as stringent as the federal ones. RCRA was updated in 1984 by the passage of the federal Hazardous and Solid Waste Amendments, which required phasing out land disposal of hazardous waste.

Regulation of Pesticides

The federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) (7 USC 136 et seq.) provides federal control of pesticide distribution, sale, and use. EPA was given authority under FIFRA not only to study the consequences of pesticide usage but also to require users (farmers, utility companies, and others) to register when purchasing pesticides. Later amendments to the law required users to take exams for certification as applicators of pesticides. All pesticides used in the United States must be registered (licensed) by EPA. Registration assures that pesticides will be properly labeled and that if used in accordance with specifications, they will not cause unreasonable harm to the environment.

Regulation of Polychlorinated Biphenyl (PCBs)

The Toxic Substances Control Act of 1976 (15 USC 2605) banned the manufacture, processing, distribution, and use of PCBs in totally enclosed systems. PCBs are considered hazardous materials because of their toxicity; they have been shown to cause cancer in animals, along with effects on the immune, reproductive, nervous, and endocrine systems, and studies have shown evidence of similar effects in humans (EPA 2004). The EPA Region 9 PCB Program regulates remediation of PCBs in several states, including California. 40 CFR Section 761.30(a)(1)(vi)(A) states that all owners of electrical transformers containing PCBs must register their transformers with EPA. Specified electrical equipment manufactured between July 1, 1978, and July 1, 1998, that does not contain PCBs must be marked by the manufacturer with the statement "No PCBs" (Section 761.40[g]). Transformers and other items manufactured before July 1, 1978, containing PCBs must be marked as such.

U.S. Department of Transportation

The U.S. Department of Transportation (DOT), in conjunction with EPA, is responsible for enforcement and implementation of federal laws and regulations pertaining to transportation of hazardous materials. The Hazardous Materials Transportation Act of 1974 (49 USC 5101 et seq.) directs DOT to establish criteria and regulations regarding safe storage and transportation of hazardous materials. Hazardous materials regulations are contained in 49 CFR 171–180, and address transportation of hazardous materials, types of materials defined as hazardous, and the marking of vehicles transporting hazardous materials. In particular, 49 CFR 173, titled "Shippers' General Requirements for Shipments and Packagings," defines hazardous materials for transportation purposes; within this portion of the code, 49 CFR 173.3 provides specific packaging requirements for shipment of hazardous materials, and 49 CFR 173.21 lists categories of materials and packages that are forbidden for shipping. 49 CFR 177, titled "Carriage by Public Highway," defines unacceptable hazardous materials shipments.

Occupational Health and Safety Administration

The Occupational Safety and Health Administration (OSHA) of the U.S. Department of Labor is responsible for enforcement and implementation of federal laws and regulations pertaining to worker health and safety. Workers at hazardous waste sites must receive specialized training and medical supervision according to the Hazardous Waste Operations and Emergency Response (HAZWOPER) regulations (29 CFR 1910.120).

STATE

California Environmental Protection Agency

The DTSC, a division of Cal/EPA, has primary regulatory responsibility over hazardous materials in California, working in conjunction with the federal EPA to enforce and implement hazardous materials laws and regulations. DTSC can delegate enforcement responsibilities to local jurisdictions.

The hazardous waste management program enforced by DTSC was created by the Hazardous Waste Control Act (California Health and Safety Code Section 25100 et seq.), which is implemented by regulations described in CCR Title 26. The State program thus created is similar to, but more stringent than, the federal program under RCRA. The regulations list materials that may be hazardous and establish criteria for their identification, packaging, and disposal.

Environmental health standards for management of hazardous waste are contained in CCR Title 22, Division 4.5. In addition, as required by California Government Code Section 65962.5, DTSC maintains a Hazardous Waste and Substances Site List for the state, commonly called the Cortese List. The project site is not included on this list (DTSC 2006).

California's Secretary for Environmental Protection has established a unified hazardous waste and hazardous materials management regulatory program (Unified Program) as required by Senate Bill 1082 (1993). The Unified

Program consolidates, coordinates, and makes consistent the administrative requirements, permits, inspections, and enforcement activities for the following environmental programs:

- hazardous waste generator and hazardous waste on-site treatment programs;
- Underground Storage Tank program,
- hazardous materials release response plans and inventories;
- California Accidental Release Prevention Program (CalARPP);
- Aboveground Petroleum Storage Act requirements for spill prevention, control, and countermeasure plans; and
- California Uniform Fire Code (UFC) hazardous material management plans and inventories.

The six environmental programs within the Unified Program are implemented at the local level by local agencies—Certified Unified Program Agencies (CUPAs). CUPAs carry out the responsibilities previously handled by approximately 1,300 State and local agencies, providing a central permitting and regulatory agency for permits, reporting, and compliance enforcement (California Resources Agency 2003). The Placer County Environmental Health Department is the Certified Unified Program Agency (CUPA) for Placer County. The Placer County Environmental Health Department's service area includes both unincorporated areas and incorporated cities, excluding the City of Roseville.

State Water Resources Control Board

The SWRCB has primary responsibility to protect water quality and supply. The Rocklin Crossings site is located within the jurisdiction of the Central Valley Regional Water Quality Control Board (RWQCB). As described in Section 4.10, Hydrology and Water Quality, the RWQCB is authorized by the Porter-Cologne Water Quality Control Act of 1969 to protect the waters of the state. The RWQCB provides oversight for sites where the quality of groundwater or surface waters is threatened. Extraction and disposal of contaminated groundwater due to investigation/remediation activities or due to dewatering during construction would require a permit from the RWQCB if the water were discharged to storm drains, surface water, or land.

California Department of Industrial Relations, Division of Occupational Health Administration

The California Department of Industrial Relations, Division of Occupational Safety and Health Administration (Cal/OSHA), assumes primary responsibility for developing and enforcing workplace safety regulations within the state. Cal/OSHA standards are more stringent than federal OSHA regulations, and are presented in CCR Title 8. Standards for workers dealing with hazardous materials include practices for all industries (General Industry Safety Orders); specific practices are described for construction, and hazardous waste operations and emergency response. Cal/OSHA conducts on-site evaluations and issues notices of violation to enforce necessary improvements to health and safety practices.

California Office of Emergency Services

The California Office of Emergency Services (OES) issued the State of California Multi-Hazard Mitigation Plan (Multi-Hazard Mitigation Plan) (California Office of Emergency Services 2004) in September 2004. The federal Disaster Mitigation Act required all state emergency services agencies to issue such plans by November 1, 2004, for the states to receive federal grant funds for disaster assistance and mitigation under the Stafford Act (44 CFR 201.4). The overall intent of the Multi-Hazard Mitigation Plan is to reduce or prevent injury and damage from natural hazards in California, such as earthquakes, wildfires, and flooding. The plan identifies past and present hazard mitigation activities, current policies and programs, and mitigation goals, objectives, and strategies for the future (California Office of Emergency Services 2004).

California Department of Transportation and California Highway Patrol

The California Department of Transportation (Caltrans) and California Highway Patrol (CHP) enforce and monitor U.S. Department of Transportation hazardous materials and waste transportation laws and regulations in

California. Together, these agencies determine container types used and license hazardous waste haulers for hazardous waste transportation on public roads. All motor carriers and drivers involved in transportation of hazardous materials must apply for and obtain a hazardous materials transportation license from CHP. When transporting explosives, inhalation hazards, and highway route-controlled quantities of radioactive materials, safe routing and safe stopping-places are required, as described in 26 CCR, Section 13 et seq. A route map must be carried in the vehicle.

LOCAL

City of Rocklin General Plan

The following goals and policies from the Community Safety Element of the City General Plan (1991) are applicable to the proposed project:

- **Goal:** To minimize the danger of natural and man-made hazards and to protect residents and visitors from the danger of earthquake, fire, flood, other natural disasters, and man-made dangers
  - **Policy 9:** To require disclosure of hazardous materials by those using them within the City, or proposing to use them in new industrial or commercial activities, in accordance with Placer County guidelines and the requirements of State Law.
  - **Policy 10:** To enforce the City building code, fire code, and City ordinances in regard to fire safety and fire protection.
  - **Policy 15:** To encourage residential development to locate within approximately two road miles from a fire station, and to encourage high density commercial development to be located approximately one and one-half road miles from a fire station, unless special fire suppression measures are incorporated into the development.
  - **Policy 16:** To require projects to be designed with at least two points of access for emergency vehicles or for general circulation where such access is necessary to assure adequate egress and ingress.

Rocklin Municipal Code Title 2, Administration and Personnel

Chapter 2.32 of the Rocklin Municipal Code requires the development of emergency procedures in the City through the Emergency Operations Plan. The Emergency Operations Plan provides a framework to guide the City's efforts to mitigate and prepare for, respond to, and recover from major emergencies or disasters.

To implement the Emergency Operations Plan, the City has established a Disaster Council, which is responsible for reviewing and recommending emergency operations plans for adoption by the City Council. The Disaster Council plans for the protection of persons and property in the event of fires, floods, storms, epidemic, riot, earthquake and other disasters.

4.8.3 IMPACTS AND MITIGATION MEASURES

METHOD OF ANALYSIS

This analysis considers the range and nature of foreseeable hazardous materials use, storage, and disposal resulting from the proposed project and identifies the primary ways that these hazardous materials could expose individuals or the environment to health and safety risks. Local and State agencies would be expected to continue to enforce applicable requirements to the extent that they do so now.

The following reports documenting potential hazardous conditions at the project site were reviewed for this analysis:

- Land use plans for the proposed project;
- Available literature, including documents published by city, county, State, and federal agencies;
- Applicable elements from the City General Plan; and,
- Phase I Environmental Site Assessment and Phase II Soils Sampling and Testing Program, Rocklin 105 – Wymore Parcels, prepared by Wallace-Kuhl & Associates (2005).

The information obtained from these sources was reviewed and summarized to establish existing conditions and to identify potential environmental effects, based on the standards of significance presented in this section. In determining the level of significance, the analysis assumes that development in the project area would comply with relevant federal, State, and local ordinances and regulations.

THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the State CEQA Guidelines, a public health and hazards impact is considered significant if implementation of the proposed project would do any of the following:

- create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment or through the routine transport, use, or disposal of hazardous materials;
- result in safety hazards to people residing or working in the project area;
- emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
- be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment;
- be located within an airport land use plan, within two miles of a public airport, or in the vicinity of a public airstrip, such that a safety hazard would result for people residing or working in the project area;
- impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or,
- expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

No schools are located within one-quarter mile of the project site and the project is not located within an airport land use plan or within two miles of a public or private airport. As such, no safety hazards related to schools or airports are anticipated. Also, the project is not anticipated to affect emergency response plans because emergency response vehicles would have direct access to the site from Interstate 80 and Sierra College Boulevard, the City's Police and Fire Departments would review the site design and circulation layout as part of the City's project referral process to ensure adequate emergency access is provided, and fire suppression infrastructure (e.g., fire hydrants, building sprinklers) would be incorporated into the site design in order to minimize fire hazards, consistent with City requirements. These issue areas will not be evaluated further in this Draft EIR.

IMPACTS AND MITIGATION MEASURES

IMPACT 4.8-1 Exposure to Known and Unknown Hazardous Materials. *No recognized environmental conditions have been identified to date on the project site. However, excavation and construction activities in the area could result in the exposure of construction workers and the general public to hazardous materials, including petroleum hydrocarbons, pesticides, herbicides, and fertilizers; contaminated debris; elevated levels of chemicals that could be hazardous; or hazardous substances that could be inadvertently spilled or otherwise spread. This impact is considered* ***significant****.*

The site reconnaissance and records search conducted for the Phase I ESA did not find documentation or physical evidence of recognized environmental conditions in soil or groundwater associated with the use of the proposed project site. A 550-gallon UST was located on the Takuma homestead and was removed in December 2004, which was observed by Wallace-Kuhl & Associates. No residual contamination was documented following its removal.

A Phase II soils sampling and testing program was conducted concurrently with the Phase I ESA to evaluate fill soil located east of the former rural residential site for metals and potential agricultural chemical residuals, and to address the potential for concentrations of persistent pesticides resulting from the site's historic agricultural uses. The soil analysis conducted by Wallace-Kuhl & Associates determined that detected metals concentrations and organochlorine compounds in the majority of the soil samples were well below their EPA health-based PRG values and metals concentrations are also generally consistent with or lower than the median, naturally occurring background metals concentrations in soil.

Per the 2005 Wallace-Kuhl & Associates Phase 1 ESA, several pole-mounted electrical transformers and one concrete-pad mounted transformer exist on the site. However, as a part of the recently initiated Interstate 80/Sierra College Boulevard Interchange Improvement Project, the pad mounted transformer and several pole mounted transformers were relocated off of the project site, but one pole mounted transformer still exists on the project site. The pole mounted transformer on the project site is not tagged on the exterior to signify that it does not contain PCB, and is therefore of unknown PCB content. No obvious evidence of transformer leakage beneath or around the transformers was observed during the Phase I ESA.

A review of regulatory agency lists identified one potential state Superfund site, Forest Products Manufacturing, located more than one-half mile west of the project site. The Forest Products Manufacturing site was satisfactorily remediated in 1993 under DTSC oversight. Three facilities registered for use and/or storage of reportable quantities of hazardous materials, including USTs, are located within one-half mile of the project site (Unocal, 7-Eleven Convenience Store, and Highbridge Ranch). MtBE has been identified in on-site soils at the 7-Eleven Convenience Store and the site is currently undergoing a preliminary site assessment. There are no records of hazardous materials releases from USTs at Highbridge Ranch.

The former Takuma Japanese homestead site likely had a water supply well, and both the former homestead site and the former rural residential site were likely connected to individual septic systems. However, no evidence of a well or septic systems was observed by Wallace-Kuhl & Associates. If during development of the project site, a water supply well or septic systems are uncovered, removal may be required. If this action is necessary, the well and/or septic systems would be required to be removed and filled in accordance with applicable State and local regulations, as directed by the Placer County Department of Environmental Health.

Development of the project would involve site grading, excavation for utilities, trenching, backfilling, and the construction of proposed facilities that could result in the exposure of construction workers and the general public to hazardous materials, including petroleum hydrocarbons, pesticides, herbicides, and fertilizers; contaminated debris; elevated levels of chemicals that could be hazardous; or hazardous substances that could be inadvertently spilled or otherwise spread. Excavation would also be necessary off of the site for utility extensions, primarily related to water line extensions, within roadway right-of-ways, and for the detention basin construction. Any on-

site structures that require removal could include asbestos-containing building materials and lead-containing materials (e.g., paint, sealants, pipe solder), which could become friable or mobile during demolition activities and come into contact with construction workers. Excavation and construction activities could also expose construction workers and the general public to currently unknown hazardous materials. If the proposed Rocklin 60 residential development project is constructed and occupied prior to the proposed project construction, it would increase the potential for public exposure to these hazardous materials by increasing the number of people in the local area. Because the release of hazardous materials into the environment could result in a safety hazard for people residing or working in the project area, this impact would be **significant**.

Mitigation Measure 4.8-1 Exposure to Known and Unknown Hazardous Materials

a. If during site preparation and construction activities previous undiscovered or unknown evidence of hazardous materials contamination is observed or suspected through either obvious or implied measures (e.g., stained or odorous soil, unknown storage tanks, etc.), construction activities shall immediately cease in the area of the find.

   Placer County Environmental Health Department staff shall be immediately consulted and the project applicant shall contract with a qualified consultant registered in DTSC's Registered Environmental Assessor Program to assess the situation. If necessary, risk assessments shall include a DTSC Preliminary Endangerment Assessment or no further action determination, or equivalent. Any required remediation shall include a DTSC Remedial Action Work Plan or equivalent. Based on consultation between the Registered Environmental Assessor and DTSC, remediation of the site shall be conducted consistent with all applicable regulations.

b. Prior to issuance of grading permits, the project applicant shall provide to the City of Rocklin an assessment conducted by or on behalf of PG&E pertaining to the contents of the existing pole mounted transformers located on and nearby the project site. The assessment shall determine whether the existing pole mounted transformer on the site and the pole mounted transformers adjacent to the site contain PCBs and whether there are any records of spills from such equipment. If PCB-containing equipment is identified, the maintenance and/or disposal of the transformers shall be subject to the regulations of the Toxic Substances Control Act (TSCA) under the authority of the Placer County Environmental Health Department. If the electrical transformers are determined not to contain PCBs, they shall be labeled as such and no further mitigation shall be required.

Level of Significance After Mitigation

Implementation of the above mitigation measures would reduce potential hazards associated with exposure to known or unknown contaminated soil or other hazardous materials by identifying the necessary procedures to follow if materials are discovered. Therefore, this impact would be reduced to a less-than-significant level.

IMPACT 4.8-2 Exposure to Hazardous Materials during Project Construction. *Use of various paints, solvents, cements, glues, and fuels is expected during construction of the proposed project. Construction workers could be exposed to hazardous materials as a result of improper handling or use; accident; environmentally unsound disposal methods; or fire, explosion, or other emergencies, resulting in adverse health effects. However, all allowable uses would be subject to compliance with federal, state, and local hazardous materials regulations, and would be monitored by the state (e.g., Cal/OSHA, DTSC, CHP) and/or local jurisdictions. Therefore, the potential for human exposure to hazardous materials during construction would be considered a* ***less-than-significant*** *impact.*

Hazardous materials would be used in varying amounts during construction of the proposed project. Construction and maintenance activities would use hazardous materials, such as fuels (gasoline and diesel); oils and lubricants; paints and paint thinners; and glues; cleaners (which could include solvents and corrosives in addition to soaps

and detergents). Construction workers and the general public could be exposed to hazards and hazardous materials as a result of improper handling or use during construction activities (particularly by untrained personnel); transportation accidents; or fires, explosions, or other emergencies. Construction workers could also be exposed to hazards associated with accidental releases of hazardous materials, which could result in adverse health effects. If the proposed Rocklin 60 residential development project is constructed and occupied prior to the proposed project construction, it would increase the potential for public exposure to these hazardous materials by increasing the number of people in the local area.

The proposed project would be required to comply with regulations on the transportation of hazardous materials codified in 49 CFR 173 and 49 CFR 177 and CCR Title 26, Division 6. These regulations, which are under the jurisdiction of Caltrans and the CHP, provide specific packaging requirements, define unacceptable hazardous materials shipments, and prescribe safe-transit practices by carriers of hazardous materials. Compliance with these regulations would reduce the risk of exposure to humans and the environment related to the transportation of hazardous materials.

Hazardous materials regulations, which are codified in CCR Titles 8 and 22, and their enabling legislation set forth in Chapter 6.5 (Section 25100 et seq.) of the California Health and Safety Code, were established at the State level to ensure compliance with federal regulations to reduce the risk to human health and the environment from the routine use of hazardous substances. Construction specifications would include the following requirements in compliance with applicable regulations and codes, including, but not limited to CCR Titles 8 and 22, Uniform Fire Code, and Division 20 of the California Health and Safety Code: all reserve fuel supplies and hazardous materials must be stored within the confines of a designated construction area; equipment refueling and maintenance must take place only within the staging area; and construction vehicles shall be inspected daily for leaks. Off-site activities (e.g., utility construction) would also be required to comply with these regulations. These regulations and codes must be implemented, as appropriate, and are monitored by the State and/or local jurisdictions, including the Placer County Environmental Health Department and the Rocklin Fire Department.

Contractors would be required to comply with Cal/EPA's Unified Program; regulated activities would be managed by Placer County Environmental Health Department, the designated Certified Unified Program Agency for Placer County, in accordance with the regulations included in the Unified Program (e.g., hazardous materials release response plans and inventories, California UFC hazardous material management plans and inventories). Such compliance would reduce the potential for accidental release of hazardous materials during construction of the proposed project. As a result, it would lessen the risk of exposure of construction workers and the public to accidental release of hazardous materials, as well as the demand for incident emergency response.

Compliance with federal, State, and local hazardous materials regulations and codes, would reduce to a **less-than-significant** level impacts related to hazards for construction workers and the general public involving the release of hazardous materials into the environment or through the routine transport, use, or disposal of hazards materials.

Mitigation Measure 4.8-2 Exposure to Hazardous Materials during Project Construction

No mitigation measures would be necessary.

Level of Significance After Mitigation

Exposure of construction workers and the general public to hazardous materials during construction would be considered a less-than-significant impact.

IMPACT 4.8-3 Exposure to Hazardous Materials during Project Operations. *The proposed project would use many materials, some of which are considered hazardous, during the course of its daily operations. Compliance with federal, State, and local hazardous materials regulations, which would be monitored by the State and/or local jurisdictions, would reduce impacts associated with the use, transport, and storage of hazardous materials during operation of the project. Therefore, impacts related to creation of significant hazards to the public or the environment would be* ***less than significant****.*

The proposed project is a regional shopping center with a wide variety of retail uses, including two major tenants (presently expected to be Wal-Mart Supercenter and Home Depot), as well as several smaller retail and restaurant-type uses, and potentially additional traveler-serving uses. The proposed project would use many materials, some of which are considered hazardous, during the course of its daily operations. Employees and the general public could be exposed to hazardous materials as a result of improper handling or use; transportation accidents; environmentally unsound disposal methods; or fire, explosion, or other emergencies, resulting in adverse health effects. If the proposed Rocklin 60 residential development project is constructed and occupied, it would increase the potential for public exposure to these hazardous materials by increasing the number of people in the local area.

As with construction, operation of the proposed project is required to be consistent with federal, State, and local laws and regulations addressing hazardous materials management and environmental protection, including, but not limited to 49 CFR 173 and 177, and CCR Title 26, Division 6 for transportation of hazardous materials, and CCR Titles 8 and 22, Uniform Fire Code, and Division 20 of the California Health and Safety Code for routine use of hazardous materials. These regulations and codes must be implemented, as appropriate, and are monitored by the State and/or local jurisdictions, including Caltrans, the CHP, the Placer County Environmental Health Department, and the Rocklin Fire Department.

The Placer County Environmental Health Department, as the local Certified Unified Program Agency, oversees hazardous materials registrations, underground storage tank programs, aboveground petroleum storage tank spill prevention control and countermeasure plans, risk management plans, and some fire safety planning. Additionally, businesses are regulated as employers by Cal/OSHA and are therefore required to ensure employee safety. Specific requirements include identifying hazardous materials in the workplace, providing safety information to workers that handle hazardous materials, and adequately training workers.

The proposed project would be required to comply with all applicable federal, State, and local regulations pertaining to safe-transit practices, workplace safety, spill prevention, and other hazardous materials-related concerns. The Placer County Environmental Health Department and the Rocklin Fire Department, and other agencies would be required to enforce compliance, including issuing permits and tracking and inspections of hazardous materials transportation and storage. As a result, operation of the proposed project would not create a significant hazard to the general public or the environment involving the release of hazardous materials into the environment or through the routine transport, use, or disposal of hazards materials. Therefore, this impact is considered **less than significant**.

Mitigation Measure 4.8-3 Exposure to Hazardous Materials during Project Operations

No mitigation measures would be necessary.

Level of Significance After Mitigation

Exposure of site employees and the general public to hazardous materials during project operations would be considered a less-than-significant impact.

IMPACT 4.8-4 Potential for Public Health Hazards from Mosquitoes. *The proposed project would include a detention basin, which could attract mosquitoes and other water-borne vectors, thereby potentially creating a public health hazard. The detention basin would be designed to not retain storm water for long periods. Therefore, it would not create a location that would facilitate mosquito breeding. This impact would be* ***less than significant****.*

Hazards to public health could result from project features that could perpetuate mosquito populations. The project proposes the use of a stormwater detention basin that would be operated in conjunction with the proposed Rocklin 60 residential development. The stormwater detention basin would discharge to an existing swale connected to Secret Ravine. The detention basin would be designed to not retain storm water for long periods and, therefore, would not be expected to facilitate mosquito breeding. However, the existing swale could provide a potential mosquito breeding site if shallow standing water is present. The ongoing mosquito abatement activities by the Placer Mosquito Abatement District, which include constant surveillance to locate mosquito breeding sources and to solve mosquito problems using physical, biological, and chemical means along with public education, are expected to effectively control mosquito breeding areas adjacent to the project site, including those that may be present in the existing swale. Therefore, the proposed project would not result in a safety hazard for people residing or working in the project area related to the exposure to health risks associated with mosquitoes. This impact would be **less than significant**.

Mitigation Measure 4.8-4 Potential for Public Health Hazards from Mosquitoes

No mitigation measures would be necessary.

Level of Significance After Mitigation

The potential public health hazards associated with mosquito exposure would be considered a less-than-significant impact.

IMPACT 4.8-5 Exposure of People or Structures to Wildland Fires. *The project site is not located in a designated wildland fire area, a High Fire Hazard Severity Zone, or a State Responsibility Area. In addition, the project applicant would be required to incorporate Uniform Fire Code requirements into the project designs and operations. Therefore, the project would not expose people or structures to significant risk of loss or injury involving wildland fires. This impact would be* ***less than significant****.*

The project site is not located in a designated wildland fire area, a High Fire Hazard Severity Zone, or a State Responsibility Area. However, development of the project site would introduce commercial land uses into a "mixed interface zone," as defined by the California Department of Forestry and Fire Protection's Fire Resource Assessment Program. Mixed interface zones are areas where rural structures are adjacent to open areas of vegetation, which results in an increased hazard from wildland fires because of the close proximity of urban development to wildland areas.

The project would substantially alter the rural landscape of this mixed interface zone by completely removing site vegetation and building upon or paving the majority of the site. In addition, masonry walls would be constructed along the eastern perimeter of the site, which would form an effective fire barrier between the undeveloped lands to the east and the proposed project. In addition, if the proposed Rocklin 60 residential development is constructed along the project's eastern boundary, it would provide an additional barrier between the naturally vegetated landscape to the east and the project site. The remainder of the site would be surrounded by paved roads, which would act as a fire break.

The Rocklin Fire Department responds to wildland fires within the City limits and has indicated that the department has no wildland fire concerns regarding the proposed project (Petitclerc 2005). The project applicant

would be required to incorporate Uniform Fire Code requirements into the project designs and operations. A water system capable of delivering required fire flows would be required to be provided in accordance with the Uniform Fire Code and the project design includes three points of access for emergency vehicles, which ensures adequate ingress and egress. Therefore, the project would not be expected to expose people or structures to a significant risk of loss, injury, or death involving wildland fires. This impact would be **less than significant**.

Mitigation Measure 4.8-5 Exposure of People or Structures to Wildfire Fires.

No mitigation measures would be necessary.

Level of Significance After Mitigation

The project's potential exposure to wildland fire risks would be considered a less-than-significant impact.

4.9 GEOLOGY, SOILS AND PALEONTOLOGY

This section describes the existing geologic and soil conditions at the project site and provides an analysis of the potential geologic hazards associated with development of the proposed project. In accordance with CEQA Guidelines Section 15125(a), the environmental baseline, as analyzed in this EIR, is the environmental setting as it existed at the time the Notice of Preparation was published, November 16, 2006. Therefore, the following discussion describes the site's geologic and soil conditions as they were on November 16, 2006. However, it should be noted that the Interstate 80/Sierra College Boulevard Interchange Improvement Project was initiated following release of the Notice of Preparation and extensive grading and excavation work has been initiated along the western and northern portions of the project site to accommodate the interchange project's lane construction and soil borrow requirements. These changes have altered the topographic character of the project site's northern and western boundaries.

4.9.1 EXISTING SETTING

GEOLOGY

Regional Geology

The City of Rocklin and the project site are located in the Great Valley geomorphic province of California. The Great Valley is an alluvial plain approximately 50 miles wide and 400 miles long that lies between the mountains and foothills of the Sierra Nevada to the east and the Coast Ranges to the west. Formation of the Great Valley Sequence began with marine sediments from the receding ocean and was followed more recently by river deposits (alluvial deposits) washing down from the Sierra Nevada, Klamath, Cascade, and Coast mountain ranges. As a result, the valley is underlain by an asymmetrical depression (formed by intersecting, downward sloping folds of bedrock) in which a set of rock formations composed of marine sandstone, shale or mudstone, and conglomerate have accumulated in a sequence of units (known as the Great Valley Sequence) for more than 100 million years.

Project Site Geology

The City of Rocklin is in the Loomis Basin, which is situated in the western foothills of the Sierra Nevada Range. The Sierra Nevada is a large fault block composed of granitic and metamorphic rocks tilted gently from the summit near Donner Lake to the west, where the block dips under sedimentary and alluvial units of the Sacramento Valley. Most of the surface of the Loomis Basin consists of granitic rocks. (City of Rocklin 2005.)

The project site is located within the U.S. Geological Survey (USGS) Rocklin 7.5-Minute Quadrangle. Site topography consists of gently sloping terrain. The project site has a local relief of 40 feet, and elevations range from approximately 320 to approximately 360 feet above mean sea level. The higher elevation areas occur on the northeast side of the property, and its surface overall slopes gently downward to the southwest (Wallace-Kuhl & Associates 2006). The California Geological Survey (formerly the California Department of Conservation, Division of Mines and Geology) Geologic Map of the Sacramento Quadrangle shows the project area to be underlain by Mesozoic granodiorite rocks, commonly referred to as the Rocklin and Penryn Plutons. The Rocklin and Penryn Plutons cover an area of approximately 150 square miles, extending from Folsom north to the Auburn area. These granitic rock units are a large-scale intrusive body that is part of a series of magmatic intrusions, which contributed in the formation of parts of the Sierra Nevada. The rock is typified as a light gray, coarse-grained igneous rock composed of minerals such as quartz, feldspar, hornblende, and biotite, and may contain xenoliths (an inclusion of pre-existing rock fragment within the magma) and quartz veins. This massive bedrock unit likely extends to depths of thousands of feet beneath the surface (Wallace-Kuhl & Associates 2006).

REGIONAL SEISMICITY AND FAULT ZONES

Potential seismic hazards resulting from a nearby moderate to major earthquake can generally be classified as primary and secondary. The primary effect is fault ground rupture, also called surface rupture. Common secondary seismic hazards include ground shaking, liquefaction, and subsidence. Each of these potential hazards is discussed below.

Surface Rupture

Surface rupture is an actual cracking or breaking of the ground along a fault during an earthquake. Structures built over an active fault can be torn apart if the ground ruptures. Surface rupture along faults is generally limited to a linear zone a few meters wide. The Alquist-Priolo Act (see the Regulatory Setting discussion below) was created to prohibit the location of structures designed for human occupancy across the traces of active faults, thereby reducing the loss of life and property from an earthquake. No Alquist-Priolo zones have been established in Placer County or adjacent to the project area (City of Rocklin 2005).

Seismic Ground Shaking

Ground shaking, motion that occurs as a result of energy released during faulting, could potentially result in the damage or collapse of buildings and other structures, depending on the magnitude of the earthquake, the location of the epicenter, and the character and duration of the ground motion. Other important factors to be considered are the characteristics of the underlying soil and rock, the building materials used, and the workmanship of the structure.

The foothills of the Sierra Nevada are characterized by relatively low risk of seismic activity. The principal fault zones nearest the project site are the Melones Fault Zone approximately 20 miles northeast and the Bear Mountain Fault Zone approximately 6.5 miles east, both of which are part of the Foothills Fault System. Data compiled between 1808 and 1987 show that only 15 earthquakes between a maximum moment magnitude (M) 3.0 and M 4.0 (on the Richter scale) were recorded along the Foothills Fault System between Mariposa and Oroville. The Richter scale is a logarithmic scale that expresses the magnitude of an earthquake in terms of the amount of energy generated, with 1.5 indicating the smallest earthquake that can be felt, 4.5 an earthquake causing slight damage, and 8.5 a very damaging earthquake. Four notable historical earthquakes have been reported in the northern Sierra Nevada. Three seem to have been associated with the northern portion of the Melones Fault Zone near Downieville approximately 55 miles to the northeast. The fourth was the M 5.7 Oroville earthquake of August 14, 1975, located about 50 miles north of the proposed project (City of Rocklin 2005).

Active Fault Zones in the Project Vicinity

Table 4.9-1 identifies active faults that may pose a potential geologic hazard to the project site. Active faults are those that show evidence of displacement during Holocene time (11,000 years ago to present). In addition, Table 4.9-1 identifies the approximate distance from the project site and the maximum moment magnitude.

The Modified Mercalli Scale, presented in Table 4.9-2, is a scale used to illustrate the effects of earthquake intensity. Table 4.9-3 shows the approximate relationships between earthquake magnitude (Richter scale) and intensity (Modified Mercalli Scale).

The California Geological Survey identifies low, medium, and high earthquake severity zones within California. Although the City of Rocklin lies in a low severity zone, the City could be subject to moderate to strong ground shaking from earthquake or fault zones located in the area near the boundary of the Sierra Nevada and the Sacramento Valley, and near the Coast Ranges and the San Francisco Bay Area (Table 4.9-1). The probable maximum intensity of an earthquake could be as high as VI to VII on the Modified Mercalli scale. Some structural damage could occur at that intensity.

Table 4.9-1 Active Faults in the Project Vicinity		
Fault	Approximate Distance (miles) from the Project Site	Maximum Moment Magnitude[1] (Richter Scale Magnitude)
Bear Mountain Fault	6.5	6.5
Melones Fault	20	6.5
Dunnigan Hills Fault	35	6.25 [2]
West Napa Fault	60	6.5
Concord-Green Valley Fault	60	6.9
Hayward Fault	85	7.1
Calaveras Fault	95	6.2 – 6.8
San Andreas Fault	105	7.8

Note:
[1] The moment magnitude scale is used by seismologists to compare the energy released by earthquakes. Unlike other magnitude scales, it does not saturate at the upper end, meaning there is no particular value beyond which all earthquakes have about the same magnitude, which makes it a particularly valuable tool for assessing large earthquakes.
[2] Wesnouski 1986
Sources: Probabilistic Seismic Hazard Assessment for the State of California (Petersen et al. 1996)

Table 4.9-2 Modified Mercalli Scale of Earthquake Intensity	
Scale	Effects
I.	Not felt except by a very few under especially favorable conditions.
II.	Felt only by a few persons at rest, especially on upper floors of buildings.
III.	Felt quite noticeably by persons indoors, especially on upper floors of buildings. Many people do not recognize it as an earthquake. Standing motor cars may rock slightly. Vibrations similar to the passing of a truck. Duration estimated.
IV.	Felt indoors by many, outdoors by few during the day. At night, some awakened. Dishes, windows, doors disturbed; walls make cracking sound. Sensation like heavy truck striking building. Standing motor cars rocked noticeably.
V.	Felt by nearly everyone; many awakened. Some dishes, windows broken. Unstable objects overturned. Pendulum clocks may stop.
VI.	Felt by all, many frightened. Some heavy furniture moved; a few instances of fallen plaster. Damage slight.
VII.	Damage negligible in buildings of good design and construction; slight to moderate in well-built ordinary structures; considerable damage in poorly built or badly designed structures; some chimneys broken.
VIII.	Damage slight in specially designed structures; considerable damage in ordinary substantial buildings with partial collapse. Damage great in poorly built structures. Fall of chimneys, factory stacks, columns, monuments, walls. Heavy furniture overturned.
IX.	Damage considerable in specially designed structures; well-designed frame structures thrown out of plumb. Damage great in substantial buildings, with partial collapse. Buildings shifted off foundations.
X.	Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundations. Rails bent.
XI.	Few, if any (masonry) structures remain standing. Bridges destroyed. Rails bent greatly.
XII.	Damage total. Lines of sight and level are distorted. Objects thrown into the air.
Source: U.S. Geological Survey 2005a	

Table 4.9-3 Approximate Relationships between Earthquake Magnitude and Intensity		
Richter Scale Magnitude	Maximum Expected Intensity (Modified Mercalli Intensity Scale)	Distance Felt (Approx. Miles)
3.0 – 3.9	I – III	15
4.0 – 4.9	IV – V	30
5.0 – 5.9	VI – VIII	70
6.0 – 6.9	VII – VIII	125
7.0 – 7.9	IX – X	250
Source: OES 2005		

The California Geological Survey's Probabilistic Seismic Hazards Mapping Ground Motion Page (California Geological Survey 2005a) was consulted to estimate site-specific probabilistic ground acceleration for the project site. Peak horizontal ground acceleration (the level of ground shaking) with 10% probability of being exceeded in 50 years was calculated for firm rock, soft rock, and alluvium in percentage of gravity (g) (or percentage of the earth's normal gravitational strength). These calculations found that there is a 1-in-10 probability that an earthquake will occur within 50 years that would result in a peak horizontal ground acceleration exceeding 0.12g (California Geological Survey 2005a). By comparison, the California Geological Survey peak ground acceleration map for the state (California Geological Survey 2005b) shows corresponding peak horizontal ground acceleration in areas in the immediate vicinity of the San Andreas Fault to be approximately 0.8g, nearly seven times greater.

The California Building Standards Code specifies more stringent design guidelines where a project would be located adjacent to a Class "A" or "B" fault as designated by the California Probabilistic Seismic Hazard Maps. Faults with an "A" classification are capable of producing large-magnitude events (magnitude greater than 7.0), have a high rate of seismic activity (e.g., having slip rates greater than 5 millimeters per year), and have well constrained paleoseismic data (e.g., evidence of displacement within the last 700,000 years). Class "B" faults are those that lack paleoseismic data necessary to constrain the recurrence intervals of large-scale events. Faults with a "B" classification are capable of producing an event of magnitude 6.5 or greater. Based on these parameters, the Foothills Fault System would be considered a Class B fault (Wallace-Kuhl & Associates 2006).

Ground Failure/Liquefaction

Soil liquefaction occurs when ground shaking from an earthquake causes a sediment layer saturated with groundwater to lose strength and take on the characteristics of a fluid. Factors determining the liquefaction potential are soil type, the level and duration of seismic ground motions, the type and consistency of soils, and the depth to groundwater. Loose sands and peat deposits are susceptible to liquefaction, while clayey silts, silty clays, and clays deposited in freshwater environments are generally stable under the influence of seismic ground shaking.

Liquefaction poses a hazard to engineered structures. The loss of soil strength can result in bearing capacity insufficient to support foundation loads, increased lateral pressure on retaining or basement walls, and slope instability.

Based on soil borings taken by Wallace-Kuhl & Associates in 2005 and 2006, on-site soils consist of surface and near-surface silty fine sands within the upper two to three feet underlain by variably weathered granodioritic rock. In addition, regional groundwater levels are expected to be approximately 200 feet below existing site grades. Given the soil profile and regional groundwater table, the potential for liquefaction was determined to be low (Wallace-Kuhl & Associates 2006).

SUBSIDENCE AND EXPANSION

Land surface subsidence can be induced by both natural and human phenomena. Natural phenomena include: subsidence resulting from tectonic deformations and seismically induced settlements; soil subsidence from consolidation, hydrocompaction, or rapid sedimentation; subsidence from oxidation or dewatering of organic-rich soils; and subsidence related to subsurface cavities. Subsidence related to human activity includes subsurface fluid or sediment withdrawal. Pumping of water for residential, commercial, and agricultural uses from subsurface water tables causes more than 80 percent of the identified subsidence in the United States (Galloway et al. 1999). Lateral spreading is the horizontal movement or spreading of soil toward an open face, such as a streambank, the open side of fill embankments, or the sides of levees. The potential for failure from subsidence and lateral spreading is highest in areas where there is a high groundwater table, where there are relatively soft and recent alluvial deposits, and where creek banks are relatively high.

Expansive soils can shrink and swell with wetting and drying. Soils with high clay content tend to be the most affected. The shrink-swell potential of expansive soils can result in differential movement beneath foundations.

As discussed above, site soils consist of surface and near-surface silty fine sands within the upper two to three feet underlain by variably weathered granodioritic rock. These soils are considered to possess low subsidence and expansion potential (Wallace-Kuhl & Associates 2006).

SLOPE STABILITY

A landslide is the downhill movement of masses of earth material under the force of gravity. The factors contributing to landslide potential are steep slopes, unstable terrain, and proximity to earthquake faults. This process typically involves the surface soil and an upper portion of the underlying bedrock. Expansive soil on slopes tends to shrink and swell in response to moisture content changes. During this shrinking and swelling process, gravity tends to work the soil downslope. Movement may be very rapid, or so slow that a change of position can be noted only over a period of weeks or years (creep). The size of a landslide can range from several square feet to several square miles.

Surface and near-surface soils were determined to possess a low expansion potential. Based on the site's relatively gently sloping topography and silty fine sand soils underlain by granodioritic rock, Wallace-Kuhl & Associates found no further investigation was required to evaluate seismically induced settlement or slope instability/failure.

SOILS

Subsurface test borings at the project site indicated the surface and near-surface residual soils consist of dark brown and brown, silty fine sands within the upper two or three feet, underlain by variably weathered granodioritic rock to the maximum depth explored of 18 feet below existing surface grade. Perched water was encountered in several borings initially at depths ranging from 3 to 14 feet below existing grades. Perched water levels were observed to rise up to 4.5 feet above initial measurements. The test borings were allowed to remain open for at least 24 hours to allow seepage water levels to reach static equilibrium at depths ranging from 1.5 to 12 feet below existing grades. The perched water was determined to be a result of the relatively impervious granodiorite rock below the surface soil, which prohibits the vertical percolation and traps surface water within the upper soils. The presence of perched water tables can require the implementation of dewatering activities (i.e., pumping) during construction if the water is exposed during site excavation.

Review of the 1980 U.S. Department of Agriculture Soil Conservation Service (SCS) *Soil Survey of Placer County, California, Western Part, Sheet No. 14 (Rocklin Quadrangle)* (1980) indicates two soil types cross the project site:

- **Andregg coarse sandy loam, 2-9% slopes.** This soil occurs at elevations of 200 to 1,000 feet above sea level. It is moderately deep, gently rolling, and well drained. Andregg coarse sandy loam typically consists of grayish brown to very pale brown coarse sandy loam to a depth of 2.5 feet underlain by weathered granitic bedrock. Permeability is moderately rapid and surface runoff is medium with a moderate erosion hazard.

- **Xerothents.** This soil typically consists of mechanically removed and mixed soil material in which horizons are no longer discernable. Most of this material is within the Interstate 80 right-of-way.

These soils are shown on Exhibit 4.9-1. These soil types were found to be generally consistent with the subsurface soil conditions identified during test borings.

PALEONTOLOGY

Fossil remains of prehistoric plant and animal life could be found in the sedimentary rocks and volcanic rock sedimentary materials that are present throughout Placer County. Sediments associated with the Mehrten Formation in the Roseville area have been found to contain fossils of terrestrial vertebrates. Fossilized animal remains also may be present in caves associated with the limestone geology that can be found in the central part of the Sierra Nevada foothills. No inventory or other information source exists that characterizes the extent, sensitivity, or significance of paleontological resources in Placer County.

The proposed project site is located in the Rocklin and Penryn Pluton, which consists of Mesozoic-age (approximately 206 million to 70 million years ago) rocks (Wagner et al. 1987). Plutonic rocks crystallized at great depths beneath the earth's surface from many different batches of magma. At the project site, the plutonic rocks are composed of diorite. Because of the geologic processes involved as these rocks were formed (high temperature and pressure at great depth), they do not contain fossils. Based on the lack of fossils within the rocks on the project site, there is no potential for fossils to be discovered during site excavations and this subject will not be discussed further in this document.

MINERAL RESOURCES

Mineral extraction in the City of Rocklin includes granite and gravel operations. The granite found in Rocklin is optimal because it is even-textured, very hard, available in large blocks and takes a high polish. One commercial business, Big Gun Quarry, extracts granite from Rocklin at this time (City of Rocklin 2005).

The project site is not located within or near any active mining operation. The California Geological Survey has designated Mineral Resource Zones (MRZ) in portions of the State that are considered to have potentially significant mineral deposits. The project site is not within a State-designated MRZ.

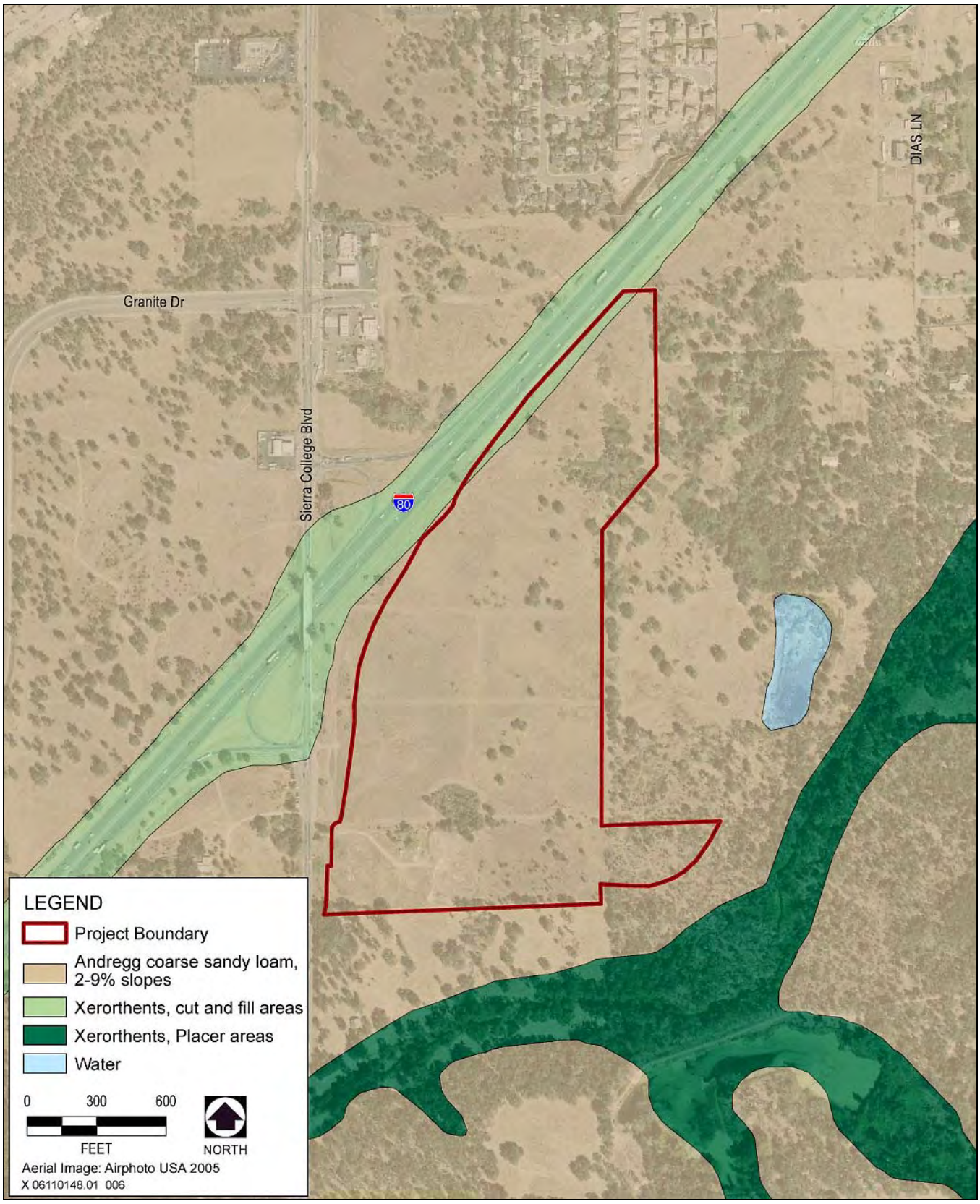
4.9.2 REGULATORY SETTING

FEDERAL

Earthquake Hazards Reduction Act

In October 1977, the U.S. Congress passed the Earthquake Hazards Reduction Act to reduce the risks to life and property from future earthquakes in the United States. To accomplish this, the act established the National Earthquake Hazards Reduction Program (NEHRP). This program was significantly amended in November 1990 by the NEHRPA by refining the description of agency responsibilities, program goals, and objectives.

The mission of NEHRP includes improved understanding, characterization, and prediction of hazards and vulnerabilities; improved building codes and land use practices; risk reduction through post-earthquake investigations and education; development and improvement of design and construction techniques; improved



Soils Types **Exhibit 4.9-1**

mitigation capacity; and, accelerated application of research results. The NEHRPA designates the Federal Emergency Management Agency (FEMA) as the lead agency of the program and assigns several planning, coordinating, and reporting responsibilities. Other NEHRPA agencies include the National Institute of Standards and Technology, National Science Foundation, and USGS.

STATE

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Act (Public Resources Code Sections 2621–2630) was passed in 1972 to mitigate the hazard of surface faulting to structures designed for human occupancy. The main purpose of the law is to prevent the construction of buildings used for human occupancy on the surface trace of active faults. The law addresses only the hazard of surface fault rupture and is not directed toward other earthquake hazards. The Alquist-Priolo Act requires the State Geologist to establish regulatory zones known as "Earthquake Fault Zones" around the surface traces of active faults and to issue appropriate maps. The maps are distributed to all affected cities, counties, and State agencies for their use in planning efforts. Before a project can be permitted in a designated Alquist-Priolo Earthquake Fault Zone, cities and counties must require a geologic investigation to demonstrate that proposed buildings would not be constructed across active faults.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act of 1990 (Public Resources Code Sections 2690–2699.6), addresses earthquake hazards from nonsurface fault rupture, including liquefaction and seismically induced landslides. The act established a mapping program for areas that have the potential for liquefaction, landslide, strong ground shaking, or other earthquake and geologic hazards. The Act also specifies that the lead agency for a project may withhold development permits until geologic or soils investigations are conducted for specific sites and mitigation measures are incorporated into plans to reduce hazards associated with seismicity and unstable soils.

National Pollutant Discharge Elimination System Permit

In California, the State Water Resources Control Board (SWRCB) administers regulations promulgated by the U.S. Environmental Protection Agency (55 Code of Federal Regulations [CFR] 47990) requiring the permitting of stormwater-generated pollution under the National Pollutant Discharge Elimination System (NPDES). In turn, the SWRCB's jurisdiction is administered through nine regional water quality control boards. Under these federal regulations, an operator must obtain a General Permit through the NPDES Stormwater Program for all construction activities with ground disturbance of one acre or more. The General Permit requires the implementation of best management practices (BMPs) to reduce sedimentation into surface waters and control erosion. One element of compliance with the NPDES permit is preparation of a Storm Water Pollution Prevention Plan (SWPPP) that addresses control of water pollution, including sediment, in runoff during construction. (See Section 4.10, Hydrology and Water Quality, for more information about the NPDES and SWPPPs.)

California Building Standards Code

The State of California provides minimum standard for building design through the California Building Standards Code (California Code of Regulations, Title 24). Where no other building codes apply, Chapter 29 regulates excavation, foundations, and retaining walls. The California Building Standards Code (CBC) applies to building design and construction in the state and is based on the federal Uniform Building Code (UBC) used widely throughout the country (generally adopted on a state-by-state or district-by-district basis). The CBC has been modified for California conditions with more detailed and/or more stringent regulations.

The State earthquake protection law (California Health and Safety Code Section 19100 et seq.) requires that structures be designed to resist stresses produced by lateral forces caused by wind and earthquakes. Specific

minimum seismic safety and structural design requirements are set forth in Chapter 16 of the CBC. The CBC identifies seismic factors that must be considered in structural design.

Chapter 18 of the CBC regulates the excavation of foundations and retaining walls, and Appendix Chapter A33 regulates grading activities, including drainage and erosion control and construction on unstable soils, such as expansive soils and areas subject to liquefaction.

LOCAL

City of Rocklin General Plan

The following goal and policies from the Community Safety Element of the City General Plan (1991) are applicable to the proposed project:

Goal: To minimize the danger of natural and man-made hazards and to protect residents and visitors from the dangers of earthquake, fire, flood, and other natural disasters, and manmade dangers.

- **Policy 1:** To require engineering analysis of new development proposals in areas with possible soil instability, flooding, earthquake faults, or other hazards, and to prohibit development in high danger areas.
- **Policy 11:** To limit development in areas with severe slopes.

Rocklin Municipal Code Title 15, Buildings and Construction

Chapter 15.28, Grading and Erosion and Sedimentation Control, of the Rocklin Municipal Code regulates grading on all property within the City of Rocklin to safeguard life, limb, health, property and public welfare; to avoid pollution of watercourses with nutrients, sediments, or other earthen materials generated or caused by surface runoff on or across the permit area; to comply with the City's National Pollution Discharge Elimination System permit issued by the California Regional Water Quality Control Board; and, to ensure that the intended use of a graded site is consistent with the City of Rocklin General Plan, provisions of the California Building Standards Code as adopted by the City relating to grading activities, City of Rocklin improvement standards, any applicable specific plans or other land use entitlements.

In addition, this chapter establishes rules and regulations to control grading and erosion control activities, including fills and embankments; establishes the administrative procedure for issuance of permits; and, provides for approval of plans and inspection of grading construction and erosion control plans for all graded sites.

4.9.3 IMPACTS AND MITIGATION MEASURES

METHOD OF ANALYSIS

Evaluation of potential geologic and soil impacts was based on a review of documents pertaining to the project site, including the City General Plan, the U.S. Department of Agriculture SCS *Soil Survey of Placer County, California, Western Part, Sheet No. 14 (Rocklin Quadrangle)* geologic maps (1980); the geotechnical investigation performed by Wallace-Kuhl & Associates (2006); and published and unpublished geologic literature. The information obtained from these sources was reviewed and summarized to establish existing conditions and to identify potential environmental effects, based on the standards of significance presented in this section. In determining the level of significance, the analysis assumes that the proposed project would comply with relevant federal, State, and local ordinances and regulations, as well as the City General Plan policies presented in this section.

THRESHOLDS OF SIGNIFICANCE

An impact is considered significant, as defined by the State CEQA Guidelines (Appendix G), if the proposed project would:

- expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:
  - the rupture of a known earthquake fault as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known active fault;
  - strong seismic ground shaking;
  - seismic-related ground failure, including liquefaction; or
  - landslides;
- result in substantial soil erosion or the loss of topsoil;
- be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on or off-site landsliding, lateral spreading, subsidence, liquefaction, or collapse;
- be located on expansive soil, as defined in Table 18-1-B of the UBC, creating substantial risks to life or property; or
- cause the disturbance or destruction of a unique paleontological resource or site or unique geologic feature.

IMPACTS AND MITIGATION MEASURES

IMPACT 4.9-1 Risks to People and Structures from Seismic Hazards. *The project site is not located within an earthquake fault zone as designated by the Alquist-Priolo Earthquake Fault Zone Act and no known faults are located on the project site. Based on the site topography, soil profiles, and the groundwater table, the potential for soil expansion, slope instability/failure, and liquefaction was determined to be low. However, ground shaking, as a result of seismic activity from nearby or distant earthquake faults, could cause seismic-related ground failure. Thus, development of the project site for commercial uses has the potential to expose people to adverse effects from seismic hazards, including strong seismic ground shaking. This impact would be* ***significant****.*

The project site is not located within an earthquake fault zone as designated by the Alquist-Priolo Earthquake Fault Zone Act (City of Rocklin 2005). The principal fault zones nearest the project site are the Melones Fault Zone and the Bear Mountain Fault Zone, both of which are part of the Foothills Fault System. Both faults are estimated to have a maximum credible earthquake of 6.25 on the Richter scale. The term “maximum credible earthquake” is defined as the largest earthquake that is likely to be generated along an active fault zone. Because no known faults are located on the project site, the potential for surface rupture (cracking or breaking of the ground during an earthquake) would be less than significant.

Based on soil borings taken by Wallace-Kuhl & Associates in 2005 and 2006, site soils consist of surface and near-surface silty fine sands within the upper two to three feet underlain by variably weathered granodioritic rock. These soils are generally considered to possess low expansion potential. Based on the site topography and soil profiles, Wallace-Kuhl & Associates found no further investigation was required to evaluate seismically induced settlement or slope instability/failure. In addition, regional groundwater levels are expected to be approximately

200 feet below existing site grades. Given the soil profile and regional groundwater table, the potential for liquefaction was determined to be low.

The project site is classified as being within Seismic Zone 3 in the 1997 edition of the UBC; as such, the level of anticipated ground shaking is lower than in many areas within the state of California. The California Geological Survey's Probabilistic Seismic Hazards Mapping Ground Motion Page (California Geological Survey 2005a) was consulted to estimate site-specific probabilistic ground acceleration for the project site. The calculations found that there is a 1-in-10 probability that alluvium on the project site will have a peak horizontal ground acceleration (level of ground shaking) exceeding 0.012g within 50 years (California Geological Survey 2005a).

The California Building Standards Code specifies more stringent design guidelines where a project would be located adjacent to a Class "A" or "B" fault as designated by the California Probabilistic Seismic Hazard Maps. The Foothills Fault System would be considered a Class B fault.

As required by current City of Rocklin construction standards as well as standard engineering practices, project facilities would be designed in accordance with seismic standards of the UBC for structures located within Seismic Zone 3. These construction standards would minimize the effects of seismic ground shaking on developed structures. However, strong ground shaking may still occur at the site as a result of large, distant earthquakes. The California Geological Survey indicates that the project area is located in a low severity zone. The probable maximum intensity of an earthquake could be as high as VI to VII on the Modified Mercalli scale. Earthquakes in this range could cause general alarm and moderate damage. Thus, development of the project site has the potential to expose people to substantial adverse effects from seismic hazards, including strong seismic ground shaking. This impact would be **significant**.

Mitigation Measure 4.9-1 Risks to People and Structures from Seismic Hazards

a. Before issuance of a grading permit, the project design plans and specifications, including grading and foundation plans, shall be reviewed by a licensed geotechnical engineer, to ensure that the recommendations in the geotechnical report have been appropriately integrated and comply with Rocklin Municipal Code Chapter 15.28, Grading and Erosion and Sedimentation Control. This review shall also assess the extent to which the recommendations in the geotechnical report are appropriate and sufficient for construction of the buildings described in the final project design plans.

b. During project design and construction, all recommendations outlined in the geotechnical report for the project (Wallace Kuhl & Associates 2006) shall be implemented, at the direction of the City engineer, to prevent significant impacts associated with seismic activity. These recommendations specifically identify actions to be taken related to: site clearing, site preparation and engineered fill construction, final subgrade preparation, trench backfilling, foundation design, interior floor slab support and moisture penetration resistance, exterior flatwork, retaining wall design, light pole and entry sign foundations, erosion and slope winterization, surface drainage, pavement design, and geotechnical engineering observation and testing during earthwork. As identified in these recommendations, a geotechnical engineer shall be present on-site during appropriate earthmoving and construction activities to ensure that requirements outlined in the geotechnical report are adhered to for proper fill and compaction of soils.

c. Should the construction schedule require continued work during the wet weather months (e.g., October through April), the project applicant shall consult with a licensed civil engineer and implement any additional recommendations provided, as conditions warrant. These recommendations would include but not be limited to (1) implementing aeration, to allow site soils to reach a proper moisture content to attain the specified degree of compaction to be achieved; and (2) implementing aeration or lime treatment, to allow any low-permeability surface clay soils intended for use as engineered fill to reach a moisture content that would permit the specified degree of compaction to be achieved (Wallace Kuhl & Associates 2006).

Level of Significance After Mitigation

Implementation of the identified mitigation measures would reduce potentially significant impacts under the proposed project associated with seismic hazards to a less-than-significant level.

IMPACT 4.9-2 Construction-Related Erosion Hazards. *Excavation and grading of soil could result in localized erosion during project construction. This would be a* ***significant*** *impact.*

Project construction activities would involve excavation and grading of soil and would remove all vegetative cover on-site thereby exposing on-site soils to wind and water erosion. The erosion potential of the soils on the site is considered moderate. Although excavation activities, grading, and construction would be conducted according to standard construction practices and building codes, construction activities associated with project site development have the potential to create substantial localized erosion during wind and rain events. Therefore, this impact would be considered **significant**.

Mitigation Measure 4.9-2 Construction-Related Erosion Hazards

a. A grading and erosion control plan shall be prepared by a California Registered Civil Engineer retained by the applicant(s) and submitted to the City of Rocklin for approval prior to issuance of grading permits. The plan shall comply with the City of Rocklin Grading and Erosion and Sedimentation Control (Municipal Code Title 15, Chapter 15.28), the erosion control recommendations in the project's geotechnical report (Wallace Kuhl & Associates 2006), and the California Building Standards Code grading requirements. The plan shall include the site-specific grading proposed for the new development. All grading shall be balanced on the site, where feasible.

b. To ensure grading activities do not directly or indirectly discharge sediments into surface waters as a result of construction activities, the project applicant shall develop a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP shall identify Best Management Practices that would be used to protect stormwater runoff and minimize erosion during construction.

Level of Significance After Mitigation

Implementation of these mitigation measures would reduce significant impacts associated with construction-related erosion hazards to a less-than-significant level.

4.10 HYDROLOGY AND WATER QUALITY

This section evaluates information regarding hydrology and water quality. It describes the existing hydrologic conditions at the project site, presents a summary of the regulatory setting, and provides an analysis of the hydrology and water quality impacts of the proposed project. In accordance with CEQA Guidelines Section 15125(a), the environmental baseline, as analyzed in this EIR, is the environmental setting as it existed at the time the Notice of Preparation was published, November 16, 2006. Therefore, the following discussion describes the site's hydrologic conditions as they were on November 16, 2006. However, it should be noted that the Interstate 80/Sierra College Boulevard Interchange Improvement Project was initiated following release of the Notice of Preparation and extensive grading and excavation work has been initiated along the western and northern portions of the project site to accommodate the interchange project's lane construction and soil borrow requirements. These changes have altered the hydrologic character of the project site's northern and western boundaries.

4.10.1 EXISTING SETTING

HYDROLOGY AND DRAINAGE

Regional Hydrology

The proposed project site is located within the northern portion of the Sacramento River Hydrological Region, as defined by the California Department of Water Resources (DWR). The Sacramento River Hydrological Region covers approximately 17.4 million acres (27,200 square miles). The region includes all or large portions of Modoc, Siskiyou, Lassen, Shasta, Tehama, Glenn, Plumas, Butte, Colusa, Sutter, Yuba, Sierra, Nevada, Placer, Sacramento, El Dorado, Yolo, Solano, Lake, and Napa Counties. Small areas of Alpine and Amador Counties are also within the region. Geographically, the region extends south from the Modoc Plateau and Cascade Range at the Oregon border, to the Sacramento-San Joaquin Delta. The Sacramento Valley, which forms the core of the region, is bounded to the east by the crest of the Sierra Nevada and southern Cascades and to the west by the crest of the Coast Range and Klamath Mountains. Other significant features include Mount Shasta and Lassen Peak in the southern Cascades; Sutter Buttes in the south central portion of the valley; and the Sacramento River, which is the longest river system in the State of California with major tributaries being the Pit, Feather, Yuba, Bear, and American Rivers. (DWR 2003). Exhibit 4.10-1 identifies the regional hydrology for western Placer County.

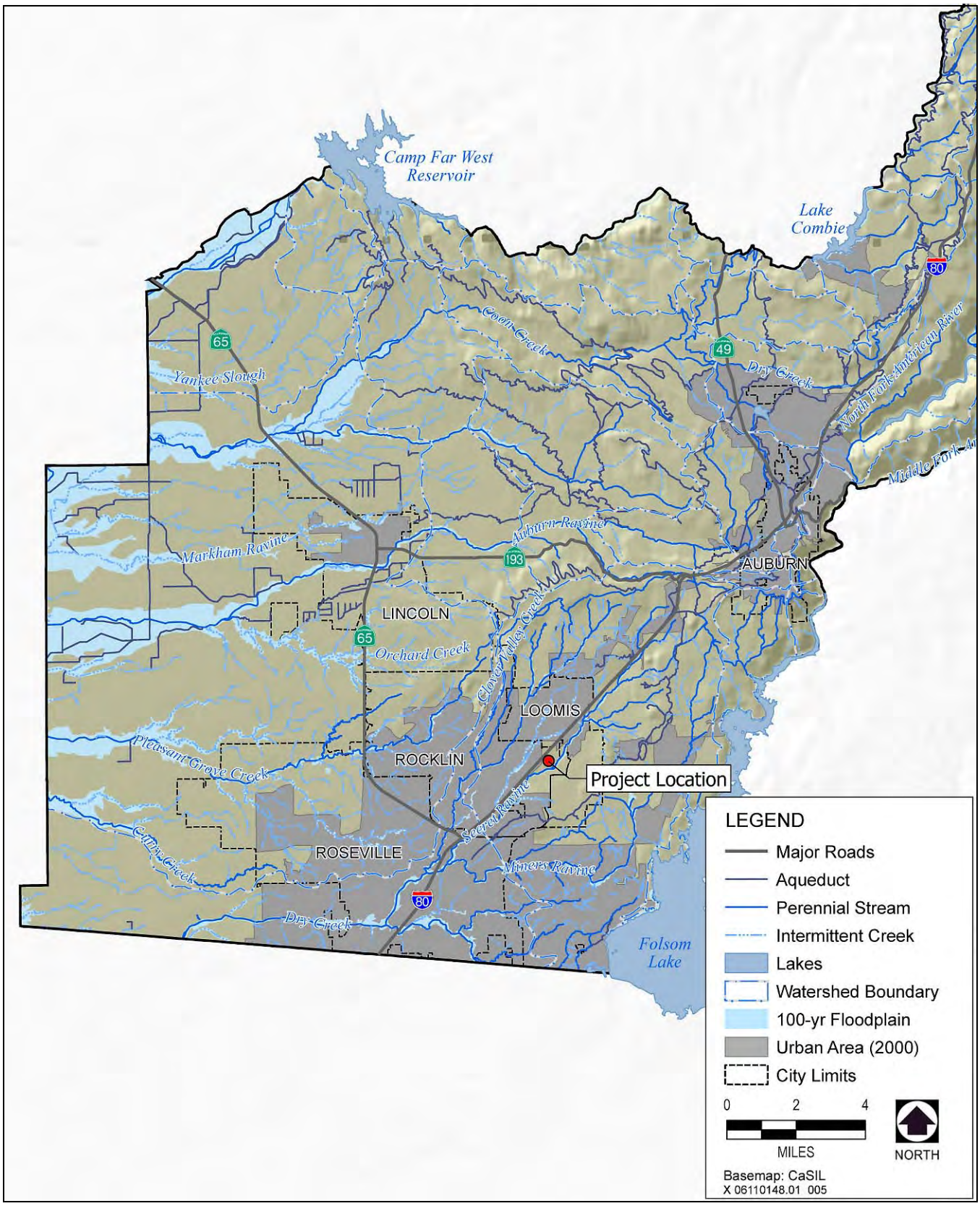
Annual precipitation averages 25 inches, 90 percent of which falls from November through April. Average summer temperatures range from a low of 60˚F to a high of above 90˚F, with temperatures in excess of 100˚F being fairly common.

Surface Hydrology

Dry Creek Watershed

The project is located within the Dry Creek watershed, a tributary to the Sacramento River, in the southwest portion of Placer County. The Dry Creek watershed covers about 101 square miles in Placer and Sacramento Counties. The headwaters of Dry Creek are located in several areas: the upper portions of the Loomis Basin, in the vicinity of Penryn and Newcastle, in unincorporated Placer County; in the Granite Bay area near Folsom Lake; and in Orangevale in Sacramento County.

The Dry Creek watershed is composed of six major subbasins in Sacramento and Placer Counties. Eight named streams are within the Dry Creek watershed and include: Dry Creek, Clover Valley Creek, Antelope Creek, Secret Ravine Creek, Miners Ravine, Cirby Creek, Linda Creek, and Strap Ravine. Antelope Creek and Clover Valley Creek form the northwest boundary of the watershed, and Secret Ravine Creek and Miners Ravine comprise the northeast portion of the watershed. Antelope Creek and Miners Ravine, after combining with Clover Valley Creek



Rocklin Crossing Regional Hydrology **Exhibit 4.10-1**

and Secret Ravine Creek, respectively, combine near Interstate 80 and Atlantic Street in the City of Roseville to form Dry Creek (Restoration Resources 2003).

Secret Ravine Creek

Secret Ravine Creek is a perennially flowing stream that drains a 19.7-square-mile basin within the Sierra Nevada foothills of western Placer County. Secret Ravine Creek flows 10.5 miles from its headwaters in the Newcastle area (elevation 1,285 feet) south of the City of Auburn and then southward, roughly parallel to Interstate 80, to its confluence with Miners Ravine Creek (elevation 165 feet) near Atlantic Street in the City of Roseville. Secret Ravine Creek flows within a narrow valley underlain by recent alluvial deposits. The valley width expands in places to over 1,000 feet, likely as the result of geologic movements. (Dry Creek Conservancy 2001.)

Project Site

Drainage within the City of Rocklin is dominated by a variety of watersheds flowing westward from the Sierra Nevada foothills east of the city, which ultimately discharge into the Sacramento River southwest of the City. The urban drainage system in the City consists of a combination of valley gutters, underground pipes and drop inlets, and open channels that in turn discharge into a variety of creeks.

The project site occupies approximately 55.1 acres of land at the intersection of I-80 and Sierra College Boulevard in the City of Rocklin. The topography is gently sloping to flat with terrain at an elevation of approximately 320 to 360 feet above mean sea level.

Flooding

Secret Ravine Creek is located approximately 300 feet south of the project site at its closest point. The Regulatory Base Flood Elevation is 299 feet above mean sea level immediately upstream of Sierra College Boulevard and 303 feet at the farthest upstream boundary of the project. The project site's lowest elevation is approximately 320 feet above mean sea level along its southern boundary. Based on the site topography and the FEMA Base Flood Elevation, the site is not within the designated 100-year floodplain (Civil Engineering Solutions, Inc. 2005). A 100-year flood has a 1% chance of being equaled or exceeded each year. The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map Panel (6061 C0418F) indicates the site is in an area designated Zone-X, which is defined as "OTHER AREAS, Areas determined to be outside 500-year floodplain." A 500-year flood has a 0.2% chance of being equaled or exceeded each year.

The Placer County Flood Control and Water Conservation District (PCFCD) is a non-regulatory entity with no permitting authority that provides technical support to Placer County, the incorporated cities in the County, the Office of Emergency Services, and developers to help set and meet standards related to stormwater management and flood control. As part of their on-going effort to meet these goals, the PCFCD has developed watershed master plans, hydrologic models, and the Stormwater Management Manual. Additionally, the PCFCD establishes standards for development and performs development review for projects within Placer County and all of the incorporated cities within Placer County.

In an effort to address flooding issues in the Dry Creek watershed; the Dry Creek Watershed Flood Control Plan was sponsored by the PCFCD and the Sacramento County Water Agency (SCWA) (PCFCD and SCWA 1992). This plan covers approximately 101 square miles of the Dry Creek watershed, including the project site.

The Dry Creek Watershed Flood Control Plan provides the PCFCD and other governmental agencies in both Placer and Sacramento Counties with information and recommendations for policies necessary to manage the stormwaters within the Dry Creek watershed. It also includes consideration of required improvements and associated funding programs to accomplish the improvements. The Flood Control Plan was intended to provide an approach for meeting existing and future flood control needs in Dry Creek watershed. The report found that substantial damage would occur under existing conditions during a 100-year flood. The plan determined that

many of the bridges and culverts in the watershed are inadequate to pass the 100-year and even 75-year flows for both existing and future conditions.

The Dry Creek Watershed Flood Plan made several recommendations to improve flood control in the watershed. Among these were structural alternatives such as regional detention, channel improvements, levees and floodwalls, and bridge and culvert replacement. The plan also suggested non-structural recommendations such as on-site detention facilities, floodplain management, and regional flood warning systems.

Regional and on-site detention basins for new development were addressed as necessary features for eliminating increased downstream flows for all new development. While detention basins would not eliminate increased flows throughout the watershed due to development, they were determined to reduce the downstream flows by 55% if local detention basins are constructed with all new development.

Groundwater Hydrology

The project area is located within the North American Groundwater Subbasin of the Sacramento Valley Groundwater Basin, as delineated in DWR Bulletin 118, *California's Groundwater* (2003 update) (DWR 2003). The eastern boundary of the North American subbasin is a north-south line extending from the Bear River south to Folsom Lake and represents the approximate edge of the alluvial basin where little or no groundwater flows into or out of the groundwater basin from the Sierra Nevada. The western portion of the North American subbasin consists of nearly flat flood basin deposits from the Bear, Feather, Sacramento, and American Rivers, and several small eastside tributaries (DWR 2006).

Regional groundwater flows are predicted to be southwesterly. In the vicinity of the proposed project, groundwater elevations and gradients in the area vary considerably, due to the highly fractured nature of the underlying rock. Groundwater elevations in the project vicinity can typically range from 10 feet to greater than 200 feet below the ground surface. The most recent data for the project site indicates that groundwater south of the site is at an approximate elevation 100 feet above mean sea level, or roughly 200 feet below existing site grades. (Wallace-Kuhl & Associates 2005.)

Water Quality

Water quality is most affected by land development, agriculture, grazing, and urban runoff. Constituents found in urban runoff vary during a storm event, from event to event within a given area, and from area to area within a given watershed. Variances can be the result of differences in rainfall intensity and occurrence, geographic features, and the land use of the area, as well as vehicle traffic and the percentage of impervious surface. Furthermore, sediment runoff from construction sites without adequate erosion control measures can contribute sediments, pesticides, fertilizers, and other pollutants to receiving waters.

Surface Water Quality

"Receiving waters" is a general term typically used to describe any surface water body, such as a creek, river, lake, bay, or ocean that receives runoff. The Dry Creek conveys drainage water to the Sacramento River southwest of the city. Therefore, the Sacramento River is receiving water for much of the drainage from the Dry Creek watershed.

Water quality in the Sacramento River is regulated primarily by the Central Valley RWQCB. The Central Valley RWQCB's *Water Quality Control Plan for the Sacramento and San Joaquin River Basins* (Basin Plan) designates beneficial uses for Sacramento River water that include agricultural supply, contact water recreation, noncontact water recreation, warm freshwater habitat, cold freshwater habitat, and wildlife habitat (Central Valley RWQCB 2004). The Sacramento River also has the potential beneficial use of coldwater spawning, reproduction, and/or early development for fisheries. In accordance with the requirements of the federal Clean Water Act, the State Water Resources Control Board (SWRCB) has determined that beneficial uses in the Sacramento River are

impaired by high concentrations of diazinon (a pesticide related to agricultural and urban runoff), mercury (related to mining in the upper watershed), and unknown toxicity. Specific beneficial uses and impairments to those uses have not been identified for the Dry Creek watershed.

Groundwater Quality

The Central Valley RWQCB Basin Plan considers all groundwater in the Central Valley Region as suitable or potentially suitable, at a minimum, for municipal and domestic water supply, agricultural supply, industrial process supply, and industrial service supply, unless otherwise designated by the Central Valley RWQCB.

As mentioned above under "Groundwater Hydrology," the Secret Ravine Creek Watershed is located within the North American Groundwater Subbasin of the Sacramento Valley Groundwater Basin. An area of groundwater along the Sacramento River extending from Sacramento International Airport northward to the Bear River has been found to have high levels of TDS, chloride, sodium, bicarbonate, manganese, and arsenic. However, the groundwater in the southern part of the groundwater subbasin is otherwise generally characterized as good quality (DWR 2006). In addition, there are three sites within the North American Groundwater Subbasin with significant groundwater contamination issues: the former McClellan Air Force Base in Sacramento County, Union Pacific Railroad Rail Yard in Roseville, and the Aerojet Superfund Site in the City of Rancho Cordova. Although the Aerojet site lies south of the North American subbasin, a contaminant plume (including TCE and PCE) extends north from Aerojet, under the American River and into the North American subbasin (DWR 2006).

Groundwater in the Dry Creek watershed and in the vicinity of the project site is generally of good quality. None of the sites discussed above with significant groundwater contamination issues (the former McClellan Air Force Base, the Union Pacific Railroad Rail Yard, and the Aerojet Superfund site) are located in the Secret Ravine Creek Watershed (DWR 2006). Furthermore, as described in Section 4.8, Public Health and Hazards, Wallace-Kuhl & Associates (2005) found no records of on-site contamination, including contaminated groundwater wells, during its Phase I Environmental Site Assessment for the project site.

4.10.2 REGULATORY SETTING

HYDROLOGY

Federal

Federal Emergency Management Agency

In 1968, Congress created the National Flood Insurance Program (NFIP) in response to the rising cost of taxpayer funded disaster relief for flood victims and the increasing amount of damage caused by floods. FEMA administers the NFIP to provide subsidized flood insurance to communities that comply with FEMA regulations to limit development in floodplains. FEMA also issues Flood Insurance Rate Maps that identify land areas subject to flooding. These maps provide flood information and identify flood hazard zones in the community. FEMA has established the minimum level of flood protection for new development as the 1-in-100 Annual Exceedance Probability (i.e., 100-year flood event).

Local

City of Rocklin General Plan

The following goal and policies from the Open Space, Conservation, and Recreation Element of the City of Rocklin General Plan (1991) are applicable to the proposed project:

- **Policy 6:** To cooperate in a coordinated regional approach to the management of drainage basins and flood plains with regional agencies such as the Placer County Flood Control and Water Conservation District (PCFCD).

The following goal and policies from the Community Safety Element of the City of Rocklin General Plan (1991) are also applicable to the proposed project:

- **Goal:** To minimize the danger of natural and man-made hazards and to protect residents and visitors from the dangers of earthquake, fire, flood, and other natural disasters, and manmade dangers.

  - **Policy 2:** To cooperate with and support the formation of a coordinated city-wide and/or regional approach for the construction, operation, and maintenance of drainage and flood control facilities.

  - **Policy 5:** To ensure that 100-year floodplain elevations, based upon the most current information, both up and downstream are not adversely affected by new development.

  - **Policy 6:** To require new developments to detain on-site drainage such that the rate of runoff flow is maintained at pre-development levels and to coordinate with other projects' master plans to ensure no adverse cumulative effects. In lieu of detention, the City may require off-site drainage improvements that are more beneficial to the community's overall drainage system.

WATER QUALITY

Federal

The U.S. Environmental Protection Agency (EPA) is the lead federal agency responsible for water quality management. The Clean Water Act (CWA) is the primary federal law that governs and authorizes water quality control activities by EPA as well as the states. Various elements of the CWA address water quality. These are discussed below. Wetland protection elements of the CWA administered by the U.S. Army Corps of Engineers are discussed in Section 4.12, Biological Resources.

Federal Antidegradation Policy

The federal antidegradation policy, established in 1968, is designed to protect existing uses and water quality and national water resources. The federal policy directs states to adopt a statewide policy that includes the following primary provisions:

- existing in-stream uses and the water quality necessary to protect those uses shall be maintained and protected;

- where existing water quality is better than necessary to support fishing and swimming conditions, that quality shall be maintained and protected unless the State finds that allowing lower water quality is necessary for important local economic or social development; and

- where high-quality waters constitute an outstanding national resource, such as waters of national and State parks, wildlife refuges, and waters of exceptional recreational or ecological significance, that water quality shall be maintained and protected.

Water Quality Criteria/Standards

Pursuant to federal law, EPA has published water quality regulations under Title 40 of the Code of Federal Regulations (CFR). Section 303 of the CWA requires states to adopt water quality standards for all surface waters of the United States. As defined by the act, water quality standards consist of designated beneficial uses of the water body in question and criteria that protect the designated uses. Section 304(a) requires EPA to publish advisory water quality criteria that accurately reflect the latest scientific knowledge on the kind and extent of all effects on health and welfare that may be expected from the presence of pollutants in water. Where multiple uses exist, water quality standards must protect the most sensitive use. As described in the discussion of State regulations below, the SWRCB and its nine RWQCBs have designated authority in California to identify beneficial uses and adopt applicable water quality objectives.

National Pollutant Discharge Elimination System

The National Pollutant Discharge Elimination System (NPDES) permit program was established in the CWA to regulate municipal and industrial discharges to surface waters of the United States. NPDES permit regulations have been established for broad categories of discharges including point source municipal waste discharges and nonpoint source stormwater runoff.

Each NPDES permit identifies limits on allowable concentrations and mass emissions of pollutants contained in the discharge. Sections 401 and 402 of the CWA contain general requirements regarding NPDES permits.

“Nonpoint source” pollution originates over a wide area rather than from a definable point. Nonpoint source pollution often enters receiving water in the form of surface runoff and is not conveyed by way of pipelines or discrete conveyances. Two types of nonpoint source discharges are controlled by the NPDES program: (1) discharges associated with industrial activities including construction activities; and, (2) the general quality of stormwater in municipal stormwater systems. The goal of the NPDES nonpoint source regulations is to improve the quality of stormwater discharged to receiving waters to the maximum extent practicable. The RWQCBs in California are responsible for implementing the NPDES permit system (see the discussion of State regulations below).

Section 303(d) Impaired Waters List

Under Section 303(d) of the CWA, states are required to develop lists of water bodies that would not attain water quality objectives after implementation of required levels of treatment by point source dischargers (municipalities and industries). Section 303(d) requires that the State develop a total maximum daily load (TMDL) for each of the listed pollutants. The TMDL is the amount of the pollutant that the water body can receive and still be in compliance with water quality objectives. The TMDL is also a plan to reduce loading of a specific pollutant from various sources to achieve compliance with water quality objectives. EPA must either approve a TMDL prepared by the State or disapprove the State’s TMDL and issue its own. NPDES permit limits for listed pollutants must be consistent with the waste load allocation prescribed in the TMDL. After implementation of the TMDL, it is anticipated that the problems that led to placement of a given pollutant on the Section 303(d) list would be remediated.

State

In California, the SWRCB has broad authority over water quality control issues. The SWRCB is responsible for developing water quality policy and exercises the powers delegated to the State by the federal government under the CWA. Other State agencies with jurisdiction over water quality regulation in California include the California

Department of Health Services (DHS) (for drinking water regulations), the California Department of Pesticide Regulation, the California Department of Fish and Game, and the Office of Environmental Health and Hazard Assessment.

Regional authority for planning, permitting, and enforcement is delegated to the nine regional water boards. The regional boards are required to formulate and adopt water quality control plans for all areas in the region and establish water quality objectives in the plans. The Central Valley RWQCB is responsible for the water bodies in the project vicinity.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (Porter-Cologne Act) is California's statutory authority for the protection of water quality. The act sets forth the obligations of the SWRCB and RWQCBs under the CWA to adopt and periodically update water quality control plans, or basin plans. Basin plans are plans in which beneficial uses, water quality objectives, and implementation programs are established for each of the nine regions in California. The Porter-Cologne Act also requires waste dischargers to notify the RWQCBs of such activities by filing Reports of Waste Discharge and authorizes the SWRCB and RWQCBs to issue and enforce waste discharge requirements, NPDES permits, Section 401 water quality certifications, or other approvals.

Water Quality Control Plan for the Sacramento and San Joaquin River Basins

The Central Valley RWQCB Basin Plan for the Sacramento River and San Joaquin River Basins adopted by the Central Valley RWQCB (2004) identifies the beneficial uses of water bodies and provides water quality objectives and standards for waters of the Sacramento River and San Joaquin River basins, including the Delta. State and federal laws mandate the protection of designated "beneficial uses" of water bodies.

The Basin Plan contains specific narrative and numeric water quality objectives for a number of physical properties (e.g., temperature, turbidity, suspended solids), biological constituents (e.g., coliform bacteria), and chemical constituents of concern including inorganic parameters, trace metals, and organic compounds. Water quality objectives for toxic priority pollutants (i.e., select trace metals and synthetic organic compounds) are included in the Basin Plan and the California Toxics Rule.

National Pollutant Discharge Elimination System Permits

The SWRCB and Central Valley RWQCB have required specific NPDES permits for a variety of activities that have potential to discharge pollutants to waters of the State and adversely affect water quality. To receive an NPDES permit, a Notice of Intent to discharge must be submitted to the Central Valley RWQCB and design and operational best management practices (BMPs) must be implemented to reduce the level of contaminated runoff. BMPs can include the development and implementation of regulatory measures (local authority of drainage facility design) and structural measures (filter strips, grass swales, and retention basins). All NPDES permits also have inspection, monitoring, and reporting requirements.

In April 2003, the SWRCB adopted an NPDES Phase II General Permit for the Discharge of Storm Water from small municipal separate storm sewer systems (MS4s) to provide NPDES permit coverage to municipalities that were not covered under the NPDES Phase I Rule for municipalities serving more than 100,000 people. The City of Rocklin is included within the NPDES Phase II General Permit. Under the Phase II General Permit, the City is required to develop, implement, and enforce a stormwater management program. The details of the development, implementation, and enforcement of the Phase II General Permit requirements are provided in the City's stormwater management program, which was approved in 2003.

General Permit for Stormwater Discharges Associated with Construction Activity (General Construction Permit)

The SWRCB adopted the statewide NPDES General Construction Permit in August 1999. The State requires that projects disturbing one acre or more of land during construction file a Notice of Intent with the RWQCB to be covered under this permit. Construction activities subject to the General Construction Permit include clearing, grading, stockpiling, and excavation. Dischargers are required to eliminate or reduce nonstormwater discharges to storm sewer systems and other waters. A Storm Water Pollution Prevention Plan (SWPPP) must be developed and implemented for each site covered by the permit. The SWPPP must include BMPs designed to prevent construction pollutants from contacting stormwater and keep products of erosion from moving off-site into receiving waters throughout the construction and life of the project. The BMPs must address source control and, if necessary, pollutant control.

General Order for Dewatering and Other Low-Threat Discharges to Surface Waters (General Order for Dewatering)

Dewatering during construction is sometimes necessary to keep trenches or excavations free of standing water when improvements or foundations/footings are installed. Clean or relatively pollutant-free wastewater that poses little or no threat to water quality may be discharged directly to surface water under certain conditions. The Central Valley RWQCB has adopted a general NPDES permit, the General Order for Dewatering, for short-term discharges of small volumes of wastewater from certain construction-related activities. Discharges may be covered by the General Order for Dewatering provided either that they are four months or less in duration or that the average dry-weather discharge does not exceed 0.25 million gallons per day. Construction dewatering and miscellaneous dewatering/low-threat discharges are among the types of discharges that may be covered by the NPDES permit.

State Nondegradation Policy

In 1968, as required under the federal antidegradation policy described previously, the SWRCB adopted a nondegradation policy aimed at maintaining high quality for waters in California. The nondegradation policy states that the disposal of wastes into State waters shall be regulated to achieve the highest water quality consistent with maximum benefit to the people of the State and to promote the peace, health, safety, and welfare of the people of the State. The policy provides as follows:

a. Where the existing quality of water is better than required under existing water quality control plans, such quality would be maintained until it has been demonstrated that any change would be consistent with maximum benefit to the people of the State and would not unreasonably affect present and anticipated beneficial uses of such water.

b. Any activity which produces waste or increases the volume or concentration of waste and which discharges to existing high-quality waters would be required to meet waste discharge requirements.

Safe Drinking Water Act

As mandated by the Safe Drinking Water Act (Public Law 93-523), passed in 1974, EPA regulates contaminants of concern to domestic water supply. Such contaminants are defined as those that pose a public health threat or that alter the aesthetic acceptability of the water. These types of contaminants are regulated by EPA primary and secondary Maximum Contaminant Levels (MCLs). MCLs and the process for setting these standards are reviewed triennially. Amendments to the Safe Drinking Water Act enacted in 1986 established an accelerated schedule for setting drinking water MCLs.

EPA has delegated to the DHS the responsibility for California's drinking water program. DHS is accountable to EPA for program implementation and for adoption of standards and regulations that are at least as stringent as those developed by EPA.

Title 22 of the California Administrative Code (Article 16, Section 64449) defines secondary drinking water standards, which are established primarily for reasons of consumer acceptance (i.e., taste) rather than for health issues.

Local

City of Rocklin General Plan

The following policy from the Open Space, Conservation, and Recreation Element the City of Rocklin General Plan (1991) is applicable to the proposed project:

- **Policy 19:** To minimize the degradation of water quality through requiring implementation of techniques such as, but not limited to, the prohibition of grading, placement of fill or trash or alteration to vegetation within designated stream setback buffer areas, and requiring the installation of measures which minimize runoff waters containing pollutants and sediments entering surface water. Measures for minimizing pollutants and sediments entering watercourses may include oil/grit separators, detention basins and flow reduction devices.

Rocklin Municipal Code Title 8, Health and Safety

Chapter 8.30, Stormwater Runoff Pollution Control Ordinance, of the Rocklin Municipal Code prohibits the discharge of any materials or pollutants that cause or contribute to a violation of applicable water quality standards, other than stormwater, into the municipal storm drain system or watercourses. Discharges from specified activities that do not cause or contribute to the violation of any plan standard, such as landscape irrigation, lawn watering, and flows from fire suppression activities are exempt from this prohibition.

Rocklin Municipal Code Title 15, Buildings and Construction

Chapter 15.28, Grading and Erosion and Sedimentation Control, of the Rocklin Municipal Code regulates grading on all property within the City of Rocklin; to avoid pollution of watercourses with nutrients, sediments, or other earthen materials generated or caused by surface runoff on or across the permit area; to comply with the City's National Pollution Discharge Elimination System permit issued by the California RWQCB; and to ensure that the intended use of a graded site is consistent with the City of Rocklin General Plan, provisions of the California Building Code as adopted by the City relating to grading activities, City of Rocklin improvement standards, any applicable specific plans or other land use entitlements.

In addition, this chapter establishes rules and regulations to control grading and erosion control activities, including fills and embankments; establishes the administrative procedure for issuance of permits; and provides for approval of plans and inspection of grading construction and erosion control plans for all graded sites.

4.10.3 IMPACTS AND MITIGATION MEASURES

METHOD OF ANALYSIS

The environmental analysis for hydrology and water quality was conducted using existing information from previously completed documents that address water resources in the project vicinity, including the City of Rocklin General Plan (1991), the Preliminary Drainage Report (Civil Engineering Solutions, Inc. 2005), and the Placer County Flood Control and Water Conservation District Stormwater Management Manual. The effects of the

proposed project were compared to environmental baseline conditions (i.e., existing conditions) to determine impacts.

THRESHOLDS OF SIGNIFICANCE

An impact is considered significant, as identified by the State CEQA Guidelines (Appendix G), if the proposed project would:

- violate any water quality standards or waste discharge requirements;
- substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate or pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted);
- substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion, siltation, or flooding on- or off-site;
- create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;
- otherwise substantially degrade water quality;
- place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map;
- place within a 100-year flood hazard area structures that would impede or redirect floodflows;
- cause the potential for inundation by seiche, tsunami, or mudflow; or
- expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam.

The project would not rely on groundwater to serve the proposed development (see Section 4.6, Utilities and Public Services) and would not place housing or other structures in a 100-year floodplain or in the vicinity of a levee or dam or interfere substantially with groundwater recharge. The project is not within an inundation area for seiches, tsunamis, or mudflows and would not expose people to these events. These impacts are not evaluated further in this EIR.

IMPACTS AND MITIGATION MEASURES

IMPACT 4.10-1 Increased Runoff and Potential for Localized or Downstream Flooding. *Implementation of the proposed project would result in an increase in impervious surfaces on the project site, which would lead to an increase in stormwater runoff compared to existing conditions. The increased surface runoff could result in a greater potential for on- and off-site flooding. The proposed project includes a stormwater runoff collection and detention system pursuant to the guidelines set forth in the Stormwater Management Manual that would reduce the post-project peak flows to pre-project levels. This impact would be* **less than significant**.

Implementation of the proposed project would create additional impervious surfaces (e.g., buildings, sidewalks, paved parking areas) on the project site. The additional runoff caused by the increase in impervious surfaces would lead to an increase in localized stormwater runoff. If not properly accommodated on the project site, increased stormwater runoff could result in localized flooding on the site and adjacent lands. In addition, if

stormwater runoff from the project site were discharged in sufficient quantities during severe storm events, lands downstream of the project site could be exposed to greater flooding risk because of increased peak flows.

A preliminary drainage report for the project was prepared in accordance with Placer County Flood Control and Water Conservation District's Stormwater Management Manual methodology. The purpose of the preliminary drainage report was to determine how peak stormwater flows would be managed on the project site. The report evaluated the combined stormwater generation effects of the proposed project and the proposed Rocklin 60 residential development located directly adjacent and to the east. The two proposed projects were evaluated together in order to determine the cumulative stormwater impacts if both projects were constructed, because the current proposal is for both projects to share the same detention basin to capture peak stormwater flows.

The preliminary drainage report identified the installation of a detention basin that would be used by both projects. The detention basin would be located on a 5.6-acre area within the boundaries of the proposed Rocklin 60 residential development and directly adjacent to the southeast corner of the proposed project (Exhibit 3-3). The detention basin would be constructed whether or not the Rocklin 60 project is developed, although its required size could be reduced without the Rocklin 60 project due to reductions in the projected peak stormwater volumes. As provided in the Detention Basin Easement Agreement entered into between the project applicant and the Rocklin 60 project applicant on May 8, 2006, the Rocklin Crossings project applicant has a non-exclusive perpetual easement and right-of-way on the Rocklin 60 property for the purposes of creating, utilizing and maintaining a detention basin intended to be used by both projects. The detention basin would be constructed upon the initiation of project construction for either of the two proposed projects.

The preliminary drainage report identified the detention volume and outlet configuration required to attenuate the post-project peak flows to pre-project levels. The preliminary drainage report's recommendations regarding detention basin sizing and outlet configurations were developed by modeling the system under pre- and post-project conditions using the U.S. Army Corps of Engineers HEC-1 model. This modeling software is designed to identify peak flow conductions during a variety of storm events and site conditions. The model was used to calculate the peak flows for the 2-year through 500-year storm events (Civil Engineering Solutions, Inc. 2006).

The pre-project modeling identified seven separate watersheds that extended over the two project sites that, with few exceptions, flows to the south and east toward Secret Ravine Creek. The total pre-project watershed was identified as approximately 121 acres. The resultant 10-year and 100-year peak flows for this area are 121 cubic feet per second (cfs) and 233 cfs, respectively (Table 4.10-1).

The post-project model consists of nine total watersheds that drain to the proposed detention site. The total watershed area is approximately 111 acres. The total area is reduced because the area of the proposed Interstate 80 eastbound onramp soon to be constructed along the northern site boundary, which is within the modeled watershed area, would drain into a separate system once completed. For the 111 acres, the 10-year and 100-year peak flows without stormwater detention increases to 151 cfs and 280 cfs, respectively (Table 4.10-1).

Table 4.10-1
Project Peak Flow Rates under Pre-Project, Post-Project, and Mitigated Project Conditions

	Project Peak Flow Rates (cfs)			
	2-Year	10-Year	100-Year	500-Year
Pre-Project Flows	55	121	233	329
Post-Project Flows	74	151	280	387
Mitigated Project Flows [a]	56	113	201	245

Source: Civil Engineering Solutions, Inc. 2006
a Mitigated project flows assumes construction of a minimum of a 4.8-acre-foot detention basin that would be designed to accommodate stormwater flows from both the Rocklin Crossings and the Rocklin 60 projects.

The preliminary drainage report indicates that the detention volume required to attenuate a 500-year storm event with the combined projects is approximately 4.8 acre-feet. All stormwater flows from both the proposed project's commercial development and the proposed residential development within the Rocklin 60 project would be routed to the detention basin, which would be sized to reduce 2-year through 500-year post-project peak flows to pre-project levels. An outlet structure from the detention basin would consist of a single 30-inch diameter "weep-hole" that would limit the volume of water that could regularly flow from the detention basin. This weep-hole would be located at the lowest point of the detention basin (approximately 308 feet above mean sea level) and would ensure that the detention basin completely drains after storm events. In addition, the detention basin would include a 48-inch riser that would control releases from the detention basin during larger storm events. The elevation of the riser would be 315.5 feet above mean sea level. Therefore, once water levels in the detention basin rise approximately 7.5 feet, stormwater would flow through both the weep-hole and the riser. The total stormwater flows would be controlled by the combined size of these two outlets.

Both the 30-inch weep-hole and 48-inch riser would discharge into a 60-inch diameter culvert that would extend through the southern bank of the detention basin. The culvert would be aligned to discharge to an existing swale connected to Secret Ravine Creek. As described below, the mitigated discharge volumes entering Secret Ravine Creek would be similar to or less than the pre-project conditions. Therefore, the proposed project would not be expected to increase erosion or streambed scour within Secret Ravine Creek.

As identified in Table 4.10-2, the detention basin would be designed to accommodate water levels in excess of a 500-year storm event. The top of the bank of the detention basin would be 325 above mean sea level and the water level elevation in the basin during a 500-year event would be 320.98 feet.

Table 4.10-2
Water Surface Elevations in the Detention Basin during Various Storm Events

Storm Event	Water Surface Elevation (feet)[a]
10-Year	316.32
100-Year	318.74
500-Year	320.98

[a] Top of Detention Basin is 325 feet.
Source: Civil Engineering Solutions, Inc. 2006

With construction of the detention basin, the mitigated 10-year and 100-year flows decrease under post-project conditions to 113 cfs and 201 cfs, respectively. This would be 8 cfs less than the 10-year pre-project flows and 32 cfs less than the 100-year pre-project flows assuming construction of both the proposed project and the Rocklin 60 project (Table 4.10-1). If the Rocklin 60 project is not constructed, the post-project flows from the project site would be less than projected for both projects. Because the proposed project includes a stormwater runoff collection and detention system pursuant to the guidelines set forth in the Stormwater Management Manual that would be sufficient to reduce the post-project peak flows to below pre-project levels with or without the Rocklin 60 project, the project would not be expected to substantially alter the course of a stream or river, or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems. Therefore, this impact would be **less than significant**.

Mitigation Measure 4.10-1 Increased Runoff and Potential for Localized or Downstream Flooding

No mitigation measures would be necessary.

Level of Significance After Mitigation

The project's runoff and flooding impacts would be considered less than significant.

IMPACT 4.10-2 Potential for Short-Term Construction-Related Water Quality Degradation. *Implementation of the proposed project could cause short-term water quality degradation associated with construction activities. Construction activities (grading, excavation, etc.) could result in substantial stormwater discharges of suspended solids and other nonpoint source pollutants, which could drain to off-site areas, potentially degrading local surface water quality. Further, areas of exposed or stockpiled soils could be subject to sheet erosion during rain events. This impact would be considered potentially* ***significant****.*

Grading, earthmoving, excavation, and utility installation, infrastructure development, and building construction would disturb the existing vegetation cover, soil, and drainage systems over the entire project site and some off-site areas (e.g., water and wastewater infrastructure). Therefore, the site would be exposed to wind and water erosion, which could adversely affect surface water quality.

The subsurface conditions on the site generally consist of variably weathered granodiorite rock. Infiltrating surface runoff water could create saturated surface conditions because of the impervious nature of the underlying bedrock. In addition, intense rainfall and associated stormwater runoff could result in short periods of sheet erosion within areas of exposed or stockpiled soils. If uncontrolled, these soil materials would flow off of the site and into local drainages. Further, the compaction of soils by heavy equipment may reduce the infiltration capacity of soils and increase the potential for runoff and downstream sedimentation.

Construction activities could result in substantial stormwater discharges of suspended solids and other pollutants into local drainage channels from the project construction site. Construction-related chemicals (fuels, paints, adhesives, etc.) could be washed into surface waters by stormwater runoff. The deposition of pollutants (gas, oil, etc.) onto the ground surface by construction vehicles could similarly result in the transport of pollutants to surface waters by stormwater runoff or in seepage of such pollutants into groundwater. Increased turbidity could result in adverse impacts on fish and wildlife species within local water courses. Long-term effects could include increased flooding hazards caused by reduced drainage facility and channel capacity.

Nonstormwater discharges could result from activities such as construction dewatering procedures, or discharge or accidental spills of hazardous substances such as fuels, oils, concrete, paints, solvents, cleaners, or other construction materials. Because of the shallow depth to bedrock and the sloping terrain of the site, it is likely that perched water could be as shallow as three feet below existing grade depending on the time of year. If perched water is encountered during excavation, dewatering activities would be necessary (Wallace-Kuhl & Associates 2005). Dewatering discharges may contain elevated levels of suspended sediment or other construction-related contaminants.

Because the project could contribute substantial additional sources of polluted runoff and could substantially degrade water quality during proposed construction activities, the project would result in potentially **significant** construction-related water quality impacts.

Mitigation Measure 4.10-2 Potential for Short-Term Construction-Related Water Quality Degradation

a. The project applicant shall demonstrate compliance, through its erosion control plan and SWPPP, with all requirements of the City's Stormwater Runoff Pollution Control Ordinance (Title 8, Chapter 8.30 of the City Code) and the Grading and Erosion and Sedimentation Control Ordinance (Title 15, Chapter 15.28 of the City Code), which regulate stormwater and prohibit non-stormwater discharges except where regulated by an NPDES permit. This includes preparing erosion, sediment, and pollution control plans for the entire construction site. The project's grading plans shall be approved by the City of Rocklin, Engineering Department prior to the initiation of site grading activities. The project applicant shall implement measures

including the use of soil stabilizers, fiber rolls, inlet filters, and gravel bags to prevent pollutants from being carried off-site in stormwater generated on the project site. These measures shall be designed to accommodate stormwater discharges associated with proposed measures that would be implemented to control on-site dust generation (e.g., wheel washing, active watering).

b. Prior to the issuance of a grading permit or any construction activity, the project applicant shall obtain from the Central Valley RWQCB the appropriate regulatory approvals for project construction including a Section 401 water quality certification, and an NPDES stormwater permit for general construction activity, including construction dewatering activities.

c. As required under the NPDES stormwater permit for general construction activity, the project applicant shall prepare and submit the appropriate Notice of Intent and prepare the SWPPP and the erosion control plan for pollution prevention and control prior to initiating site construction activities. The SWPPP shall identify and specify the use of erosion sediment control BMPs, means of waste disposal, implementation of approved local plans, nonstormwater management controls, and inspection and maintenance responsibilities. The SWPPP shall also specify the pollutants that are likely to be used during construction and that could be present in stormwater drainage and nonstormwater discharges. A sampling and monitoring program shall be included in the SWPPP that meets the requirements of SWRCB Order 99-08-DWQ to ensure the BMPs are effective.

d. Construction techniques shall be identified that would reduce the potential runoff and the SWPPP shall identify the erosion and sedimentation control measures to be implemented. The SWPPP shall also specify spill prevention and contingency measures, identify the types of materials used for equipment operation, and identify measures to prevent or clean up spills of hazardous materials used for equipment operation and hazardous waste. Emergency procedures for responding to spills shall also be identified. BMPs identified in the SWPPP shall be used in subsequent site development activities. The SWPPP shall identify personnel training requirements and procedures that would be used to ensure that workers are aware of permit requirements and proper installation and performance inspection methods for BMPs specified in the SWPPP. The SWPPP shall also identify the appropriate personnel responsible for supervisory duties related to implementation of the SWPPP. All construction contractors shall retain a copy of the approved SWPPP on the construction site.

Level of Significance After Mitigation

With implementation of the above mitigation measures, erosion from site soils would be minimized and pollutants would be largely captured on the site. Also, the implementation of identified spill prevention and cleanup plans would limit the potential for hazardous material spills to adversely affect storm water quality. Therefore, the project's construction-related water quality impacts would be reduced to a less-than-significant level.

IMPACT 4.10-3 Potential Long-Term Degradation of Water Quality. *The conversion of the site from vacant to commercial uses would introduce new stormwater pollutant sources. These pollutant sources would include oils and greases, petroleum hydrocarbons (gas and diesel fuels), nitrogen, phosphorus, and heavy metals. Pesticides, herbicides, and other landscape maintenance products typically used in landscape maintenance also could be present. These pollutants could adversely affect the site's stormwater discharges. The potential water quality degradation associated with site operations would be considered* ***significant****.*

The project site is currently vacant and undeveloped. The development of the project site with commercial land uses would alter the types, quantities, and timing of contaminant discharges in stormwater runoff relative to existing conditions. If this stormwater runoff is uncontrolled and not treated, the water quality of the discharge could affect off-site drainage channels and downstream waterbodies. The stormwater runoff generated within the project site would ultimately discharge to Secret Ravine Creek.

Water quality degradation from the discharge of urban runoff occurs when stormwater or landscaping irrigation runoff enters the storm drain system carrying contaminants found in urban environments. Stormwater may

encounter oil, grease, or fuel that has collected on roadways and parking lots and convey these contaminants to the storm drain system. Water used for irrigation of landscaped areas may encounter pesticides, herbicides, and fertilizer. Water that has encountered these chemicals but that has not been absorbed by plants and soil can enter the storm drain system and be conveyed to receiving waters. The potential discharges of contaminated urban runoff from paved and landscaped areas could increase or could cause or contribute to adverse effects on aquatic organisms in receiving waters. Urban contaminants typically accumulate during the dry season and may be washed off when adequate rainfall returns in the fall to produce a "first flush" of runoff.

The amount of contaminants discharged in stormwater drainage from development areas varies based on a variety of factors, including the intensity of urban uses such as vehicle traffic, types of activities occurring on-site (e.g., office, commercial, industrial), types of chemicals used on-site (e.g., pesticides, herbicides, cleaning agents, petroleum byproducts), the pollutants on street surfaces, and the amount of rainfall. The potential for the project to contribute substantial additional sources of polluted runoff and to substantially degrade water quality during site operations would be considered a **significant** water quality impact.

Mitigation Measure 4.10-3 Potential Long-Term Degradation of Water Quality

Before issuance of a grading permit for the site, the project applicant shall obtain from the Central Valley RWQCB a general NPDES permit and shall comply with all of the permit requirements in order to minimize storm water discharges associated with site operations. In addition, the project applicant shall prepare a SWPPP and implement Best Management Practices designed to minimize sedimentation and release of products used during site operations.

Before approval of the final project design, the project applicant shall identify storm water runoff BMPs selected from the Storm Water Quality Task Force's California Storm Water Best Management Practices Handbook (American Public Works Association 1993), the Bay Area Stormwater Management Agencies Association's (1999) Start at the Source: Design Guidance Manual for Stormwater Quality Protection, or similar documents. Typical BMPs that could be used on the project site shall include, but are not limited to, catchbasin inserts, compost storm water filters, sand filters, vegetated filter strips, biofiltration swales, oil/water separators, biodetention basins, or other equally effective measures. Other BMPs shall include, but would not be limited to, administrative controls such as signage at inlets to prevent illicit discharges into storm drains, parking lot and other pavement area sweeping, public education, and hazardous waste management and disposal programs. BMPs shall identify and implement mechanisms for the routine maintenance, inspection, and repair of pollution control mechanisms. In addition, the BMPs shall be reviewed for adequacy by the City of Rocklin, Engineering Department prior to issuance of a grading permit for the site to ensure that they will effectively remove pollutants from the site's stormwater runoff.

Level of Significance After Mitigation

With the implementation of the BMPs identified above, the stormwater discharge from the project site would be captured within the project's drainage systems and would be filtered through oil/water separators and/or other equally effective control systems prior to being directed to the detention basin. Once in the detention basin, the settlement of undissolved solids would occur, further removing contaminants from the stormwater. As the stormwater is discharged from the detention basin, it would flow through an existing grassy swale for approximately 300 feet before entering Secret Ravine Creek. The grassy swale would remove additional contaminants within the stormwater through biofiltration. The implementation of these BMPs, consistent with the requirements of the site's NPDES permit and the SWPPP, would ensure that the quality of the water entering Secret Ravine Creek would not be substantially degraded. With implementation of the above mitigation measures, the project's operational water quality impacts would be reduced to a less-than-significant level.

4.11 AGRICULTURE

This section includes descriptions of the existing environmental setting and regulatory background related to agriculture resources. It also examines the proposed project's consistency with the City's agricultural resource policies and evaluates the project's impacts on agricultural resources.

4.11.1 EXISTING SETTING

The generally undeveloped project site contains gently sloping to flat terrain covered with annual grasses dotted with rock outcroppings, boulders, seasonal wetland features and scattered trees and shrubs. The site is not currently in agricultural production. The site is bordered to the north by Interstate 80 (I-80) and by freeway-serving commercial uses further to the north. Rural residential land uses are located to the east and south. Sierra College Boulevard and the I-80 northbound on- and off-ramps are located to the west with rural residential land uses located further to the west and a church located to the southwest. The project site does not currently include agricultural operations.

HISTORICAL AGRICULTURAL ACTIVITIES

Land in the project vicinity was used during the mid to late 1800s to grow grain crops used as feed for draft animals that hauled supplies to the gold mining areas to the east. By the end of the nineteenth century, land was subdivided into small parcels for family farms engaged in fruit, citrus, and grape production. The project area was part of the Himes Tract, which was subdivided into 10-acre lots in the 1890s. Most of the lots were sold by the 1920s. Often, they were combined into 20- to 40-acre farmsteads. In the 1910s and 1920s, several Japanese families bought lots in the Himes Tract. One of these was the Takuma family whose farmstead was recorded as an archaeological site within the project boundaries (ECORP 2005b). See Section 4.13, Cultural Resources, of this Draft EIR for more information on archaeological sites.

The Takuma family cultivated orchards on the project site including plums, peaches, pears and persimmons. By 1971, the orchard had been removed. According to the Placer County Agricultural Commissioner's Office, the property has not supported a commercially producing orchard for over thirty years. Since that time the subject property has generally remained fallow land with the exception of some dry-farmed crops in the mid 1980s (Wallace-Kuhl & Associates Inc. 2005).

COUNTY AGRICULTURAL RESOURCES

In 2004, Placer County was estimated to have 124,262 acres of Important Farmland: 9,236 acres of Prime Farmland, 5,509 acres of Farmland of Statewide Importance, 23,283 acres of Unique Farmland, and 86,234 acres of Farmland of Local Importance (California Department of Conservation [CDC] 2006). Over the past decade, the availability of Important Farmland has been consistently declining from year to year primarily because of conversions to urban and other developed land uses. Table 4.11-1 identifies the acreages of Important Farmland in Placer County inventoried by the CDC from 1994 through 2004. A decline in acreages occurred for all Important Farmland categories over the last decade.

Table 4.11-1 Acreages of Important Farmland in Placer County						
Important Farmland Category	1994	1996	1998	2000	2002	2004
Prime Farmland	10,458	9,867	9,750	9,901	9,481	9,236
Farmland of Statewide Importance	5,608	5,546	5,196	5,312	5,513	5,509
Unique Farmland	23,848	23,300	22,726	23,616	22,166	23,283
Farmland of Local Importance	113,505	114,271	114,453	111,987	102,838	86,234
Total	153,419	152,984	152,125	150,816	139,998	124,262

Source: California Department of Conservation Farmland Conversion Reports at http://www.consrv.ca.gov/dlrp/FMMP/stats_reports/farmland_conv_reports.htm

FARMLAND MAPPING AND MONITORING PROGRAM

The Farmland Mapping and Monitoring Program (FMMP) land classifications system monitors and documents land use changes that specifically affect California's agricultural land. The program, administered by the California Department of Conservation, produces maps, referred to as Important Farmland Maps, and statistical data that are used for assessing the significance and quality of agricultural lands. Agricultural land is rated according to soil quality, based on the Natural Resources Conservation Service soil survey maps, and irrigation status. Maps are updated every 2 years, with current land use information gathered from aerial photographs, a computer mapping system, public review, and field reconnaissance (CDC 2006).

The FMMP land classification system is cited by the State CEQA Guidelines as the preferred information source for determining the agricultural significance of a property (CEQA Guidelines, Appendix G). The California Department of Conservation has characterized Prime Farmland as land with the best combination of physical and chemical characteristics for the production of agricultural crops. Prime Farmland has the soil quality, growing season, and moisture supply needed to produce sustained high yields of crops when treated and managed, including water management, according to current farming methods. Farmland of Statewide Importance is characterized as land with a good combination of physical and chemical characteristics for agricultural use, having only minor shortcomings, such as less ability to store soil moisture, compared to Prime Farmland (CDC 2006).

The CDC, Division of Land Resource Protection, Placer County Important Farmland Map designates the entire project site as grazing land, which is not considered Important Farmland under the definition in CEQA of "Agricultural Land" that is afforded consideration as to its potential significance (see CEQA Section 21060.1 [a]).

4.11.2 REGULATORY SETTING

WILLIAMSON ACT CONTRACTS

In 1965, the California Legislature passed the California Land Conservation Act, which is commonly referred to as the Williamson Act. The act is a voluntary land conservation program that is administered by counties and cities, with technical assistance from the CDC. The objectives of the act are as follows:

- To preserve farmland for a secure food supply for the state and nation, and for future generations;
- To maintain agriculture's contribution to local and state economic health;
- To provide economic relief to tax-burdened farmers and ranchers;
- To promote orderly city growth, and discourage leapfrog development and premature loss of farmland; and
- To preserve open space for its scenic, social, aesthetic, and wildlife values.

Landowners enrolled in the Williamson Act are taxed at a lower rate using a value based on the agricultural use of the land under contract. In turn, landowners commit to restricting the use of their land to agriculture and open space uses for 10 years. The term of the contract is essentially indefinite and it is automatically renewed on the anniversary date of which the contract was entered. To exit the contract, landowners must initiate the non-renewal process, which allows the remainder of the contract term to lapse (the remaining 9 years), thereby rendering the contract null and void at the end of the term.

No portions of the project site or adjacent parcels are subject to Williamson Act contracts.

CITY OF ROCKLIN GENERAL PLAN

The City of Rocklin General Plan does not include any policies related to agricultural resources.

4.11.3 IMPACTS AND MITIGATION MEASURES

METHOD OF ANALYSIS

The environmental analysis in this section is based on a review of the Important Farmland Maps of the Farmland Mapping and Monitoring Program (FMMP) land classifications system to determine the agricultural significance of lands within the City of Rocklin.

THRESHOLDS OF SIGNIFICANCE

Pursuant to Appendix G of the State CEQA Guidelines, an impact to agricultural resources is considered significant if the proposed project would:

- Convert Important Farmland (i.e., Prime Farmland, Unique Farmland, or Farmland of Statewide Importance), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use;
- Conflict with existing zoning for agricultural use, or a Williamson Act contract; or
- Involve other changes in the existing environment which, because of their location or nature, could result in conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, to nonagricultural use.

IMPACTS AND MITIGATION MEASURES

IMPACT 4.11-1 Farmland Conversion. *The project would not convert important farmlands to non-agricultural land uses and would not conflict with lands zoned for agricultural uses. Therefore, **no impact** on agricultural resources would be anticipated with project implementation.*

The Farmland Mapping and Monitoring Program land classification map identifies the project site as grazing land, which is not considered important farmland, as defined by CEQA. The project is currently zoned for urban land uses (i.e., retail commercial, residential). Land uses surrounding the project site consist of rural residences, open space, and retail-commercial land uses. The project site is not located adjacent to land in productive agriculture or lands zoned for agricultural uses. Also, the project site and adjacent parcels are not under a Williamson Act contract. Therefore, because the project would not convert important farmland to non-agricultural uses, would not conflict with existing agricultural zoning or Williamson Act contracts, or involve other changes that could result in the conversion of important farmland to non-agricultural uses, **no impact** on agricultural resources would be anticipated with project implementation.

Mitigation Measure 4.11-1 Farmland Conversion

No mitigation measures are required.

Level of Significance after Mitigation

No impacts on agricultural resources would be anticipated with project implementation.

4.12 BIOLOGICAL RESOURCES

This section describes biological resources present on, or with potential to occur on the project site, including biological communities, common plant and wildlife species, and special-status species. It also includes an overview of the federal, State and local laws and regulations pertaining to the protection of biological resources in the City of Rocklin. Potential impacts on biological resources resulting from implementation of the proposed project are evaluated and mitigation measures are proposed, where appropriate.

The biological resources information presented in this section is based on a review of available background reports, previous studies conducted on the project site, biological resource databases, aerial photography interpretation, and a reconnaissance level site survey conducted by EDAW biologists on September 29, 2006. Specific biological resource background reports reviewed in preparing this section are identified in Table 4.12-1.

Table 4.12-1
Biological Resource Background Reports

Title	Author	Date
Croftwood Subdivision Final EIR	The Planning Center	3/1/1991
Sierra College Boulevard/Interstate 80 Interchange Draft and Final EIR	LSA Associates	Aug. & Nov/ 2003
Environmental Site Assessment, Rocklin 105*	Wallace-Kuhl Associates	1/5/2005
Corps of Engineers verification letter, Rocklin 105	ACOE, Tom Cavanaugh	2/19/2004
Tree Survey, Rocklin 105	Foothill Associates	3/12/2002
Arborist Report, Rocklin Crossings	Foothill Associates	8/3/07
Updated Arborist Report, Rocklin Crossings	Foothill Associates	9/6/07
Pre-Construction Notification for Authorization Under Nationwide Permit (NWP) No. 39 for Rocklin Crossings Commercial Development (Placer County, California)	ECORP Consulting, Inc.	7/22/2005
Report of Findings – Branchiopods, Rocklin 105	ECORP Consulting, Inc.	9/12/2005
Dry Season Report of Findings – Branchiopods, Rocklin 105	ECORP Consulting, Inc.	12/18/2005
Wetland Delineation Report, Rocklin 105	ECORP Consulting, Inc.	4/15/2003
Elderberry Survey, Rocklin Crossings	ECORP Consulting, Inc.	2/17/2006
Wetland Assessment, Special Species Assessment/Elderberry Survey, Rocklin 105	ECORP Consulting, Inc.	3/8/2002
Special Status Plant Survey, Rocklin Crossings	ECORP Consulting, Inc.	11/18/2005
Rocklin Crossings, Placer County, California - Special-Status Plant Survey Addendum	ECORP Consulting, Inc.	7/11/07
Wet / Dry Report of Findings – Branchiopods, Rocklin Crossings	ECORP Consulting, Inc.	4/3/2006

* Rocklin 105 refers to the Rocklin Crossings property as it was originally configured plus the adjacent proposed Rocklin 60 residential development

In accordance with CEQA Guidelines Section 15125(a), the environmental baseline, as analyzed in this EIR, is the environmental setting as it existed at the time the Notice of Preparation was published, November 16, 2006. Therefore, the following discussion describes the site's biological conditions as they were on November 16, 2006. However, it should be noted that the Interstate 80/Sierra College Boulevard Interchange Improvement Project was initiated following release of the Notice of Preparation and extensive grading and excavation work has been initiated along the western and northern portions of the project site to accommodate the interchange project's lane

construction and soil borrow requirements. These changes have altered the biological character of the project site's northern and western boundaries by removing the existing vegetation.

4.12.1 ENVIRONMENTAL SETTING

REGIONAL SETTING

The project site is located in the Sierra Nevada foothills at the southeast corner of Interstate 80 and Sierra College Boulevard in the City of Rocklin. The project site is bordered by Interstate 80 to the north and Sierra College Boulevard to the west. Oak woodlands and Secret Ravine Creek lie to the east and south. Rural residential uses are located to the west, southwest and east of the site.

LOCAL SETTING

The project site is characterized by plant communities typical of the Sierra Nevada foothills. The property is primarily dominated by non-native annual grassland, interspersed with a limited amount of oak woodland. Several wetland features are also present on the site. Numerous rock outcrops are found throughout the project site. The site's topography is gently rolling terrain with a slight rise in the center of the property. Surface elevations of the project site range from about 320 to 360 feet above mean sea level.

Construction of the Croftwood Subdivision access road was underway at the time of the reconnaissance visit by EDAW biologists. This access road extends east from Sierra College Boulevard to the approved Croftwood Subdivision project, which is located to the southeast of the project site and east of Secret Ravine Creek. The access road parallels the property's southern border, extends east past the southern boundary of the proposed Rocklin 60 residential property, and continues east across Secret Ravine Creek to the Croftwood Subdivision property.

Project Site Habitat types

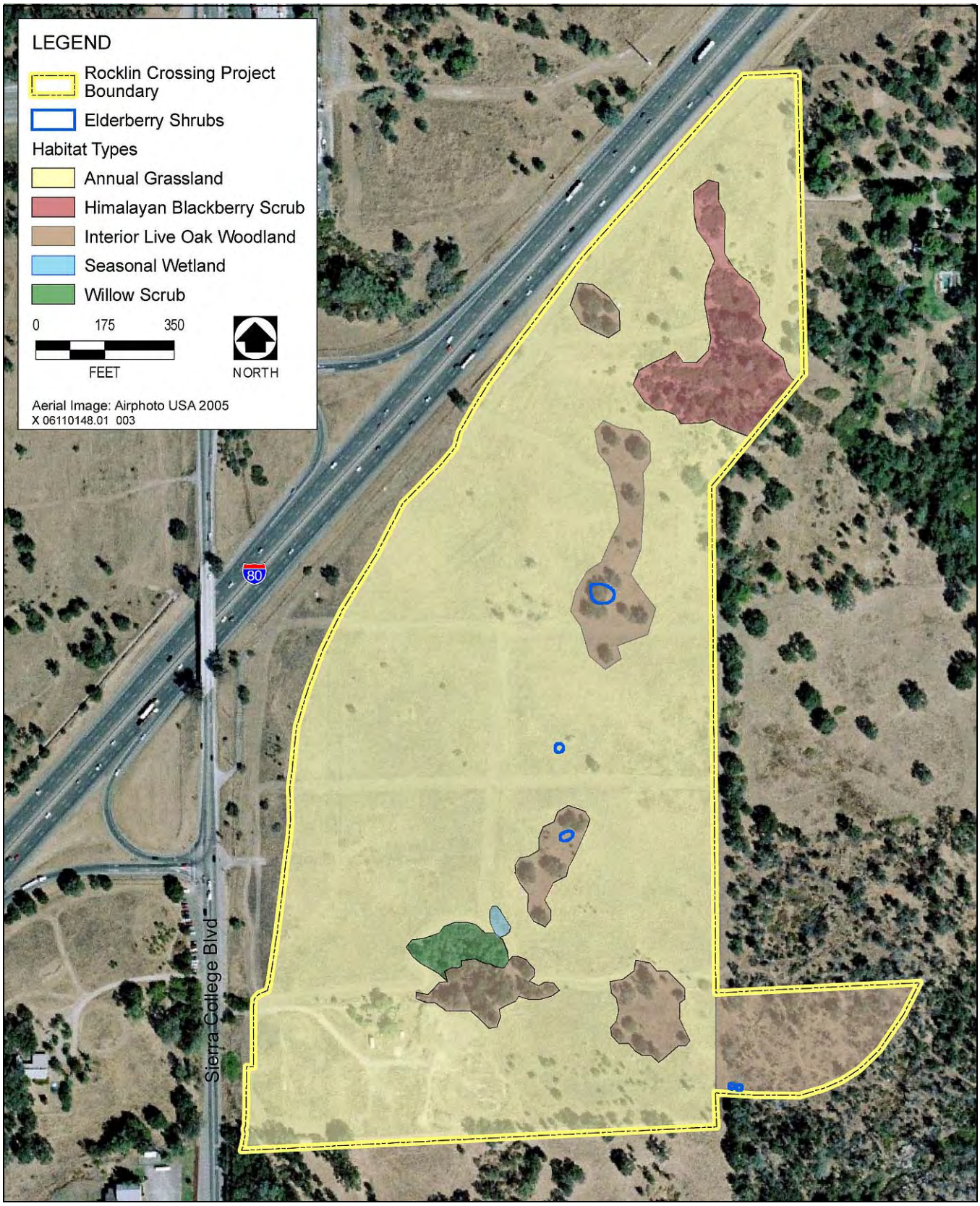
Habitat types present on the project site are briefly described below, and the location and extent of each habitat type is identified in Exhibit 4.12-1.

Annual Grassland

Annual grassland occupies the majority of the project site. This herbaceous plant community is characterized by a dense, tall cover of non-native annual grasses such as soft chess (*Bromus hordeaceus*), ripgut brome (*Bromus diandrus*), wild oats (*Avena fatua*), medusahead (*Taeniatherum caput-medusae*), and non-native forbs such as rose clover (*Trifolium hirtum*), rush skeletonweed (*Chondrilla juncea*), and yellow star-thistle (*Centaurea solstitialis*). Native forbs observed in the annual grassland during late summer reconnaissance surveys include common madia (*Madia elegans*), western ragweed (*Ambrosia psilostachya*), and fiddleneck (*Amsinckia menziesii*). Scattered interior live oak (*Quercus wislizeni*) trees can be found throughout the annual grassland. A remnant persimmon orchard and ornamental landscaping associated with a former residence is located in the southwest quarter of the project site.

Interior Live Oak Woodland

Portions of the property are characterized by remnants of interior live oak woodland. Clusters of live oak trees are associated with the scattered rock outcrops found throughout the property. The oaks in these clusters tend to be large mature individuals. The understory of these woodland "islands" is open with occasional poison oak (*Toxicodendron diversilobum)* and elderberry (*Sambucus mexicana*). Herbaceous cover in the understory is similar to the surrounding annual grassland.



Location and Extent of Habitat Types on the Project Site **Exhibit 4.12-1**

The densest oak woodlands are located within the proposed detention basin footprint. This area consists of an open blue and interior live oak woodland with a heavy cover of shrubs, including coyote brush (*Baccharis pilularis*), toyon (*Heteromeles arbutifolia*), hoary coffeeberry (*Rhamnus tomentella*), and poison oak (*Toxicodendron diversilobum*).

Himalayan Blackberry Scrub

A dense thicket of Himalayan blackberry (*Rubus discolor*) scrub is located near the northern end of the project site. The boundaries of this habitat type are clearly defined by dense cover of three- to four-foot tall Himalayan blackberry. Occasional emergent valley oak (*Quercus lobata*) trees and willow (*Salix* spp.) shrubs are interspersed in this habitat type. The stand of Himalayan blackberry scrub is situated in a shallow topographic depression that drains to the east and is connected hydrologically to seasonal and riparian wetlands located on the adjacent property.

Willow Scrub

A small stand of willow scrub is present in the southern central portion of the project site. This habitat type occurs in a shallow depression and is dominated by a dense cover of 6- to 12-foot tall narrowleaf willows (*Salix exigua*). Himalayan blackberry is present in the understory of the willow scrub and occasional young valley oaks are present on the perimeter of this habitat type. The source of moisture supporting the willow scrub in this location is a groundwater seep.

Seasonal Wetland

Jurisdictional waters of the United States on the project site include two seasonal wetlands (0.014 acre), a seasonal wetland swale (0.087 acre), and two seeps (0.325 acre). The wetlands receive direct rainfall and sheet flow from the surrounding uplands to become inundated during the wet season. The seeps result from shallow underground water "day lighting" at the surface. The wetlands are dry during typical spring and summer periods. The vegetation composition of the seasonal wetlands includes Italian ryegrass (*Lolium multiflorum*), Mediterranean barley (*Hordeum marinum*), vulpia (*Vulpia bromoides*), and curly dock (*Rumex crispus*) (ECORP 2005c).

The seasonal wetland swale is located within the dense thicket of Himalayan blackberry scrub near the northern end of the project site. The larger of the two seeps is located within the small stand of willow scrub in the southern central portion of the project site. The two seasonal wetlands are located adjacent to the seep to the east and south, respectively. The smaller of the two seeps is located adjacent to the site's eastern boundary in the northern portion of the property.

Sensitive Off-Site Habitat types

A small seasonal wetland is located directly north of the detention basin footprint and an intermittent drainage is located directly to the east. Also, elderberry shrubs are located directly to the south and north of the detention basin footprint. The seasonal wetland swale within the northern portion of the site extends southeast onto the adjacent property. Relatively dense oak woodlands are scattered along the length of the project's eastern and southern boundaries.

Offsite water line improvements necessary to provide adequate water pressure to the project site would be installed within the paved portions of the roadway rights-of-way.

Wildlife

Wildlife occurring on the project site is typical of annual grasslands and oak woodlands in the Sierra Nevada Foothills. Wildlife species observed or detected within the annual grassland and oak woodland during the

reconnaissance level survey conducted by EDAW biologists include coyote (*Canis latrans*), raccoon (*Procyon lotor*), western grey squirrel (*Sciurus griseus*), deer mouse (*Peromyscus maniculatus*), Botta's pocket gopher (*Thomomys bottae*), black-tailed jackrabbit (*Lepus californicus*), and mule deer (*Odocoileus hemionus*). Avian species observed or detected include Canada goose (*Branta canadensis*), turkey vulture (*Cathartes aura*), wild turkey (*Meleagris gallopavo*), acorn woodpecker (*Melanerpes formicivorus*), black phoebe (*Sayornis nigricans*), Western kingbird (*Tyrannus verticalis*), Western scrub-jay (*Aphelocoma californica*), and Western bluebird (*Sialia mexicana*).

Many Pacific tree frogs (*Hyla regilla*) were observed within the irrigation box at the northeastern corner of the property. Western fence lizards (*Sceloporus occidentalis*) were common throughout the annual grasslands and around rock outcroppings within the oak woodland. Other common reptile species that are expected to occur include Gilbert's skink (*Eumeces gilberti*), Western rattlesnake (*Crotalus viridis*), and striped racer (*Masticophis lateralis*).

The abundance and diversity of the common wildlife species observed and expected to occur within the project site are reflective of the high value of the habitats on-site to wildlife in the region. The proximity of the site to Secret Ravine Creek increases the value of the site to regional wildlife populations, as it supports additional species that may not occur in similar habitats that lack a perennial water source.

Special-status Species

Special-status species are defined as plants and animals that are legally protected or that are otherwise considered sensitive by federal, State, or local resource conservation agencies and organizations. For the purposes of this EIR, special-status species are those that fall into one or more of the following categories:

- species listed or proposed for listing as threatened or endangered under the federal Endangered Species Act (ESA) or California Endangered Species Act (CESA);
- species considered as candidates for listing as threatened or endangered under ESA or CESA;
- species identified by California Department of Fish and Game (DFG) as Species of Special Concern;
- animals fully protected in California under the California Fish and Game Code;
- plants on California Native Plant Society (CNPS) List 1B (plants considered by CNPS to be rare, threatened, or endangered in California and elsewhere) or List 2 (plants considered rare, threatened, or endangered in California but more common elsewhere).

Taxa considered by the California Native Plant Society (CNPS) to be "rare, threatened, or endangered in California." The CNPS *Electronic Inventory of Rare and Endangered Vascular Plants of California* (CNPS Inventory) (CNPS 2006) includes five lists for categorizing plant species of concern, which are summarized as follows:

- List 1A—Plants presumed to be extinct in California
- List 1B—Plants that are rare, threatened, or endangered in California and elsewhere
- List 2—Plants that are rare, threatened, or endangered in California but more common elsewhere
- List 3—Plants about which more information is needed (a review list)
- List 4—Plants of limited distribution (a watch list)

Plant inventories prepared by CNPS provide one source of substantial evidence that is used by lead agencies to determine what plants meet the definition of endangered, rare, or threatened species, as described in Section 15380 of the State CEQA Guidelines. For purposes of this document, the relevant inventories are List 1B (plants that are rare, threatened, or endangered in California and elsewhere) and List 2 (plants that are rare, threatened, or

endangered in California but more common elsewhere). All plants listed in the CNPS Inventory (CNPS 2006) are considered "special plants" by DFG. The term "special plants" is a broad term used by DFG to refer to all of the plant taxa inventoried by the California Natural Diversity Database (CNDDB), regardless of their legal or protection status. Notation as a List 1B or 2 plant species does not automatically qualify the species as endangered, rare, or threatened within the definition of State CEQA Guidelines Section 15380. Rather, CNPS designations are considered along with other available information about the status, threats, and population condition of plant species to determine whether a species warrants evaluation as an endangered, rare, or threatened species under CEQA. Other sources include consultation with biologists from federal, state responsible, and state trustee agencies with jurisdiction over natural resources of the project site and area; published and unpublished research; field survey records; local and regional plans adopted for the conservation of species (such as habitat conservation plans or natural community conservation plans), other CEQA or National Environmental Policy Act (NEPA) documents; or other relevant information. Plants on Lists 1A, 1B, and 2 of the CNPS Inventory may qualify for listing, and DFG recommends—and local governments may require—that these species be addressed in CEQA projects. However, a plant species need not be in the CNPS Inventory to be considered a rare, threatened, or endangered species under CEQA.

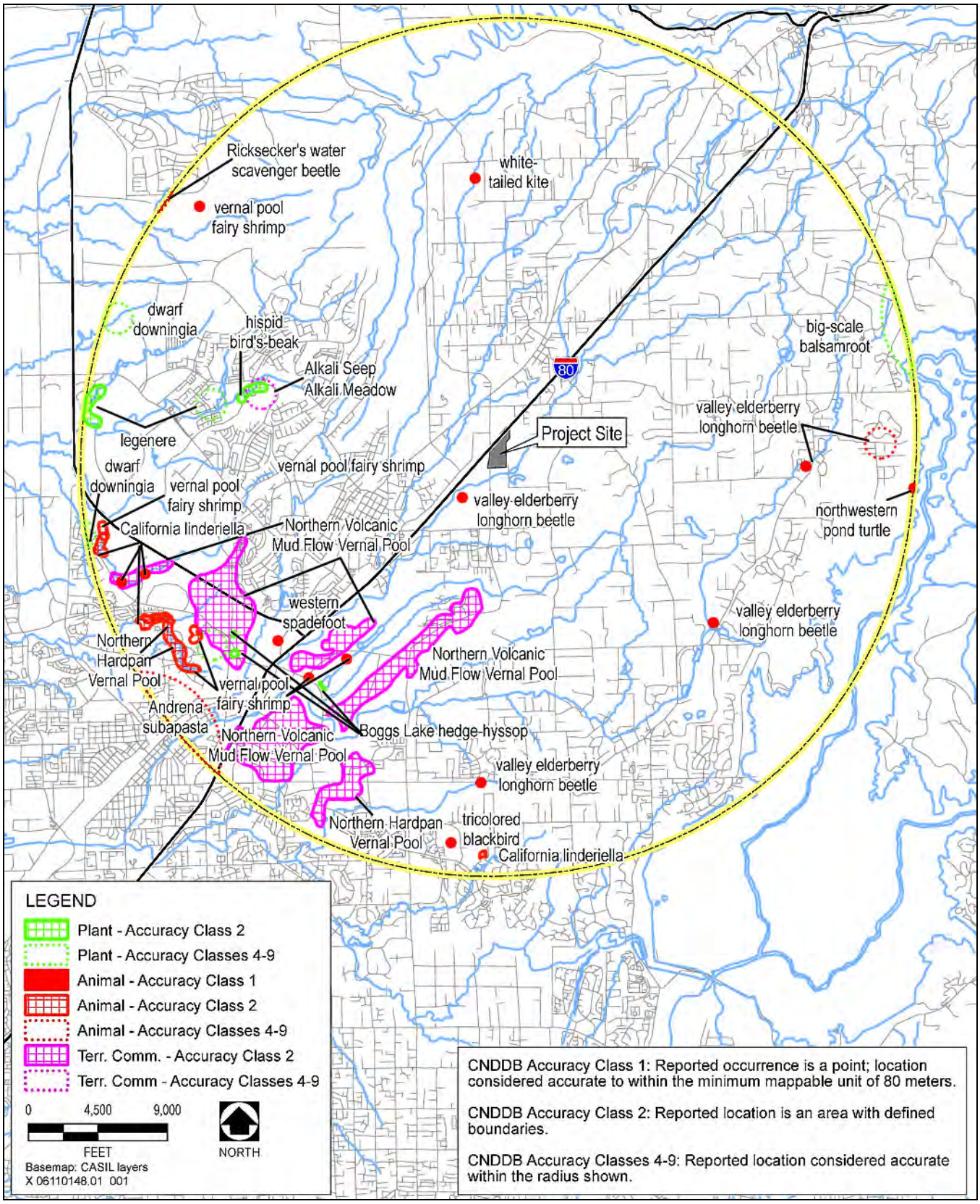
The term "California Species of Special Concern" is applied by DFG to animals that are not listed under ESA or CESA but are nonetheless declining at a rate that could result in listing, or that historically occurred in low numbers and currently face known threats to their persistence. CNPS designations are used by both United States Fish and Wildlife Service (USFWS) and DFG when considering formal species protection under ESA and CESA.

The California Natural Diversity Data Base (CNDDB), CNPS, and Sacramento USFWS databases were queried to determine special-status species that are known from, or have potential to occur in the vicinity of the project site. The following U.S. Geological Survey (USGS) 7.5 minute quadrangles were included in the database searches: Rocklin, Roseville, Lincoln, Gold Hill, Auburn, Pilot Hill, Clarksville, and Folsom. Exhibit 4.12-2 identifies the location of known special-status species documented in the CNDDB as occurring within five miles of the project site. Although the CNDDB is the most current and reliable tool for tracking occurrences of special-status species, it contains only those records that have been reported to DFG.

Special-status Plants

Searches of the CNPS and CNDDB databases identified 21 special-status plant species as occurring in the vicinity of the project site. Nine of these species were identified as having no potential to occur on the project site due to narrow substrate requirements or geographical distributions and were therefore excluded from further analysis. Stebbin's morning glory (*Calystegia stebbinsii*), Pine Hill ceanothus (*Ceanothus roderickii*), Pine Hill flannelbush (*Fremontodendron decumbens)*, El Dorado bedstraw (*Galium californicum* ssp. *sierrae*) and El Dorado County mule ears (*Wyethia reticulata*) are all restricted to gabbro soils in El Dorado and Nevada counties. Red Hills soap root (*Chlorogalum grandiflorum*) and Bisbee Peak rush rose (*Helianthemum suffrutescens*) are restricted to gabbro or Ione formation soils, which do not occur on the project site. Sacramento orcutt grass (*Orcuttia viscida*) is restricted to large, deep vernal pools in eastern Sacramento County, and Hispid bird's-beak (*Cordylanthus mollis* ssp. *hispidus)* occurs in damp alkaline soils in meadow, playas, and valley and foothill grasslands, which are absent from the project site.

Table 4.12-2 identifies the regulatory status, habitats, and blooming period of the remaining 12 special-status plant species evaluated in this analysis. Table 4.12-2 also provides information on the likelihood of these species to occur on the project site. Habitat and elevation range information for these species was obtained from the California Native Plant Society (CNPS) Electronic Inventory (2006).



Special-Status Species Previously Documented as Occurring within Five Miles of the Project Site **Exhibit 4.12-2**

Table 4.12-2 Special-Status Plants Potentially Occurring on the Site					
Species	Status[1]			Habitat and Blooming Period	Potential for Occurrence
	USFWS	DFG	CNPS		
Plants					
Jepson's onion *Allium jepsonii*	—	—	1B	Serpentine soils in cismontane woodland or lower montane coniferous forest; 1200 to 4000 feet elevation; blooms May to August	**Unlikely**; the project site is well below the elevation range of the species.
Big-scale balsamroot *Balsamorhiza macrolepis* var. *macrolepis*	—	—	1B	Chaparral, cismontane woodland, and valley and foothill grassland, sometimes in serpentine soils; 300 to 4,600 feet elevation; blooms March to June	**Could occur**; the foothill grassland and woodland provide marginally suitable habitat; species is known to occur in the vicinity of the project site.
Brandegee's clarkia *Clarkia biloba* ssp. *brandegeeae*	—	—	1B	Chaparral, cismontane woodland; often in road cuts; 700 to 3,000 feet elevation; blooms May to July	**Unlikely**; project site is below the elevation range of this species.
Dwarf Downingia *Downingia pusilla*	—	—	2	Vernal lake and pool margins in valley and foothill grasslands; 3 to 1500 feet elevation; blooms March to May	**Could occur**; the seasonal wetland provides marginal habitat; species was not found during focused special-status plant surveys conducted in 2005.
Boggs Lake hedge-hyssop *Gratiola heterosepala*	E	—	1B	Marshes and swamps and clay soils in vernal pools; 30 to 7800 feet; blooms April to August	**Could occur**; the seep and seasonal wetland on the site provide very marginal habitat; species was not found during focused special-status plant surveys conducted in 2005.
Aharts's dwarf rush *Juncus leiospermus* var. *ahartii*	—	—	1B	Mesic valley and foothill grassland; restricted to the edges of vernal pools; 100 to 330 feet elevation; blooms March to May	**Could occur**, the seasonal wetland on the site provides very marginal habitat species was not found during focused special-status plant surveys conducted in 2005.
Dubious pea *Lathyrus sulphureous* var. *argillaceous*	—	—	3	Cismontane woodland, lower montane coniferous forest; 490-1000 feet elevation; blooms in April	**Unlikely**; the project site is below the elevation range of this species.
Legenere *Legenere limosa*	—	—	1B	Vernal pools; in beds of pools; 3 to 3000 feet elevation; blooms April to June	**Could occur**; the seasonal wetlands on-site provide very marginal habitat; species was not found during focused special-status plant surveys conducted in 2005.

Table 4.12-2
Special-Status Plants Potentially Occurring on the Site

Species	Status[1]			Habitat and Blooming Period	Potential for Occurrence
	USFWS	DFG	CNPS		
Pincusion navarretia *Navarettia myersii* ssp. *myersii*	—	—	1B	Vernal pools in valley and foothill grassland; 60 to 1100 feet elevation; blooms in May	**Could occur**; the seasonal wetlands on-site provide very marginal habitat.
Sanford's arrowhead *Sagittaria sanfordii*	—	—	1B	In standing or slow-moving freshwater ponds, marshes, or ditches; 0 to 2000 feet elevation; blooms May to October	**Could occur;** the seasonal wetlands on-site provide very marginal habitat; species was not found during focused special-status plant surveys conducted in 2005.
Layne's ragwort *Senecio layneae*	T	R	1B	Rocky serpentine or gabbro soils in chaparral, cismontane woodland or lower montane coniferous forest; 650 to 3,300 feet elevation; blooms April to July	**Unlikely**; the project site is below the elevation range of this species, and serpentine soils are not present on the site.
Oval-leaved viburnum *Viburnum ellipticum*	—	—	2	Chaparral, cismontane woodland or lower montane coniferous forest; 600 to 4000 feet elevation; blooms May to June	**Unlikely**; the project site is below the elevation range of this species.

Legal Status Definitions
U.S. Fish and Wildlife Service (USFWS):
T = Federal Threatened
E = Federal Endangered

California Department of Fish and Game (DFG):
R = Rare
T = Threatened
E = Endangered

California Native Plant Society (CNPS) Listing Categories:
1B = Plants rare, threatened, or endangered in California and elsewhere
2 = Plants rare, threatened, or endangered in California but more common elsewhere
3 = Plants for which more information is needed – a review list
4 = Plants of limited distribution – a watch list

Source: CNPS 2006, CNDDB 2006

Biological studies conducted for the site by ECORP and Foothill Associates between 2002 and 2007, and the 2006 reconnaissance survey conducted by EDAW biologists identified suitable habitat for seven special-status plant species on the site: Big-scale balsam-root (*Balsamorhiza macrolepis* var. *macrolepis*), dwarf downingia (*Downingia pusilla*), Boggs Lake hedge-hyssop (*Gratiola heterosepala*), Aharts's dwarf rush (*Juncus leiospermus* var. *ahartii*), Greene's legenere (*Legenere limosa*), pincushion navarretia (*Navarretia myersii* ssp. *myersii*), and Sanford's arrowhead (*Sagittaria sanfordii*). These plants are CNPS List 1B species, considered by the CNPS to be rare, threatened, or endangered in California and elsewhere. In addition, Boggs Lake hedge-hyssop is federally listed as endangered.

Dwarf downingia, Boggs Lake hedge-hyssop, Ahart's dwarf rush, Greene's legenere, and pincushion navarretia are found in vernal pools and seasonally inundated sites. Big-scale balsam-root is typically found in cismontane woodland and valley and foothill grasslands. Sanford's arrowhead is typically found in standing or slow-moving freshwater ponds, marshes, or ditches.

A focused special-status plant survey for five of the seven species, dwarf downingia, Boggs Lake hedge-hyssop, Ahart's dwarf rush, Greene's Legenere, and Sanford's arrowhead was conducted on April 13 and June 16, 2005 (ECORP 2005b). Brief late season, follow-up visits were conducted on July 27 and August 16, 2005. No special-status plant species were found during the special-status plant surveys. Although big scale balsamroot and pincushion navarretia were not specifically included in these surveys, the methodology employed during the surveys would have likely resulted in their detection, if they were present. A followup survey for big scale balsamroot or pincushion navarretia was conducted on May 18, 2007 (ECORP). Neither one of these species nor any other special-status species were observed during this survey.

Special-Status Wildlife

A total of 10 special-status wildlife species are known to occur or have the potential to occur on the project site. They include: white-tailed kite (*Elanus leucurus*), a fully protected species under the DFG Code; Swainson's hawk (*Buteo Swainsonii*), California red-legged frog (*Rana aurora draytonii*), and valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), State and/or federally listed as threatened or endangered; northwestern pond turtle (*Emys marmorata marmorata*), northern harrier (*Circus cyaneus*), sharp-shinned hawk (*Accipiter striatus*), Cooper's hawk (*Accipiter cooperii*), western burrowing owl (*Athene cunicularia hypugea*), and loggerhead shrike (*Lanius ludovicianus*), DFG Species of Special Concern. The project site also has appropriate foraging and nesting habitat for additional raptor species. Table 4.12-3 summarizes the regulatory status, habitat association, and likelihood of occurrence for special-status wildlife species with potential to occur on the site.

Table 4.12-3
Special-status Wildlife Species Potentially Occurring on the Site

Species	Listing Status [1]		Habitat	Potential for Occurrence
	Fed.	State		
Invertebrates				
Valley elderberry longhorn beetle *Desmocerus californicus dimorphus*	T	--	Elderberry shrubs below 3,000 feet in elevation.	**Could occur**; elderberry shrubs present; nearest documented occurrence (1991) less than 0.5 mile southwest of the project site along the Sierra College nature trail.
Amphibians and Reptiles				
Northwestern pond turtle *Emys marmorata marmorata*	--	SSC	Freshwater marsh, ponds, lakes, and rivers.	**Known to occur in vicinity**; however, only suitable upland habitat is present. Observed within Croftwood Lake southeast of the project site.
California red-legged frog *Rana aurora draytonii*	T	SSC	Found in a variety of aquatic habitats including streams, ponds, and marshes often with riparian or emergent vegetation. Also utilizes upland habitats adjacent to or between suitable aquatic habitats.	**Unlikely** to occur; although suitable habitat is present, the species has been extirpated from the valley floor and few drainages in the Sierra Nevada are known to support the species. The nearest documented occurrence (2005) is approximately 8 miles southeast of the project site.
Birds				
Northern harrier *Circus cyaneus*	--	SSC	Forage in grasslands, marshes, agricultural land, and open woodlands; nest on ground or in low-growing vegetation.	**Could occur**; suitable foraging and nesting habitat present.

Table 4.12-3 Special-status Wildlife Species Potentially Occurring on the Site				
Species	Listing Status [1]		Habitat	Potential for Occurrence
	Fed.	State		
White-tailed kite *Elanus leucurus*	--	FP	Forage in grasslands and other open habitat; nest in isolated trees or small woodland patches.	**Could occur**; suitable nesting and foraging habitat present; observed in 1990 within the proposed Croftwood Subdivision site to the east. Nearest CNDDB occurrence (2003) is approximately 3 miles north of project site.
Sharp-shinned hawk *Accipiter striatus*	--	SSC	Nests in dense forests or woodlands near open areas suitable for foraging.	**Could occur**; suitable foraging habitat present, but unlikely to nest onsite.
Cooper's hawk *Accipiter cooperii*	--	SSC	Forages in broken woodland and habitat edges; nests in second-growth conifer stands, or in deciduous riparian areas, usually near streams.	**Could occur**; suitable foraging and nesting habitat present.
Swainson's hawk *Buteo swainsoni*	--	T	Forages in grasslands and agricultural land; nests in riparian and isolated trees.	**Unlikely** to occur; suitable habitat present, but species typically occurs at lower elevations in this region, nearer to the valley floor; nearest CNDDB occurrence (2005) is approximately 8 miles west of project site.
Western burrowing owl *Athene cunicularia hypugea*	FSC	SSC	Grasslands, agricultural land, and open woodlands; requires burrows for nesting, typically created by mammals such as ground squirrels.	**Unlikely** to occur; suitable habitat present within the annual grassland, but species typically occurs at lower elevations in this region, nearer to the valley floor.
Loggerhead shrike *Lanius ludovicianus*	FSC	SSC	Open habitats with abundant perches; nests in densely-foliaged shrubs or trees.	**Could occur**; suitable nesting and foraging habitat present.

[1] Legal Status Definitions
U.S. Fish and Wildlife Service (USFWS)
E Endangered (legally protected)
T Threatened (legally protected)
California Department of Fish and Game (DFG)
T Threatened (legally protected)
SSC Species of Special Concern (no formal protection)
FP Fully Protected (legally protected)
Source: EDAW 2006, CNPS 2006, CNDDB 2006

Several special-status species that are known to occur in the region require specific habitats for foraging and reproduction that are not present within the project site and are therefore not likely to occur. These species include: Central Valley steelhead trout (*Oncorhynchus mykiss*), Central Valley fall/late fall-run Chinook salmon (*Oncorhynchus tshawytscha*), delta smelt (*Hypomesus transpacificus*), winter-run Chinook salmon, Sacramento River and Central Valley spring-run Chinook salmon (*Oncorhynchus tshawytscha*), western spadefoot (*Scaphiopus hammondii*), giant garter snake (*Thamnophis gigas*), double crested-cormorant (*Phalacrocorax auritus*), bald eagle (*Haliaeetus leucocephalus*), bank swallow (*Riparia riparia*), tricolored blackbird (*Agelaius tricolor*), California black rail (*Laterallus jamaicensis coturniculus*), Townsend's big-eared bat (*Corynorhinus townsendi*), and red bat (*Lasiurus blossevillii*).

California black rail was identified within the Clover Valley area of Rocklin during 2006 surveys conducted for the Clover Valley EIR (City of Rocklin 2007). The typical habitat for California black rail includes coastal

saltmarsh, delta emergent marsh and interior freshwater emergent marsh. No suitable habitat is present on the site for California black rail.

Wet and dry season protocol surveys and reporting for vernal pool invertebrates were completed on the site in 2006 (ECORP 2006a). No vernal pool fairy shrimp, (*Branchinecta lynchi*) or vernal pool tadpole shrimp (*Lepidurus packardi*), were detected during the surveys and these species are not considered further in this document.

Valley Elderberry Longhorn Beetle

The valley elderberry longhorn beetle (beetle) is federally listed as threatened pursuant to ESA. It is completely dependent on its host plant, elderberry (*Sambucus* sp.), in California's Central Valley during its entire life cycle. Beetle larvae live within the soft pith of the elderberry shrub, where they feed for one to two years. Adults emerge from pupation inside the wood of elderberry shrubs during the spring, as the plant begins to flower. The adults feed on the elderberry foliage up until they mate. Females lay their eggs in the crevices of elderberry bark. Upon hatching, the larvae tunnel into the stems of the shrub to feed. Beetles typically utilize stems that are greater than one-inch in diameter at ground level. Beetle populations in the State have decreased largely due to the loss of riparian habitat in the Central Valley; however, a five-year review of the species, required by section 4(c)(2)(A) of the Endangered Species Act, was recently completed by USFWS and recommended that the beetle be delisted. Thirty-eight elderberry shrubs were observed on the site that could provide suitable habitat for the valley elderberry longhorn beetle (VELB) (Exhibit 4.12-1). No characteristic exit holes were observed on the stems of the shrubs during the December 6, 2005 field survey (ECORP 2006b).

Northwestern Pond Turtle

The northwestern pond turtle is a DFG Species of Special Concern. Pond turtles generally occur in streams, ponds, freshwater marshes, and lakes. They require still or slow-moving water with instream emergent woody debris, rocks, or other similar features for basking sites. Nests are typically located on unshaded upland slopes in dry substrates with sandy, clay, or silty soils excavated by the female up to 400 meters (usually less) from the aquatic habitats where they occur. Within the vicinity of the project site, the areas that provide suitable aquatic habitat include Secret Ravine Creek, ponds within the adjacent property to the east (i.e., the proposed Rocklin 60 residential subdivision site), and Croftwood Lake within the approved Croftwood Subdivision east of Secret Ravine Creek (The Planning Center 1991). Suitable nesting habitat is present throughout the project site within the adjacent oak woodland and annual grassland; however, suitable nesting habitat is available closer to aquatic habitat within the adjacent property to the east.

California Red-Legged Frog

California red-legged frog is a DFG Species of Special Concern and is federally listed as threatened. The frog utilizes a variety of aquatic and upland habitats throughout its life cycle including ponds, slow-flowing portions of perennial streams, and intermittent streams that maintain water in the summer months. The frog is able to disperse or migrate from breeding sites to forage in upland habitats and is known to move up to two miles (3 km) from aquatic sites, regardless of topography or vegetation, during the wet season. Additionally, during the summer months when aquatic sites tend to dry out, California red-legged frog is known to disperse overland to suitable estivation (dormancy) habitat that can include small mammal burrows, moist leaf litter, riparian corridors, or stream channels with shallow pools, such as those in Secret Ravine Creek. Suitable habitat is present within seasonal wetlands on-site, within the ponds and wetlands of the adjacent property to the east, and in Croftwood Lake. Suitable upland habitat is present within oak woodland and annual grassland on the site. However, the species has been extirpated from the valley floor and few drainages in the Sierra Nevada are known to support California red-legged frogs. The closest known occurrence is approximately eight miles southeast of the site near the eastern shore of Folsom Lake (CNDDB 2006). No critical habitat has been designated for this species within 30 miles of the site.

Swainson's Hawk

The Swainson's hawk is State listed as a threatened species and is protected under Section 3503.5 of the California Fish and Game Code. This species prefers to nest in riparian forest or scattered trees adjacent to grasslands and/or agricultural fields that provide suitable foraging habitat. The closest known occurrence of Swainson's hawk is approximately eight miles west of the project site. Although the Secret Ravine Creek riparian corridor and the larger oaks on the project site provide potential nest sites for Swainson's hawk, nest sites are typically restricted to lower elevations, primarily on the valley floor (CNDDB 2006). Therefore, Swainson's hawks are unlikely to nest on or near the project site.

Western Burrowing Owl

Western Burrowing Owl is a DFG Species of Special Concern. This species is also protected under Section 3503.5 of the California Fish and Game Code, which prohibits the destruction of raptors and their nests. Burrowing owls prefer dry grasslands and other dry, open habitats. They typically nest and roost in burrow systems created by medium-sized mammals, such as ground squirrels, artificial sites such as drain pipes or culverts, or self-excavated burrows when soil conditions are appropriate. There are no documented records of burrowing owls within five miles of the project area. Although suitable habitat and a few suitable small mammal burrows exist on-site, it is rare to find them nesting in the foothills as far east as the project site.

Other Special-Status Raptors

Other special-status raptors that could use the project site include white-tailed kite, Cooper's hawk, sharp-shinned hawk, and northern harrier. Cooper's hawk, sharp-shinned hawk, and northern harrier are DFG Species of Special Concern. All of these raptors are also protected under Section 3503.5 of the California Fish and Game Code. White-tailed kite, fully protected under Section 3511 of the California Fish and Game Code, has been observed foraging in the nearby Croftwood Subdivision area (The Planning Center 1991). Annual grassland and oak woodland on the site provide suitable foraging habitat for all three species. Suitable nesting habitat for white-tailed kite and Cooper's hawk is located in the oak woodland habitat on the project site.

Loggerhead Shrike

The loggerhead shrike is a DFG Species of Special Concern. Loggerhead shrike inhabit lowland and foothill areas with scattered shrubs and trees. They nest in shrubs and small trees and typically forage in grasslands and agricultural fields. Suitable foraging and nesting habitat is present throughout the project area.

Sensitive Fish Species within Secret Ravine Creek

Due to a lack of available habitat, no fish habitat are present on the project site. However, Secret Ravine Creek, which is located between 300 and 800 feet southeast of the project site, does provide habitat for sensitive fish species. These species include the following:

Central Valley Fall/Late Fall-Run Chinook Salmon

Central Valley fall/late fall-run Chinook salmon is a federal Species of Concern and a DFG Species of Special Concern. Secret Ravine Creek supports a population of fall-run Chinook salmon. Chinook salmon typically spawn in swift, relatively shallow riffles, along edges of fast runs where there is an abundance of loose gravel, or in tailouts of pools where depths decline, water velocity increases and one- to four-inch gravels settle out, and where water flows down into gravel to oxygenate the eggs. Embryos hatch in 40 to 60 days, then stay within the gravel for an additional four to six weeks until the yolk sack is completely absorbed and begin emigration shortly after emergence from the gravel. Development of these early life stages is dependent on stream temperature and embryo development is particularly sensitive to temperature stress.

Records from the Sacramento River document a decline in the numbers of returning spawners from one million prior to 1915 to an average of 176,000 between 1967 and 1991 (Reynolds et al. 1990 and Mills and Fisher 1994, cited in Dry Creek Conservancy 2001). Central Valley fall/late fall-run Chinook salmon have been recorded in Secret Ravine Creek, averaging about 160 fish per year since the late 1990's (Jones & Stokes 2005). Secret Ravine Creek also provides most of the suitable spawning habitat in the Dry Creek watershed (ibid).

Central Valley Steelhead Trout

Central Valley steelhead trout is a federal threatened species known to occur in Secret Ravine Creek. Prior to the closure of rivers by dams, water manipulation, and watershed disturbances of the past two centuries, steelhead was found throughout the tributaries and headwaters of the Sacramento River. Steelhead trout are anadromous rainbow trout that emigrate to sea and later return to inland waters to spawn, requiring water temperatures that remain cool in late spring and summer. Steelhead prefer swift, shallow water and clean loose gravel for spawning. Steelhead prefer shallower depths and smaller gravel compared to Chinook salmon and are much less tolerant of fine sediments in gravel substrates because of their smaller egg size and higher oxygen demand. However, suitable spawning habitat for both species may co-exist within the same stream, as they do in Secret Ravine Creek. Embryos generally hatch in 30 days, emerging from the gravel as fry four to six weeks after hatching. Juvenile steelhead remain for a year in fresh water before beginning to emigrate to the ocean. Secret Ravine Creek was included in the Valley-American Hydrologic Unit of critical habitat for the California Central Valley steelhead. Designation of Secret Ravine Creek as critical habitat for steelhead ensures that activities requiring federal consultation will not adversely modify critical habitat to the point that it will no longer aid in the species' recovery.

Sensitive Habitats

Sensitive habitats include those that are of special concern to resource agencies or are afforded specific consideration through CEQA, Section 1602 of the California Fish and Game Code, Section 404 of the CWA, or the State's Porter-Cologne Act, as discussed in the Regulatory Setting section below. Sensitive habitats may be of special concern to these agencies and to conservation organizations for a variety of reasons, including their locally or regionally declining status, or because they provide important habitat to common and special-status species. Many of these habitats are tracked in the CNDDB, a Statewide inventory of the locations and conditions of the State's rarest plant and animal taxa and vegetation types.

The seasonal wetlands and seeps present on the project site qualify as jurisdictional waters of the United States. The oak woodland present on the site is considered sensitive habitat by DFG and the City of Rocklin.

Waters of the United States

The project site includes the following jurisdictional waters of the United States: two seasonal wetlands (0.014 acre), a seasonal wetland swale (0.087 acre), and two seeps (0.325 acre). The habitats associated with these wetland features are described above in the Habitat Types section of this chapter and the locations of these features are identified in Exhibit 4.12-3.

Oak Woodland

Oak woodland is typically considered a sensitive habitat by DFG and local agencies, although it is not currently tracked in the CNDDB. There is a great deal of concern about oak and other hardwood communities in California due to the rapid rate of urban development in the foothills where these communities are predominantly found. The City of Rocklin has recognized the value of native trees through the adoption of both General Plan policy and the Rocklin Oak Tree Preservation Ordinance, described below under *Regulatory Setting*.

A tree survey of the project site was completed by Foothill Associates in September 2007. A total of 221 oak trees were located, measured, and evaluated within the project site.

Jurisdictional Wetlands on the Project Site **Exhibit 4.12-3**

Tree species assessed include interior live oak (131), valley oak (65) and blue oak (25). The City defines a heritage tree as any oak tree with a trunk diameter of 24 inches or greater and in good or fair health and structural condition. Based on the City's definition, only two heritage trees were identified on the site. Of the 221 total trees, 52 trees that were identified in previous tree surveys are now dead. Five of these dead trees were located in the adjacent Sierra College Boulevard/Interstate 80 interchange project area and have since been removed. The 47 remaining dead oak trees, 44 of which are located within the proposed detention basin area, died as a result of a fire in September 2002.

Trees on the site excluded from the evaluation include non-native species and native species with a trunk smaller than 6 inches in diameter at breast height (DBH). The trunk diameter of a multi-trunk tree is the measurement of the largest trunk only.

Wildlife Movement Corridors

A wildlife corridor is generally a topographical/landscape feature or movement area that connects two areas of natural habitat. Wildlife corridors link areas of suitable wildlife habitat that are separated by changes in vegetation, rugged terrain, or human disturbance. Secret Ravine Creek is likely to serve as a movement corridor for a variety of wildlife species due to the continuity of the riparian vegetation along its length.

4.12.2 REGULATORY SETTING

Biological resources in California are protected by a variety of federal, State and local laws and regulations. Important regulations pertaining to biological resources in the project area are discussed below.

FEDERAL REGULATORY ISSUES

Federal Endangered Species Act

Pursuant to ESA, USFWS and National Marine Fisheries Service (NMFS) have authority over projects that may affect the continued existence of a federally listed (threatened or endangered) species. Section 9 of ESA and federal regulations prohibit the take of federally listed fish or wildlife species (16 United States Code [USC] Section 1538[a][1][B]). "Take" is defined under ESA, in part, as killing, harming, or harassing (16 USC Section 1539[19]). Under federal regulations, take is defined further to include habitat modification or degradation where it actually results or is reasonably expected to result in death or injury to wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering.

The take prohibition of ESA Section 9 applies only to listed species of fish and wildlife. Section 9(a)(2)(B) describes federal protection for endangered plants. In general, ESA does not protect listed plants located on nonfederal land (i.e., areas not under federal jurisdiction), unless such species are already protected by state law.

Section 7 of ESA outlines procedures for federal interagency cooperation to conserve federally listed species and designated critical habitat. Section 7(a)(2) requires federal agencies to consult with USFWS to ensure that the federal agencies are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat. Critical habitat identifies specific areas that have the physical and biological features that are essential to the conservation of a listed species, and that may require special management considerations or protection.

For projects where federal action is not involved and take of a listed species may occur, the project proponent may seek to obtain an incidental take permit under Section 10(a) of ESA. Section 10 allows USFWS to permit the incidental take of listed species if such take is accompanied by a Habitat Conservation Plan (HCP) that includes components to minimize and mitigate impacts associated with the take.

Migratory Bird Treaty Act

As part of the Federal Migratory Bird Treaty Act (MBTA), all active nests of migratory birds (e.g., those with eggs or nestlings) are protected under federal law, MBTA (15 USC 703-11), 50 CFR Part 21, 50 CFR Part 10, and State law. Under the California Fish and Game Code, Section 3503.5, it is unlawful to take, possess, or destroy any birds in the orders Falconiformes (hawks, eagles and falcons) or Stringiformes (owls). Together, these two orders include all birds considered "raptors", or birds of prey. "Take" includes the disturbance of active nests that result in the abandonment or loss of young. The MBTA prohibits activities that have the potential to disturb all active bird nests or burrows on a project site. A preconstruction survey is required by CDFG and USFWS for birds if project activities occur within the breeding season window. The breeding season window considered by CDFG is January 1 to August 31. Preconstruction surveys are to be conducted no more than 30 days prior to ground disturbance. Some restrictions on construction activities may be required in the vicinity of the nests or burrows until the site is no longer active, as determined by a qualified biologist. This protection generally ceases once nesting activity is completed.

Clean Water Act

Section 404 of the federal Clean Water Act (CWA) requires a permit before engaging in any activity that involves any discharge of dredged or fill material into "waters of the United States," including wetlands. Fill material means material placed in waters of the United States where the material has the effect of replacing any portion of a water of the United States with dry land; or changing the bottom elevation of any portion of a water of the United States. Examples of fill material include, but are not limited to: rock, sand, soil, clay, plastics, construction debris, wood chips, overburden from mining or other excavation activities, and material used to create any structure or infrastructure in waters of the United States. Waters of the United States include navigable waters of the United States; interstate waters; all other waters where the use, degradation, or destruction of the waters could affect interstate or foreign commerce; tributaries to any of these waters; and, wetlands that meet any of these criteria or that are adjacent to any of these waters or their tributaries. Wetlands are defined as those areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Jurisdictional wetlands must meet three wetland delineation criteria: hydrophytic vegetation; hydric soil types; and, wetland hydrology. Many surface waters and wetlands in California meet the criteria for waters of the United States, including intermittent streams and seasonal lakes and wetlands.

Under Section 404 of the CWA, U.S. Army Corps of Engineers (USACE) regulates and issues permits for activities that involve the discharge of dredged or fill materials into waters of the United States. Fill of less than one-half acre of nontidal waters of the United States for residential, commercial, or institutional development projects can generally be authorized under USACE's nationwide permit (NWP) program, provided that the project satisfies the terms and conditions of the particular NWP. Fills that do not qualify for a NWP or regional general permit require an individual permit.

STATE REGULATORY ISSUES

California Endangered Species Act

Pursuant to CESA, a permit from DFG is required for projects that could "take" a species that is State listed as threatened or endangered (California Fish and Game Code Section 2050 et seq.). Under CESA, take is defined as an activity that would directly or indirectly kill an individual of a species. The definition does not include "harm" or "harass" as in the federal act. As a result, the threshold for take under CESA is higher than under ESA (i.e., habitat modification is not necessarily considered take under CESA). The take of State-listed species incidental to otherwise lawful activities requires a permit, pursuant to Section 2081(b) of CESA. The State has the authority to issue an incidental take permit under California Fish and Game Code Section 2081, or to coordinate with USFWS during the Section 10(a) process to make the federal permit consistent with CESA.

As under federal law, listed plants have considerably less protection than fish and wildlife under California law. The California Native Plant Protection Act (California Fish and Game Code Section 19000 et seq.) allows landowners to take listed plant species from, among other places, a canal, lateral ditch, building site, road, or other right-of-way, provided that the owner first notifies CDFG and gives the agency at least 10 days to come and retrieve (and presumably replant) the plants before they are plowed under or otherwise destroyed. The project site is a "building site" within the meaning of the applicable statute (Fish and Game Code Section 1913).

Section 1602 of the California Fish and Game Code

All diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake in California that supports wildlife resources are subject to regulation by the DFG, pursuant to Sections 1600–1603 of the California Fish and Game Code. The Code states that it is unlawful for any person or agency to substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated by DFG, or to use any material from the streambeds, without first notifying DFG of such activity. The regulatory definition of a stream is a body of water that flows at least periodically or intermittently through a bed or channel having banks and that supports fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation. DFG's jurisdiction within altered or artificial waterways is based upon the value of those waterways to fish and wildlife. A DFG Streambed Alteration Agreement must be obtained for any project that would adversely affect a river, stream, or lake.

Fully Protected Species under the California Fish and Game Code

Four sections of the California Fish and Game Code (Fish and Game Code Sections 3511, 4700, 5050, and 5515) list 37 fully protected species. These statutes prohibit take or possession at any time of fully protected species. DFG is unable to authorize incidental take of fully protected species when activities are proposed in areas inhabited by those species. DFG has informed nonfederal agencies and private parties that they must avoid take of any fully protected species in carrying out projects.

California Fish and Game Code Sections 3503–3503.5 - Protection of Bird Nests and Raptors

Section 3503 of the California Fish and Game Code states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird. Section 3503.5 specifically states that it is unlawful to take, possess, or destroy any raptors (i.e., hawks, owls, eagles, and falcons), including their nests or eggs. Typical violations of these codes include destruction of active nests resulting from removal of vegetation in which the nests are located. Violation of Section 3503.5 could also include failure of active raptor nests resulting from disturbance of nesting pairs by nearby project construction.

Porter-Cologne Water Quality Control Act

Under the Porter-Cologne Water Quality Control Act, waters of the state fall under jurisdiction of the Regional Water Quality Control Board (RWQCB). Under the act, the RWQCB must prepare and periodically update water quality control basin plans. Each basin plan sets forth water quality standards for surface water and ground water, as well as actions to control non-point and point sources of pollution to achieve and maintain these standards. Projects that affect wetlands or waters must meet waste discharge requirements of the RWQCB, which may be issued in addition to a water quality certification under Section 401 of the CWA.

LOCAL REGULATORY ISSUES

City of Rocklin General Plan

Several policies in the City of Rocklin General Plan (1991) address natural resource protection. Specific action plans and policies included in the Open Space, Conservation and Recreation Element of the General Plan that apply to the preservation of natural resources include the following:

Action Plan

- The City will apply open space designations to all lands located within 50 feet from the edge of the bank of all perennial and intermittent streams and creeks providing natural drainage, adjacent to areas consisting of riparian habitat. The City will designate a buffer area greater than 50 feet for perennial streams when it is determined that such a buffer area is necessary to adequately protect drainage and habitat areas. In designating these areas as open space, the City is preserving natural resources and protecting these areas from development.

- The City will require a restricted easement recorded over any property that contains areas designated for preservation, including wetlands, vernal pools, and rare, threatened and endangered species habitat. Such easements would restrict the use and type of structures located within them, when such action does not conflict with the permitting requirements of other agencies.

- The City will investigate the availability of, and consider applying for, state and federal grants to be used for the preservation and enhancement of open space, conservation, and recreation areas.

- The City will discourage the premature and unnecessary conversion of open space land to urban uses by requiring development to be contiguous.

Policies

- Policy 1. To encourage the protection of natural resource areas, scenic areas, hilltops, open space areas and parks from encroachment or destruction by incompatible development through the use of conservation easements, buffers, setbacks or other measures. Developments shall be required to provide usable land areas outside of conservation easements or established natural resource buffers.

- Policy 2. To encourage the protection of wetlands, vernal pools, and rare, threatened and endangered species of both plants and animals through either avoidance of these resources or implementation of appropriate mitigation measures where avoidance is not feasible, as determined by the City of Rocklin.

- Policy 4. To encourage the protection of oak trees, including heritage oaks, and other significant vegetation from destruction.

- Policy 15. To provide adequate yard areas and building setbacks from creeks, riparian habitat, hilltops, and other natural resources.

- Policy 19. To minimize the degradation of water quality through requiring implementation of techniques such as, but not limited to, the prohibition of grading, placement of fill or trash or alteration to vegetation within designated stream setback buffer areas, and requiring the installation of measures which minimize runoff waters containing pollutants and sediments from entering surface waters. Measures for minimizing pollutants and sediments from entering watercourses may include oil/grit separators, detention basins and flow reduction devices.

Rocklin Oak Tree Preservation Ordinance

The City of Rocklin has recognized the value of native trees through the adoption of the City of Rocklin Oak Tree Preservation Ordinance, Chapter 17.77 of the City of Rocklin Municipal Code. The ordinance contains policy language which is explicitly written to protect native oaks. These policies regulate both the removal of protected trees and the encroachment of construction activities into the protected zones of these trees. Protected trees include any oak tree native to the Rocklin area with a diameter at breast height (DBH) of six inches or greater. Heritage oaks are given special protection and are defined as oaks native to the Rocklin area having a DBH of 24 inches or greater. Ordinances 17.77.030 and 17.77.050 prohibit the removal of oak trees without the issuance of a permit and require that preservation and removal of healthy oak trees from undeveloped property shall be addressed in the development application review process, and shall be governed by the guidelines adopted under Section 17.77.100.

4.12.3 IMPACTS AND MITIGATION MEASURES

METHOD OF ANALYSIS

The analysis included in this section is based on a review of available background reports, previous studies conducted on the project site, biological resource databases, aerial photography interpretation, and a reconnaissance level site survey conducted by EDAW biologists on September 29, 2006. Specific biological resource background reports reviewed in preparing this section are identified in Table 4.12-1. The purpose of the reconnaissance site visit was to assess current site conditions, classify and map habitats, evaluate the potential of the project site to support sensitive biological resources including special-status species and to verify the biological resources assessment data previously collected at the project site.

Potential impacts on biological resources resulting from implementation of the proposed project were determined by overlaying project plans with the habitat map for the project site, quantifying potential loss of common and sensitive habitats, and evaluating potential effects to common and special-status species that could result from this habitat loss.

THRESHOLDS OF SIGNIFICANCE

Pursuant to Appendix G of the CEQA Guidelines and CEQA Guidelines Section 15065, impacts on biological resources resulting from implementation of the proposed project would be considered significant if the project would:

- Substantially degrade the quality of the environment;
- Substantially reduce the habitat of a fish or wildlife species;
- Cause a fish or wildlife species to drop below self-sustaining levels;
- Threaten to eliminate a plant or animal community;
- Substantially reduce the number or restrict the range of an endangered, rare, or threatened species;
- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service;

- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service;
- Have a substantial adverse effect on federally protected wetlands, as defined by Section 404 of the Clean Water Act, through direct removal, filling, hydrological interruption, or other means;
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- Conflict with City of Rocklin General Plan policies protecting biological resources, or violates the City of Rocklin Oak Tree Preservation Ordinance; or,
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or State conservation plan.

IMPACTS AND MITIGATION MEASURES

IMPACT 4.12-1 Loss of Wetlands. *Implementation of the proposed project would result in the fill of jurisdictional waters of the United States, including wetlands. This impact is considered* ***significant****.*

Implementation of the proposed project would result in the fill of jurisdictional waters of the United States, including wetlands that are subject to USACE jurisdiction under the federal Clean Water Act. The project site includes a total of 0.014 acre of seasonal wetland, 0.087 acre of seasonal wetland swale, and 0.325 acre of seeps. All of these wetlands would be removed during project construction. Because the proposed project would result in the direct removal of federally protected wetlands, this impact would be considered **significant**.

No wetlands or waters are located within the water line extension areas. Therefore, no impacts on wetlands or waters would occur within these offsite areas with project implementation.

Mitigation Measure 4.12-1: Loss of Wetlands.

On May 16, 2007, the project applicant secured authorization for the fill of approximately 0.426 acres of jurisdictional waters of the United States (Nationwide Permit No. 39). Prior to commencing any construction activities associated with the proposed project, the project applicant shall comply with all of the terms and conditions of the Nationwide Permit. In addition, the project applicant shall obtain water quality certification pursuant to Section 401 of the Clean Water Act for the project. Any measures required as part of the issuance of water quality certification shall be implemented.

If the proposed project is constructed before the proposed Rocklin 60 residential development is approved, a buffer area shall be established between the detention basin and the wetland resources to the north and east prior to the commencement of construction activities on the project site. Temporary construction fencing shall be installed around these wetland resources for the duration of construction period to ensure construction vehicles and personnel are restricted from entering the wetland areas. This mitigation will not be necessary if the proposed Rocklin 60 residential subdivision is developed prior to construction of the proposed project because the Rocklin 60 project would remove and mitigate for the loss of this wetland habitat.

Level of Significance after Mitigation

With the implementation of the above mitigation measures, impacts on waters of the United States, including wetlands, would be reduced to a less-than-significant level.

IMPACT 4.12-2 Disturbance of Common Plant and Wildlife Species. *Implementation of the proposed project would result in the removal of common plant and wildlife species. These effects would not substantially reduce the habitat of any common species, cause a species to drop below self-sustaining levels, or threaten to eliminate a plant or animal community. Therefore, this impact is considered* ***less than significant****.*

Implementation of the proposed project would result in the removal of approximately 45 acres of non-native annual grassland. Annual grassland is considered a common community both locally and regionally. Project construction would also result in the loss of common plants, small mammals, reptiles, amphibians, and other animals of slow mobility that live within the project's direct impact area, including the offsite detention basin area. More mobile wildlife species now using the project site could potentially move into adjacent rural residential and undeveloped areas. Although habitat for common species and some individuals of these species would be lost, these effects would not substantially reduce the habitat of any common species, cause a species to drop below self-sustaining levels, or threaten to eliminate a plant or animal community. The impacts on common plant and wildlife species resulting from the proposed project are considered **less than significant**.

Mitigation Measure 4.12-2: Disturbance of Common Plant and Wildlife Species. No mitigation measures would be necessary.

Level of Significance after Mitigation

Impacts on common plants and wildlife species would be considered less than significant.

IMPACT 4.12-3 Loss of Native Oak and Heritage Trees - Short Term. *Implementation of the proposed project would result in the removal of all of the native oak trees on the site, including two heritage trees. This impact would be considered* ***significant and unavoidable*** *in the short-term because the removed trees would not be immediately replaced with mature oak trees.*

Implementation of the proposed project would result in the removal of native oak trees, including heritage trees. The removal of native oak trees and the encroachment of construction activities into the protected zones of these trees are subject to the requirements of the City of Rocklin Oak Tree Preservation Ordinance, Chapter 17.77, City of Rocklin Municipal Code. Protected trees include any oak tree native to the Rocklin area, with a diameter at breast height (DBH) of six inches or greater. Heritage oaks are given special protection and are defined as oaks native to the Rocklin area having a DBH of 24 inches or greater.

Based on the native oak tree survey conducted by Foothill Associates in 2007, 216 native oak trees would be removed with project implementation including two heritage trees. This total includes 47 trees that died as a result of a fire in September 2002 and two heritage oak trees. If the proposed Rocklin 60 residential project is constructed before the proposed project, the removal of the native oak trees necessary to construct the detention basin would occur as part of this separate project.

The removal of native oak trees associated with project implementation would result in the loss of a sensitive natural community. This impact would be considered **significant and unavoidable** in the short-term because the removed trees would not be immediately replaced with mature oak trees.

Mitigation Measure 4.12-3: Loss of Native Oak and Heritage Trees - Short Term.

Prior to any grading or construction activity, the project applicant must obtain a tree permit from the City that will include provisions for replacing lost trees and an oak tree restoration plan will be developed and implemented. This plan will provide for the replacement of as many oaks as feasible within the project area.

If adequate locations cannot be found, as determined by the Development Services Manager, to replace all removed oak trees, then the remaining mitigation requirement may be met through payment into the existing City of Rocklin Tree Preservation Fund. Payments shall be calculated using the following formula:

Step 1:

Trunk Diameter at Breast Height (TDBH) of all Surveyed Trees on the Site X 20% = Discount Diameter

Step 2:

TDBH of all Surveyed Trees on the Site to be Removed - Discount Diameter = Total Number Inches of TDBH of Replacement Trees Required

Such payments shall be made prior to the issuance of building permits, with review and approval by the City Engineer.

The protection of oak trees not scheduled for removal must comply with pertinent sections of the City's Oak Tree Preservation Ordinance.

Level of Significance after Mitigation

With the implementation of the above mitigation measures, the trees removed with site development would be replaced at a minimum of a 2:1 ratio, consistent with the City's Oak Tree Preservation Ordinance. However, in the short -term, this impact would be considered significant and unavoidable because the removed trees would not be immediately replaced with mature oak trees.

IMPACT 4.12-4 Loss of Native Oak and Heritage Trees - Long Term. *Implementation of the proposed project would result in the removal of all of the native oak trees on the site, including two heritage trees. This impact would be considered* ***potentially significant*** *in the long-term.*

As identified in Impact 4.12-3, implementation of the proposed project would result in the removal of native oak trees, including heritage trees. Based on the native oak tree surveys conducted for the site, approximately 221 native oak trees would be removed from the site with project implementation, including two heritage oak trees. The removal of native oak trees associated with project implementation would result in the loss of a sensitive natural community. This impact would be considered **potentially significant** in the long-term.

Mitigation Measure 4.12-4: Loss of Native Oak and Heritage Trees - Long Term.

Implement Mitigation Measure 4.12-3.

Level of Significance after Mitigation

With the implementation of the above mitigation measures, the trees removed with site development would be replaced at a minimum of a 2:1 ratio, consistent with the City's Oak Tree Preservation Ordinance. This impact would be reduced to a less-than-significant level in the long-term once replanted trees become established and mature.

IMPACT 4.12-5 Disturbance or Removal of Special-Status Plant Species. *Implementation of the proposed project would not result in the loss or disturbance of special-status plant species. This would be considered a* ***less-than-significant*** *impact.*

Implementation of the proposed project would not be expected to adversely affect special-status plant species. Protocol-level surveys for five of the seven special-status plant species identified as having the potential to occur on the project site were conducted on April 13 and June 16, 2005 (ECORP 2005b). These species include dwarf downingia, Boggs Lake hedge-hyssop, Ahart's dwarf rush, Greene's Legenere, and Sanford's arrowhead. None of the five targeted special-status plants were found on the project site during the protocol-level surveys. A follow-up survey targeting big-scale balsom-root and pincushion navarettia was conducted during May 2007. This follow-up survey revealed no evidence that either species was present on the site (ECORP 2007). Therefore, the proposed project would not be expected to adversely affect, either directly or through habitat modifications, any special-status plant species. This impact would be **less than significant**.

Mitigation Measure 4.12-5: Disturbance or Removal of Special-Status Plant Species.

No mitigation measures are necessary.

Level of Significance after Mitigation

No special-status plant species are anticipated to be disturbed with project implementation. Therefore, impacts on special-status plant species would be considered less than significant.

IMPACT 4.12-6 Disturbance of Valley Elderberry Longhorn Beetle Habitat. *Implementation of the proposed project would result in the loss of elderberry shrubs, which provide potential habitat for the valley elderberry longhorn beetle. The loss of valley elderberry longhorn beetle habitat would be considered a* ***significant*** *impact.*

Implementation of the proposed project would result in the loss of thirty-eight elderberry shrubs. These elderberry shrubs provide potential habitat for the valley elderberry longhorn beetle. Although none of the shrubs on the site displayed exit holes characteristic of beetle habitation, use by the beetle is rarely apparent. Field studies suggest that larvae can be present in elderberry stems with no evidence of exit holes, because the larvae either succumb before constructing an exit hole or are not far enough along in the developmental process to construct an exit hole. Removal or disturbance of elderberry shrubs could reduce the number of valley elderberry longhorn beetles, a federally threatened species, which would constitute a substantial adverse effect to a federal special-status species. Because the loss of elderberry shrubs would result in substantial habitat modification for the valley elderberry longhorn beetle, this impact is considered **significant**.

The USACE consulted with the USFWS regarding potential effects to federally listed species. This consultation resulted in a Biological Opinion issued on March 10, 2006. The Biological Opinion authorized incidental take and stipulated required mitigation measures.

Mitigation Measure 4.12-6: Disturbance of Valley Elderberry Longhorn Beetle Habitat.

The project applicant shall comply with the terms and conditions of the Biological Opinion issued by USFWS on March 10, 2006.

Level of Significance after Mitigation

With the implementation of the above mitigation measures all valley elderberry longhorn beetle habitat removed would be replaced. Therefore, impacts on valley elderberry longhorn beetle would be reduced to a less-than-significant level.

IMPACT 4.12-7 Disturbance of California Red-Legged Frog Habitat. *Implementation of the proposed project would not be expected to adversely affect California red-legged frog due to the marginal habitat on the site and distance to known populations. Therefore, the project's potential impacts on this species would be considered* ***less than significant****.*

The proposed project is not expected to adversely affect California red-legged frog. The limited amount and marginal suitability of breeding habitat on the site, distance to known extant populations of California red-legged frogs, site hydrology, and physical terrain characteristics make the occurrence of the frog and its potential use of the site highly unlikely. The closest known occurrence of the species is eight miles east of the project site and populations in the Sierra Nevada foothills are rare. Upland habitat on the site is flanked by Interstate 80, which presents a physical barrier to the northwest; in addition, the site does not lie between suitable aquatic sites, and therefore, would not be used as a migration corridor by the species. Because red-legged frogs are unlikely to utilize the project site, implementation of the proposed project would not reduce the number or restrict the range of this threatened species or interfere substantially with their movement. Potential impacts on California red-legged frog are considered less than significant.

Mitigation Measure 4.12-7: Disturbance of California Red-Legged Frog Habitat.

No mitigation measures would be necessary.

Level of Significance after Mitigation

Impacts to this species would be considered less than significant.

IMPACT 4.12-8 Disturbance of Western Pond Turtle Habitat. *Implementation of the proposed project would not be expected to adversely affect western pond turtle due to the marginal habitat on the site. Therefore, the project's potential impacts on this species would be considered* ***less than significant****.*

Project development is not likely to adversely affect western pond turtle. Although the project site contains suitable upland nesting habitat, suitable nesting habitat is available off-site, closer to suitable aquatic habitat on adjacent properties. Upland habitat on the site is flanked by Interstate 80, which presents a physical barrier to the northwest; in addition, the site does not lie between suitable aquatic sites, and therefore, would not be used as a migration corridor by the species. Because northwestern pond turtle are unlikely to utilize the project site, implementation of the proposed project would not reduce the number or restrict the range of this species or interfere substantially with their movement. Impacts on western pond turtle are considered **less than significant**.

Mitigation Measure 4.12-8: Disturbance of Western Pond Turtle Habitat.

No mitigation measures would be necessary.

Level of Significance after Mitigation

Potential impacts on western pond turtle would be considered less than significant.

IMPACT 4.12-9 Disturbance of Burrowing Owl Habitat. *Implementation of the proposed project would not be expected to adversely affect burrowing owls because it is rare to find them nesting in the foothills as far east as the project site and there are no documented records of burrowing owls within five miles of the project area. Therefore, the project's potential impacts on this species would be considered* ***less than significant****.*

Project development is not likely to adversely affect burrowing owls. Although the project site contains suitable habitat and a few suitable small mammal burrows exist on-site, it is rare to find them nesting in the foothills as far east as the project site and there are no documented records of burrowing owls within five miles of the project area. Therefore, implementation of the proposed project would not reduce the number or restrict the range of this species or interfere substantially with their movement. Impacts on burrowing owls are considered **less than significant**.

Mitigation Measure 4.12-9: Disturbance of Burrowing Owl Habitat.

No mitigation measures would be necessary.

Level of Significance after Mitigation

Impacts on burrowing owls would be considered less than significant.

IMPACT 4.12-10 Disturbance of Raptors and Migratory Birds. *Loss of nests of special-status species would result in substantial adverse effects to local populations. This would be considered a* ***significant*** *impact.*

The oak woodland and non-native annual grassland on the project site provides foraging and nesting habitat for common and special-status bird species. The oak woodland habitat in the offsite detention pond area also provides foraging and nesting habitat for these species. Active raptor nests and nests of other migratory birds are protected by California Fish and Game Code Section 3503.5 and by the Federal Migratory Bird Treaty Act. Special-status birds with potential to nest on-site include Cooper's hawk, white-tailed kite, and loggerhead shrike. Common raptors and migratory birds could also nest on the site. Removal and/or disturbance of active nests of common and special-status nesting birds could result from project implementation. Disturbance of nesting pairs could result in nest abandonment and loss of active nests. Loss of active nests of common species could be a violation of the Federal Migratory Bird Treaty Act and Fish and Game Code, but would not constitute a significant impact under CEQA, because it would not cause the population of a species to drop below self-sustaining levels or threaten to eliminate an animal community. Loss of nests of special-status species would result in substantial adverse effects to local populations. This would be considered a **significant** impact.

Mitigation Measure 4.12-10: Disturbance of Raptors and Migratory Birds.

a. Removal of nesting habitat for raptors and migratory birds shall be timed to avoid the nesting season.

b. If vegetation removal and/or project construction occurs during the nesting season for raptors and migratory birds, preconstruction surveys shall be conducted by a qualified biologist approved by the City. The surveys shall cover all areas of suitable nesting habitat within 500 feet of project activity and shall be conducted within 14 days prior to commencement of project activity. The surveys shall be valid for one construction season. If no active nests are found, no further mitigation shall be required.

c. If active nests are found, impacts shall be avoided by establishment of appropriate buffers. No project activity shall commence within the buffer area until a qualified biologist confirms that the nest is no longer active. DFG guidelines recommend implementation of 500-foot buffers, but the size of the buffer may be adjusted if a qualified biologist determines through consultation with CDFG and/or USFWS that construction activities would not be likely to adversely affect the nest. Monitoring of the nest by a qualified biologist may be required if the activity has potential to adversely affect the nest.

Level of Significance after Mitigation

With implementation of the above mitigation measures, impacts on raptors and migratory birds would be avoided. Therefore, this impact would be reduced to a less-than-significant level.

IMPACT 4.12-11 Degradation of Chinook Salmon and Steelhead Trout Habitat. *Project development would not be expected to directly affect Central Valley fall/late fall-run Chinook salmon or Central Valley steelhead trout. No habitat is present on the project site and the nearest habitat within Secret Ravine Creek is located approximately 300 feet to the southeast at its closest point. However, if uncontrolled, soil erosion generated during project construction and urban pollutants generated from the site during site operations could indirectly affect fish habitat by degrading the water quality within Secret Ravine Creek. Therefore, potential impacts on these species are considered* ***significant****.*

Project development would not be expected to directly affect habitat for the Central Valley fall/late fall-run Chinook salmon or Central Valley steelhead trout. The closest habitat to the project site is located within Secret Ravine Creek, which is located approximately 300 feet to the southeast of the project site at its closest point. Therefore, direct disturbance of Secret Ravine Creek would not occur with project implementation. However, if uncontrolled, soil erosion generated during project construction and urban pollutants generated from the site during site operations could indirectly affect fish habitat by degrading the quality of the water that discharges from the site. Because storm water discharge from the site ultimately flows into Secret Ravine Creek, there is the potential that the water quality in the creek could be adversely degraded. Because degraded water quality within Secret Ravine Creek could result in a substantially adverse modification of fish habitat, this impact would be considered **significant**.

Mitigation Measure 4.12-11: Degradation of Chinook Salmon and Steelhead Trout Habitat.

Implement Mitigation Measures 4.10-2 and 4.10-3 identified in Section 4.10, Hydrology and Water Quality of this report in order to ensure water quality within Secret Ravine Creek is not substantially degraded with project construction and operation.

Level of Significance after Mitigation

With the implementation of the BMPs identified in Mitigation Measures 4.10-2 and 4.10-3, the storm water discharge from the project site would be captured within the project's drainage systems and would be filtered through oil/water separators and/or other equally effective control systems prior to being directed to the detention basin. Once in the detention basin, the settlement of undissolved solids would occur, further removing contaminants from the storm water. As the storm water is discharged from the detention basin, it would flow through an existing grassy swale for approximately 300 feet before entering Secret Ravine Creek. The grassy swale would remove additional contaminants within the storm water through biofiltration. The implementation of these BMPs, consistent with the requirements of the site's NPDES permit and the SWPPP, would ensure that the quality of the water entering Secret Ravine Creek would not be substantially degraded. With implementation of the identified mitigation measures, the project's impacts on Central Valley fall/late fall-run Chinook salmon and Central Valley steelhead trout would be reduced to a less-than-significant level.

4.13 CULTURAL RESOURCES

This section includes an evaluation of the potential impacts to cultural resources. The project area and its vicinity are known to contain numerous traces of past human activity ranging from early Native American sites and artifacts to the remains of early mining, ranching, and farming activities. Such materials can be found at many locations on the landscape and along with prehistoric and historic human remains and associated grave goods, are protected under various federal, State, and local statutes, including the California Environmental Quality Act (CEQA) and the City of Rocklin General Plan (1991).

The impact analysis included in this section is based on cultural resource investigations conducted by ECORP Consulting, Inc. (ECORP November 2005a and November 2005b). These investigations were reviewed by EDAW's archaeologists for technical adequacy, which included a site reconnaissance visit to confirm the investigation's findings in the field.

4.13.1 EXISTING CONDITIONS

The Rocklin/Roseville area and the surrounding region are known to contain numerous remains associated with early Native American occupation and historic-era activities. In order to place these resources within a broader cultural context and so their significance can be better understood, a brief outline of the archaeological, ethnographic, and historic context of the region is presented below.

PREHISTORIC ARCHAEOLOGICAL CONTEXT

The Central Valley region of California was one of the most densely populated areas in North America during prehistoric times. Summaries and overviews of the prehistory of the vicinity can be found in *California Archaeology* (Moratto 1984:167–216).

Early work conducted by Sacramento Junior College and the University of California, Berkeley resulted in the development of the Central California Taxonomic System and a tripartite classification scheme (Early, Middle, and Late Periods). These broad temporal periods are briefly described below.

Early Horizon

Early Horizon (Windmiller Pattern, ca. 4,500–2,500 BP) sites are characterized by extended burials orientated to the west, specialized grave goods, baked clay balls, charmstones and exotic lithic materials. Year round settlements with seasonal forays into the foothills resulted in the acquisition of a varied subsistence resource base that was dominated by fish and acorn acquisition. However, archaeological evidence shows heavy exploitation of elk, deer, antelope, rabbits, waterfowl and numerous additional floral and faunal species.

Middle Horizon

Middle Horizon (Berkeley Pattern, ca. 2,500–1,500 BP) artifact assemblages show a dramatic increase in the use of mortars and pestles, possibly related to an expanded reliance on acorn as a staple food resource. Flexed burials, with various orientations are common, as well as specialized bone tools, numerous distinctive shell beads and ornaments, and stone tools unique to the period frequently occur on sites dated to this time.

Late Horizon

Late Horizon (Augustine Pattern, ca. 1,400–200 BP) cultural manifestations are distinguished by the presence of shaped mortars and pestles, the use of bow and arrow technology and the introduction of the harpoon, particularly during early phases of this period. Bone awls are common. There is an increased usage of shell for decorative

items and ground stone artifacts such as tubular pipes and charmstones are commonly encountered. Mortuary practices can be highly variable and include pre-interment pit burning, cremations, and flex burials.

ETHNOGRAPHIC CONTEXT

Ethnographically, the project area is situated within the traditional territory of the Nisenan (sometimes referred to as the Southern Maidu). Kroeber (1925) recognized three Nisenan dialects – Northern and Southern Hill, and Valley Nisenan. The Nisenan territory included the drainages of the Yuba, Bear, and American Rivers, and the lower drainages of the Feather River, extending from the crest of the Sierra Nevada to the banks of the Sacramento River. The southern boundary with the Miwok was probably a few miles south of the American River, bordering a shared area used by both Miwok and Nisenan groups that extended to the Cosumnes River. It appears that while the foothill Nisenan had a distrust for the valley peoples, the relationship between the Nisenan and the Washoe to the east was primarily friendly. Elders recall inter-group marriage and trade primarily involving the exchange of acorns for fish procured by the Washoe (Wilson 1972:33).

According to Kroeber (1925:831), the larger villages could have had populations in excess of 500 individuals, although small settlements consisting of 15 to 25 people and extended families were common. Several village sites are depicted by Wilson and Towne (1978:Figure 1) along the North Fork American River just east of Auburn These are the villages of '*Chulku, Didit, Hakaka, Wemea, Koyo, Sumyan, Soloklok*.

As with most valley and foothill groups, the Nisenan exploited a wide variety of floral and faunal food sources. The primary staple food was acorn and gathering expeditions were organized seasonally, although hunting, fishing and the gathering of other floral foodstuffs occurred throughout the year. The seasonal harvests were often communal property and important social behaviors were intricately related to these harvests.

The acquisition of faunal species was accomplished through any number of techniques and implements including the bow and arrow, drives and decoys. Nets, traps, rodent hooks and fire were all put to use in hunting small game and fish could be caught with nets, gorges, hooks, and harpoons. One technique apparently involved using soaproot and turkey mullein to poison the water so fish could be easily gathered. Freshwater clams and mussels were also gathered in the larger water courses, such as the American River. Other aquatic food sources available to Native populations within the project area would have included fish such as salmon and sturgeon, which would have been netted or caught with the aid of weirs.

In general, the basic religious system noted throughout central California, the Kuksu cult, appeared among the Nisenan. Cult membership was restricted to those initiated in its spirit and deity-impersonating rites. The Kuksu cult, however, was only one of several levels of religious practice among the Nisenan. Various dances associated with mourning and the change of seasons was also important. One of the last major additions to Nisenan spiritual life occurred sometime shortly after 1872 with a revival of the Kuksu cult as an adaptation to the Ghost Dance religion (Wilson and Towne 1978).

HISTORIC CONTEXT

Aside from early Spanish explorers and probable trappers and traders from the Hudson Bay Company, the Sierra Nevada foothill region and Sacramento Valleys were virtually unsettled by Euro-Americans prior to the Gold Rush. In 1844 the Stevens-Townsend Party entered California via Donner Pass, passing along the divide just north of the North Fork American River (Egan 1977:307). This same route was traversed by John Fremont a year later. However, this route was not the first to be used by immigrant groups which began in 1841 by the Bidwell-Bartelson Party that crossed to the south into Tuolumne County, and others who were using the Pit River route to the north.

A wave of gold seekers descended upon California and the foothill and mountain regions of the Sierra Nevada following the discovery of gold at Coloma on the South Fork American River in January of 1848. The 1850 U.S.

Census put the population of Placer County at 11,417 which consisted of Whites (6,945), Chinese (3,019), Blacks (89), foreign (634) and Native American (730). During the Gold Rush period, the American River was a focal point of extensive mining activity. However, in the vicinity of the Rocklin Crossings project area, little mining activity occurred as the majority of the gold-bearing deposits were located farther to the east, particularly in the Auburn area. Roseville, Rocklin, and the surrounding area served more as support areas where farms and ranches provided agricultural products, and quarries sent construction materials to the mines and towns in the Sierra foothills (Davis 1990; Motz 1980; ECORP 2005a). The area granite quarries were a major local industry during the middle and latter decades of the 19th century and even supplied material for the lower sections of the State Capitol building in Sacramento (Davis 1990; Rukala 1975; ECORP 2005a).

Apart from the Rocklin area's prominence as a mining support center during the middle and latter decades of the 1800s, the arrival of the Central Pacific Railroad in 1864 (part of the Transcontinental Railroad as of 1869) in Rocklin ushered in a series of historic-era developments where transportation became the dominant historic-era theme of the region. Rocklin was selected as the site of an engine terminal where larger locomotives capable of negotiating the steep Sierra grades were coupled with east-bound passenger and freight cars. The terminal's roundhouse in Rocklin burned in 1873 but it was soon replaced with a more substantial granite structure (Ruhkala 1975; ECORP 2005a). In 1908, the Southern Pacific, which acquired the Central Pacific in 1884, moved the rail yard to Roseville where another new roundhouse was built.

Land in the project vicinity was originally used to grow grain crops used as feed for draft animals that hauled supplies to the gold mining areas to the east. By the end of the nineteenth century, land was subdivided into small parcels for family farms engaged in fruit, citrus, and grape production. The project area was part of the Himes Tract which was subdivided into 10-acre lots in the 1890s. Most of the lots were sold by the 1920s. Often, they were combined into 20- to 40-acre farmsteads. Early settlers in the Rocklin area were from Finland, Ireland, and China. In the 1910's and 1920's several Japanese families bought lots in the Himes Tract. One of these was the Takuma family whose farmstead was recorded as archaeological site CB-2 within the Project APE (ECORP November 2005a).

CULTURAL RESOURCE INVESTIGATION

Cultural resource investigations were conducted for the project site by ECORP (November 2005a and November 2005b). These investigations were reviewed by EDAW's archaeologists for technical adequacy, which included a site reconnaissance visit to confirm the investigation's findings in the field.

As identified in the cultural resource investigations for the site (ECORP November 2005a and November 2005b), the cultural resource analysis consisted of a phased approach that included Native American consultation, pre-field research, field surveys, and resource documentation. These investigations were conducted in accordance with the federal *Secretary of the Interior's Standards and Guidelines for Identification of Cultural Resources* (48CFR 44720-23).

NATIVE AMERICAN CONSULTATION

As a component of the cultural resource investigations, ECORP's cultural resource specialists consulted with the Native American Heritage Commission (NAHC) concerning potential areas of Native American concern regarding the Rocklin Crossings project area. The NAHC conducted a search of the Sacred Lands File and provided a list of appropriate regional Native American tribal contacts and individuals with a potential interest in the project. Contact letters were mailed to the NAHC-suggested contacts and they were provided with an opportunity to comment on the proposed project and contribute information on cultural resources or areas of concern potentially located within and in the vicinity of the project area. No responses were received (ECORP November 2005a).

PRE-FIELD RESEARCH

The research into cultural resource issues included a records search of pertinent cultural resource information. This search was conducted at the North-Central Information Center (NCIC) of the California Historical Resources Information System. The records search included, but was not necessarily restricted to, a review of select publications, maps, and properties listed in the following sources:

- National Register of Historic Places (National Park Service 1996 and updates)
- California Register of Historical Resources (State of California 1976 and updates)
- California Points of Historical Interest (State of California 1992 and updates)
- California Historical Landmarks (State of California 1990)
- Directory of Properties in the Historical Resources Inventory (State of California)
- OHP Historic Properties Directory
- California Inventory of Historical Resources
- California Gold Camps (Gudde 1975)
- Caltrans Local Bridge Survey (1989 and updates)

The record search results indicate that three cultural resource investigations have been conducted within the project area. These include:

- Cultural Resource Assessment of the Rocklin Regional Mall Project, Placer County, California (Peak & Associates 1988)

- Historic Property Survey Report (positive) for the Sierra College Boulevard/Interstate 80 Interchange Improvements (LSA 2002)

- Supplemental Historic Property Survey Report (positive) for the Sierra College Boulevard/Interstate 80 Interchange Improvements (LSA 2003)

Nine prehistoric archaeological sites and one historic archaeological site were identified as a result of the 1988 survey of a larger area that includes the proposed property (Peak & Associates 1988). Four of these sites (three prehistoric and one historic) are within the current property boundary, which includes the detention basin area. One additional historic site, two historic isolates, one prehistoric isolate, and one historic residence were identified on the project site as a result of investigations for the Interstate 80/Sierra College Boulevard interchange project in 2002 and 2003 (Kaptain 2002, Kelley et al. 2002; Pulcheon 2003). The three prehistoric sites within the project site all consist of bedrock mortars. The historic resources consist of a Japanese farmstead, a collapsed one room cabin, a 1920's residence, isolated stone piles, and an isolated "petroglyph." All prehistoric and historic resource locations within the project site are identified in Table 4.13-1.

A subsequent testing and evaluation program conducted by ECORP on the three prehistoric bedrock mortar sites (CA-Pla-1212, CA-Pla-1217, and CA-Pla-1219) concluded that they appear to have been satellite sites used for acorn processing. Two of the three sites did not have associated artifacts. CA-PLA-1212 had only one associated ground stone tool fragment, possibly a fragment from a pestle used in the bedrock mortar. None of them were eligible for listing on the California Register of Historical Resources (CRHR) (or the National Register of Historical Places) under any criteria. The single isolate basalt biface is also not eligible for listing on the CRHR (or the National Register of Historical Places) due its isolated character and its lack of association or context. Similarly, the historic-era sites (CA-Pla-1218, 4695 Sierra College Blvd., the F. Hull rock carving, and the rock piles) are also not eligible for listing on the CRHR (or the National Register of Historical Places) due to a lack of documented association with historically significant persons or events, lack of distinctive architecture, lack of historic integrity, and a lack of data potential (ECORP November 2005a).

Table 4.13-1 Cultural Resource Sites Located Within the Project Site			
Site Number	Association	Type	Reference
CA-Pla-1212 PA-88-17	Prehistoric	One bedrock mortar within an outcrop of approximately 2 square meters. No midden observed.	Peak and Assoc. 1988 LSA 2002 ECORP 2005
CA-Pla-1217 PA-88-22	prehistoric	Two bedrock mortars within an outcrop of approximately 62 square meters. No midden observed.	Peak and Assoc. 1988 LSA 2002 ECORP 2005
CA-Pla-1219 PA-88-24	prehistoric	One bedrock mortar within an outcrop of approximately 15 square meters. No midden observed.	Peak and Assoc. 1988 LSA 2002 ECORP 2005
CA-Pla-1078H SCB-2	historic-era	Early twentieth century Japanese-American farmstead identified as "Takuma Farm." Consists of loose bricks, water pipes, stone-line pond, concrete trough and trees. Most above-ground features removed since 2001.	LSA 2002 ECORP 2005
CA-Pla-1218 PA-88-23	historic-era	Dry-laid stone foundations for a small structure (no longer extant) of approximately 15 by 15 feet. Furnace parts and galvanized metal fragments recorded inside the foundations.	Peak and Assoc. 1988 LSA 2002 ECORP 2005
4695 Sierra College Blvd	historic-era	A standing, one-story, U-shaped residence dating to the 1920s.	LSA 2002 ECORP 2005
-	prehistoric	An isolated fine-grained basalt biface found on the surface.	LSA 2003
-	historic-era	Petroglyph of "F. Hull 99" inscribed into a bedrock outcrop.	LSA 2003
-	historic-era	Four stone piles, probably a result of field clearing.	LSA 2003
Source: Peak and Associates 1988, LSA 2002 and 2003, ECORP 2005			

A significance evaluation was also conducted for the historic-era Takuma Farmstead (CA-Pla-1078H [SCB-2]) by Kelley (2003). Between the time the site was originally documented by LSA Associates in 2001 (Pulcheon 2003) and Kelley's 2003 assessment, the site had been impacted by the removal of most of the recorded above-ground features and surface artifacts. As a result of this loss of integrity and a lack of significant historical association, this historic-era resource was determined to be not eligible for listing on the California Register of Historical Resources (CRHR) or the National Register of Historic Places. Consequently, it is not considered a historic resource per CEQA and is not discussed further in this study.

FIELD SURVEY

An intensive archaeological survey of the project area was conducted by ECORP archaeologists utilizing the results of the NCIC record search, the Peak and Associates 1988 report and the LSA 2002 and 2003 reports as a baseline. Resources previously documented by Peak and Associates and LSA were revisited and their records were updated. The ECORP survey did not result in the documentation of additional prehistoric resource or historic-era resources.

4.13.2 REGULATORY SETTING

NATIVE AMERICAN CONSULTATION REQUIREMENTS

California Senate Bill (SB) 18 states that prior to a local (city or county) government's adoption of any general plan or specific plan, or amendment to general and specific plans, or a designation of open space land proposed on or after March 1, 2005, the city shall initiate consultation with California Native American tribes for the purpose of preserving or mitigating impacts to Cultural Places.

A Cultural Place is defined in the PRC sections 5097.9 and 5097.995 as:

- Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine Public Resources Code [PRC] Section 5097.9), or;
- Native American historic, cultural, or sacred site, that is listed or may be eligible for listing in the California Register of Historic Resources pursuant to Section 5024.1, including any historic or prehistoric ruins, any burial ground, or any archaeological or historic site (PRC Section 5097.995).

The intent of SB 18 is to establish meaningful consultation between tribal governments and local governments ("government-to-government") at the earliest possible point in the planning process so that cultural places can be identified and preserved and to determine necessary levels of confidentiality regarding Cultural Place locations and uses. According to the Government Code (GC) Section 65352.4, "consultation" is defined as:

> The meaningful and timely process of seeking, discussing, and considering carefully the views of others, in a manner that is cognizant of all parties' cultural values and, where feasible, seeking agreement. Consultation between government agencies and Native American Tribes shall be conducted in a way that is mutually respectful of each party's sovereignty. Consultation shall also recognize the tribes' potential needs for confidentiality with respect to places that have traditional tribal cultural significance.

While consultation is required to take place on a government-to-government level, the SB 18 process begins with a letter from the local government to the Native American Heritage Commission requesting a list of tribal organizations appropriate to the plan or plan amendment area or proposed open space designation. Once contacted by the local government, the tribes have up to 90 days to respond and request consultation regarding the preservation and treatment of known cultural place(s) if any have been identified by the tribe.

CEQA

Under CEQA, historical resources and "unique archaeological resources" are recognized as a part of the environment (Public Resources Code Sections 21001(b), 21083.2, 21084(e), 21084.1). In 1992, the Public Resources Code was amended as it affects historical resources. The amendments included creation of the California Register of Historical Resources (Public Resources Code Sections 5020.4, 5024.1 and 5024.6). While the amendments became effective in 1993, it was not until January 1, 1998, that the implementing regulations for the California Register were officially adopted (Public Resources Code Section 4850 *et seq*.).

The California Register is an authoritative listing and guide for state and local agencies and private groups and citizens in identifying historical resources. This listing and guide indicates which resources should be protected from substantial adverse change. The California Register includes historical resources that are listed automatically by virtue of their appearance on or eligibility for certain other lists of important resources. The Register includes historical resources that have been nominated by application and listed after public hearing. Also included are historical resources listed as a result of an evaluation by specific criteria and procedures adopted by the State Historical Resource Commission.

The criteria used for determining the eligibility of a cultural resource for the California Register are similar to those developed by the National Park Service for the National Register of Historic Places. However, criteria of eligibility for the California Register were reworded to better reflect California history.

Any building, site, structure, object or historic district meeting one or more of the following criteria may be eligible for listing in the California Register:

- It is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States;
- It is associated with the lives of persons important to local, California, or national history;
- It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic values; or
- It has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

Eligibility for the California Register also depends on the integrity, or the survival of characteristics of the resource that existed during its period of significance. Eligible historic resources must not only meet one of the above criteria, but also they must retain enough of their historic character or appearance to convey the reasons for their importance, or retain the potential to yield significant scientific or historical information or specific data.

Like the process of evaluating historical resources for National Register eligibility, California Register evaluations include the consideration of seven aspects of integrity: location, design, setting, materials, workmanship, feeling and association. The evaluation of integrity must be judged with reference to the particular criterion or criteria under which a resource may be eligible for the California Register. However, the implementing regulations specifically caution that alterations of a historic resource over time may themselves have historical, cultural or architectural significance.

Most often, historical resources eligible for the California Register will be 50 years old or older. However, the new implementing regulations stipulate that “a resource less than fifty years old may be considered for listing in the California Register if it can be demonstrated that sufficient time has passed to understand its historical importance.”

Under CEQA Guidelines Section 15064.5, an “historical resource” includes: (1) a resource listed in, or determined to be eligible by the State Historical Resources Commission for listing in, the California Register of Historical Resources; (2) a resource listed in a local register of historical resources or identified in a historical resource survey meeting the requirements in Section 5024.1(g) of the Public Resources Code; and (3) any object, building, structure, site, area, place, record, or manuscript that a lead agency determines is historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, provided the determination is supported by substantial evidence in light of the whole record; or a resource determined by a lead agency to be “historical,” as defined in Public Resources Code Sections 5020.1(j) or 5024.1.

While alteration of the setting of an archaeological site that is eligible only for its information potential may not affect the site’s significant characteristics, alteration of a property’s location (viz., removing or damaging all or part of the site) may have a significant adverse effect. CEQA Guidelines Section 15126.4(b)(3) states, “Public agencies should, whenever feasible, seek to avoid damaging effects on any historical resource of an archaeological nature.” The Guidelines further state that preservation in place is the preferred manner of mitigating impacts, and that preservation “. . . may be accomplished by, but is not limited to, the following”:

- Planning construction to avoid archaeological sites;
- Incorporation of sites within parks, greenspace, or other open space;
- Covering the archaeological sites with a layer of chemically stable soil before building tennis courts, parking lots, or similar facilities on the site; and
- Deeding the site into a permanent conservation easement [CEQA Guidelines, Title 14, Section 15126.4 (b)(3)(B)].

The CEQA Guidelines state, "when data recovery through excavation is the only feasible mitigation, a data recovery plan, which makes provision for adequately recovering the scientifically consequential information from and about the historical resource, shall be prepared and adopted prior to any excavation being undertaken" [CEQA Guidelines, Title 14, Section 15126.4(b)(3)(C)]. However, "data recovery shall not be required for an historical resource if the lead agency determines that testing or studies already completed have adequately recovered the scientifically consequential information from and about the archaeological or historical resource…" [CEQA Guidelines, Title 14, Section 15126.4(b)(3)(D)].

As noted above, CEQA is also concerned with effects of a project on "unique archaeological resources." If an archaeological site meets the definition of a unique archaeological resource (Public Resources Code Section 21083.2), then the site must be treated in accordance with the special provisions for such resources, which include time and cost limitations for implementing mitigation. "Unique archaeological resource" is defined as "an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets the following criteria:

- Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
- Has a special and particular quality such as being the oldest of its type or the best available example of its type.
- Is directly associated with a scientifically recognized important prehistoric or historic event or person. [Public Resources Code Section 21083.2 (g)]"

If it can be demonstrated that a project will cause damage to a unique archaeological resource, the lead agency may require reasonable efforts to be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. Examples of that treatment are described in the code. To the extent that unique archaeological resources are not preserved in place or left in an undisturbed state, mitigation measures shall be required as provided in the code. The code also places limitations on the extent, cost and timing of mitigation measures that can be required by the lead agency.

Finally, California law also protects Native American burials, skeletal remains and associated grave goods regardless of their antiquity, and provides for the sensitive treatment and disposition of those remains (California Health and Safety Code Section 7050.5, California Public Resources Code Sections 5097.94 *et seq.*).

Section 15064.5(e)(1) and (2) of the CEQA Guidelines provides the following guidance with regard to the accidental discovery of human remains:

- In the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, the following steps should be taken:

    1. There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:
        A. The coroner of the County must be contacted to determine that no investigation of the cause of death is required, and
        B. If the coroner determines the remains to be Native American:
            (1). The coroner shall contact the Native American Heritage Commission within 24 hours.
            (2). The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased native american.
            (3). The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98, or
    2. Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance.
        A. The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission.
        B. The descendant identified fails to make a recommendation; or
        C. The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner.

As of January 1, 2007, Assembly Bill (AB) 2641 (Stats. 2006, ch. 863) has altered the follow-up process slightly from what was done in the past. (See Public Resources Code sections 5097.91 and 5097.98.)

Under AB 2641, the most likely descendant (MLD) will have 48 hours to complete a site inspection and make recommendations after being granted access to the site. In addition, the updated version of PRC 5097.98(b) states that, upon the discovery of Native American remains, the landowner shall ensure that the immediate vicinity (according to generally accepted cultural or archaeological standards or practices) is not damaged or disturbed by further development activity until consultation with the MLD has taken place. That consultation would preferably include discussing the possibility of additional interments.

AB 2641 goes on to suggest a range of possible treatments for the remains, including nondestructive removal and analysis, preservation in place, relinquishment of the remains and associated items to the descendents, or other culturally appropriate treatment. AB 2641 suggests that the concerned parties may extend discussions beyond the initial 48 hours to allow for the discovery of additional remains. AB 2641(e) includes a list of site protection measures and states that the landowner shall comply with one or more of the following:

- Record the site with the NAHC or the appropriate Information Center;
- Utilize an open-space or conservation zoning designation or easement; and/or
- Record a document with the county in which the property is located.

The landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance if the NAHC is unable to identify a MLD or the MLD fails to make a recommendation within 48 hours after gaining

access to the site or if the landowner or his authorized representative rejects the recommendation of the MLD, and mediation by the NAHC fails to provide measures acceptable to the landowner.

CITY OF ROCKLIN GENERAL PLAN

The 1991 City of Rocklin General Plan includes the following policy that addresses historic resources:

> Open Space, Conservation and Recreation Element Policy 3 - To encourage the protection of historically significant and geologically unique areas and encourage their preservation.

In addition, the Open Space/Conservation Action Plan included in the Open Space, Conservation and Recreation Element requires that projects be conditioned when unknown archaeological resources are discovered during the course of construction to require the developer to stop work immediately around the site and to also notify appropriate federal, State and local agencies.

4.13.3 IMPACTS AND MITIGATION MEASURES

METHOD OF ANALYSIS

The impact analysis included in this section is based on cultural resource investigations conducted by ECORP (November 2005a and November 2005b). These investigations were reviewed by EDAW's archaeologists for technical adequacy, which included a site reconnaissance visit to confirm the investigation's findings in the field.

THRESHOLDS OF SIGNIFICANCE

Under criteria based on the State CEQA Guidelines, the project would be considered to have a significant impact on cultural resources if it would result in any of the following:

- A substantial adverse change in the significance of an historical resource;
- A substantial adverse change in the significance of a unique archaeological resource;
- Disturbance or destruction of unique paleontological resource or site or unique geologic feature;
- Disturbance of any human remains, including those interred outside of formal cemeteries; or
- Elimination of important examples of the major periods of California history or prehistory.

CEQA provides that a project may cause a significant environmental effect where the project "may cause a *substantial adverse change in the significance of an historical resource*" (Pub. Resources Code, Section 21084.1 [emphasis added]). CEQA Guidelines Section 15064.5 defines a "substantial adverse change in the significance of an historical resource" to mean "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be *materially impaired*" (CEQA Guidelines, Section 15064.5, subd. (b)(1) [emphasis added]).

CEQA Guidelines, Section 15064.5, subdivision (b)(2), defines "materially impaired" for purposes of the definition of "substantial adverse change…" as follows:

- The significance of an historical resource is materially impaired when a project:

  (A) Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources; or

  (B) Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to Section 5020.1(k) of the Public

Resources Code or its identification in an historical resources survey meeting the requirements of Section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or

(C) Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register of Historical Resources as determined by a lead agency for purposes of CEQA. (CEQA Guidelines, Section 15064.6, subd.(b)(2).).

IMPACT 4.13-1 Damage or Destruction of Significant Documented Cultural Resources. *No significant cultural resources have been identified within or immediately adjacent to the project site. Therefore, the proposed project would result in* ***no impacts*** *to CRHR-listed or eligible resources.*

Based on previous studies, as well as EDAW archival and field investigations, three prehistoric archaeological sites, one isolated prehistoric artifact, and five historic-era cultural resources have been identified within the project site. The three early Native American sites, the isolated prehistoric artifact, and the five historic-era resources were evaluated to determine their eligibility for listing on the CRHR (or the National Register of Historical Places). None of the prehistoric or historic-era resources located within the project site (inclusive of the detention basin area) were determined to be eligible for listing on the CRHR (or the National Register of Historical Places) and none of them were considered to be unique (as defined in Public Resources Code, Section 21083.2) due to a lack of association with historically significant persons or events, a lack of historical integrity, and/or a lack of data potential. In addition, the areas that would require off-site infrastructure extensions are located within paved roads. No known cultural resources are located within these roadways. Therefore, no significant cultural or historical resources would be affected by project implementation and **no impacts** on cultural resources would occur with development of the project.

Mitigation 4.13-1: Damage or Destruction of Significant Documented Cultural Resources

No mitigation is necessary.

Level of Significance After Mitigation

The impacts on documented cultural resources would be less than significant.

IMPACT 4.13-2 Potential Impacts to Undocumented Cultural Resources. *There is the possibility that previously undiscovered and undocumented resources could be adversely affected or otherwise altered by ground disturbing activities during construction of the project. Disturbance of undocumented resources would be a* ***potentially significant*** *impact.*

The entire Rocklin Crossings project area has been subjected to an intensive archaeological inventory and all known cultural resources have been documented and evaluated. However, it is theoretically possible, though improbable, that buried traces of significant (as defined by CEQA) historic-era activity and early Native American occupation that could not be documented during the course of the surface pedestrian survey may be present within and in the vicinity of the proposed project. In addition, infrastructure extensions within roadways off of the project site could disturb previously unidentified cultural resources. The disturbances to these resources would be considered a **potentially significant** impact.

Mitigation Measure 4.13-2 Potential Impacts to Undocumented Cultural Resources.

If an inadvertent discovery of cultural materials (e.g., unusual amounts of shell, charcoal, animal bone, bottle glass, ceramics, burned soil, structure/building remains) is made during project-related construction activities, ground disturbances in the area of the find shall be halted and a qualified professional archaeologist shall be notified regarding the discovery. The archaeologist shall determine whether the resource is potentially significant as per CEQA (i.e., whether it is an historical resource, a unique archaeological resource, or a unique paleontological resource) and shall develop specific measures to ensure preservation of the resource or to mitigate impacts to the resource if it cannot feasibly be preserved in light of costs, logistics, technological considerations, the location of the find, and the extent to which avoidance and/or preservation of the find is consistent or inconsistent with the design and objectives of the project. Specific measures for significant or potentially significant resources could include, but are not necessarily limited to, preservation in place, in-field documentation, archival research, subsurface testing, and excavation. The specific type of measure necessary would be determined according to evidence indicating degrees of resource integrity, spatial and temporal extent, and cultural associations, and would be developed in a manner consistent with CEQA guidelines for preserving or otherwise mitigating impacts to archaeological and cultural artifacts.

Level of Significance After Mitigation

With the implementation of the identified mitigation measure, potential impacts to unidentified cultural resources would be reduced to a less-than-significant level.

IMPACT 4.13-3 Potential to Uncover Human Remains. *Subsurface disturbances associated with construction activities could potentially uncover unmarked historic-era and prehistoric Native American burials, resulting in their alteration or damage. This would be a* ***potentially significant*** *impact.*

While no evidence for prehistoric or early historic interments was found in the project area in surface contexts, this does not preclude the existence of buried subsurface human remains. California law recognizes the need to protect historic era and Native American human burials, skeletal remains, and items associated with Native American interments from vandalism and inadvertent destruction. The procedures for the treatment of Native American human remains are contained in California Health and Safety Code §7050.5 and §7052 and California Public Resources Code §5097.

If any human remains were unearthed during project construction, particularly those that were determined to be Native American in origin, a **potentially significant** disturbance of human remains would occur. In accordance with the California Health and Safety Code, if human remains are uncovered during ground-disturbing activities, all such activities in the vicinity of the find shall be halted immediately and the City or the City's designated representative (s) shall be notified. The project landowner/lead agency shall immediately notify the Placer County coroner and a qualified professional archaeologist. The coroner is required to examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or State lands (Health and Safety Code Section 7050.5[b]). If the coroner determines that the remains are those of a Native American, he or she must contact the Native American Heritage Commission (NAHC) by phone within 24 hours of making that determination (Health and Safety Code Section 7050[c]). The NAHC will identify a most likely descendant (MLD) for consultation regarding the disposition of the remains.

Mitigation Measure 4.13-3 Potential to Uncover Human Remains

In the event of the accidental discovery or recognition of any human remains, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains, until compliance with the provisions of Section 15064.5 (e)(1) and (2) of the CEQA Guidelines, as well as Public Resources Code Section 5097.98, has occurred.

If any human remains are discovered, all work shall stop in the immediate vicinity of the find and the County Coroner shall be notified, according to Section 7050.5 of the California Health and Safety Code. The City's Community Development Director shall also be notified. If the remains are Native American, the Coroner will notify the Native American Heritage Commission, which in turn will inform a most likely descendant. The descendant will then recommend to the landowner appropriate disposition of the remains and any grave goods, and the landowner shall comply with the requirements of AB 2641.

Level of Significance After Mitigation

With the implementation of the identified mitigation measure, potential disturbance of any human remains would be reduced to a less-than-significant level.

4.14 ENERGY

This section discusses the energy setting and impacts associated with the proposed project.

4.14.1 EXISTING SETTING

Energy use is a component of everyday life and its efficient use has become more important over the past several years as energy supplies have diminished and prices have increased. In addition to its economic costs, energy production and consumption can have direct and indirect environmental impacts. As examples, impacts can include loss of sensitive resources from energy excavation (e.g., coal mining), air quality degradation from energy combustion, and water pollution from energy generation (e.g., thermal pollution). However, energy use is a common necessity and will continue to be so into the future.

Energy use within the City of Rocklin is generally confined to the use of fossil fuels (e.g., natural gas, gasoline, etc.) and electricity (which can be generated from a large variety of sources including fossil fuels). Commercial and residential customers in Rocklin are served by Pacific Gas and Electric Company (PG&E) for electricity and natural gas.

Pacific Gas and Electric Company

- *Electricity*. PG&E provides electricity to all or part of 47 counties in California, comprising most of the northern and central portions of the State. PG&E obtains 40 percent of electricity from its own generation sources and the remaining 60 percent from outside sources. PG&E's owned-generating capacity includes nuclear, fossil fuel-fired, and hydroelectric facilities. Outside suppliers to PG&E include the State Department of Water Resources, irrigation districts, renewable energy suppliers, and other fossil fuel-fired suppliers. PG&E operates approximately 158,700 circuit miles of transmission and distribution lines. PG&E is interconnected with electric power systems in the Western Electricity Coordinating Council, which includes 14 western states, Alberta and British Columbia, Canada, and parts of Mexico.

In 2006, PG&E delivered 84,310 gigawatt hours of electricity to its customers. Commercial customers accounted for the largest segment of demand, with 40 percent of the total.

- *Natural Gas*. PG&E provides natural gas to all or part of 38 counties in California, comprising most of the northern and central portions of the State. PG&E obtains approximately 62 percent of its natural gas supplies from western Canada, 32 percent from the southwestern United States, and the balance from in-state sources. PG&E operates approximately 47,000 miles of transmission and distribution pipelines.

In 2006, PG&E delivered 836 billion cubic feet (Bcf) of natural gas to its customers. Commercial customers accounted for 12 percent of the total.

4.14.2 REGULATORY SETTING

TITLE 24

Title 24, California's Energy Efficiency Standards for Residential and Nonresidential Buildings, was promulgated by the California Energy Commission (CEC) in 1978 in response to a legislative mandate to create uniform building codes to reduce California's energy consumption, provides energy efficiency standards for residential and nonresidential buildings. In 2005, the CEC updated the Title 24 standards with more stringent requirements. All projects pursuing building permits after October 2005 must adhere to the new 2005 standards. The 2005 Standards (for residential and nonresidential buildings) are expected to reduce the growth in electricity use by 478 gigawatt-hours per year (GWh/y) and reduce the growth in natural gas use by 8.8 million therms per year (therms/y). The savings attributable to new nonresidential buildings are 163.2 GWh/y of electricity savings and

0.5 million therms. Additional savings result from the application of the Standards on building alterations. In particular, requirements for cool roofs, lighting, and air distribution ducts are expected to save about 175 GWh/y of electricity. These savings are cumulative, doubling in two years, tripling in three, etc.

The 2005 Energy Efficiency Standards include the following measures:

- **Time Dependent Variation (TDV).** Source energy was replaced with TDV energy. TDV energy values energy savings greater during periods of likely peak demand, such as hot summer weekday afternoons, and values energy saving less during off-peak hours. TDV gives more credit to measures such as daylighting and thermal energy storage that are more effective during peak periods.

- **New Federal Standards.** Coincident with the 2005 Standards, new standards for water heaters and air conditioners took effect. These changes affect all residential buildings, but they also affect many nonresidential buildings that use water heaters and/or "residential size" air conditioners.

- **New Lighting in Historic Buildings.** The exception to the Standards requirements for historic buildings has changed relative to lighting requirements so that only those historic or historic replica components are exempt.

- **Cool Roofs**. The nonresidential prescriptive standards require "cool roofs" (high-reflectance, high-emittance roof surfaces, or exceptionally high reflectance and low-emittance surfaces) in all low-slope applications. The cool roof requirements also apply to roof replacements for existing buildings.

- **Acceptance Requirements.** Basic "building commissioning," at least on a component basis, is required for electrical and mechanical equipment that is prone to improper installation.

- **Demand Control Ventilation.** Controls that measure carbon dioxide concentrations and vary outside air ventilation are required for spaces such as conference rooms, dining rooms, lounges, and gyms.

- **T-bar Ceilings.** Placing insulation directly over suspended ceilings is not permitted as a means of compliance, except for limited applications.

- **Relocatable Public School Buildings.** Special compliance approaches are added for relocatables so they can be moved anywhere statewide.

- **Duct Efficiency.** R-8 duct insulation and duct sealing with field verification is required for ducts in unconditioned spaces in new buildings. Duct sealing is also required in existing buildings when the air conditioner is replaced. Performance method may be used to substitute a high-efficiency air conditioner in lieu of duct sealing.

- **Indoor Lighting.** The lighting power limits for indoor lighting are reduced in response to advances in lighting technology.

- **Skylights for Daylighting in Buildings.** The prescriptive standards require that skylights with controls to shut off the electric lights are required for the top story of large, open spaces (spaces larger than 25,000 square feet with ceilings higher than 15 feet).

- **Thermal Breaks for Metal Building Roofs.** Continuous insulation or thermal blocks at the supports are required for metal building roofs.

- **Efficient Space Conditioning Systems.** A number of measures are required that improve the efficiency of heating, ventilation and air conditioning (HVAC) systems, including variable-speed drives for fan and pump

motors greater than 10 hp, electronically commutated motors for series fan boxes, better controls, efficient cooling towers, and water cooled chillers for large systems.

- **Unconditioned Buildings.** New lighting standards – lighting controls and power limits – apply to unconditioned buildings, including warehouses and parking garages. Lighting power tradeoffs are not permitted between conditioned and unconditioned spaces.

- **Compliance Credits.** Procedures are added for gas cooling, underfloor ventilation.

- **Lighting Power Limits.** The Standards set limits on the power than can be used for outdoor lighting applications, such as parking lots, driveways, pedestrian areas, sales canopies, and car lots. The limits vary by lighting zones or ambient lighting levels. Lighting power tradeoffs are not permitted between outdoor lighting and indoor lighting.

- **Shielding.** Luminaires in hardscape areas larger than 175 W are required to be cutoff luminaries, which will save energy by reducing glare.

- **Bi-level Controls.** In some areas, outdoor lighting controls are required, including the capability to reduce lighting levels to 50 percent.

- **Lighting Power Limits.** Lighting power limits (or alternative equipment efficiency requirements) apply to externally and internally illuminated signs used either indoors or outdoors.

The proposed project's structures would incorporate the applicable 2005 Title 24 standards listed above. In addition, the Wal-Mart Supercenter would contain a number of energy efficiency measures that are above and beyond 2005 Title 24 standards. These measures are discussed below under Impact 4.5-1.

CEQA

Public Resources Code Section 21100(b)(3) and CEQA Guidelines Section 15126.4(a)(1) require EIRs to describe feasible measures which could minimize significant adverse impacts, including where relevant, inefficient and unnecessary consumption of energy. Appendix F of the State CEQA Guidelines provides advisory direction regarding the analysis of energy impacts by stating that potentially significant energy implications of a project should be considered in an EIR, with particular emphasis on avoiding or reducing inefficient, wasteful and unnecessary consumption of energy. Appendix F suggests that the EIR evaluate the energy consuming equipment and process that would be used during project construction and operation, the total energy requirements of the project, energy conservation equipment and design features, and the total estimated daily trips to be generated by the project.

CITY OF ROCKLIN GENERAL PLAN

The following policy from the Open Space, Conservation and Recreation Element of the City General Plan (1991) is applicable to the proposed project:

- **Policy 5:** To encourage energy conservation in new developments.

4.14.3 IMPACTS AND MITIGATION MEASURES

METHOD OF ANALYSIS

The examination of energy conditions in this section is based on a review of the anticipated energy uses associated with the proposed project and the effects of these uses on national energy supplies. A discussion of the

specific energy infrastructure (i.e., electrical power lines and natural gas line) that would be required to meet the site's energy demands is included in Section 4.6, Utilities and Public Services.

THRESHOLDS OF SIGNIFICANCE

An energy impact is considered significant if the proposed project would:

- cause the inefficient, wasteful and unnecessary consumption of energy.

IMPACTS AND MITIGATION MEASURES

IMPACT 4.14-1 Increased Energy Demand. *Project implementation would increase energy demand during both construction and operation of the proposed project. Construction and operation of the proposed buildings on the site would be required to comply with the energy efficiency standards included in Title 24 and with air quality mitigation measures identified in Section 4.3, Air Quality (Mitigation Measure 4.3-2) that would effectively reduce the project's energy demands. Therefore, the project would not be expected to cause the inefficient, wasteful or unnecessary consumption of energy. This impact is considered* ***less than significant****.*

Project implementation would increase the consumption of energy within the City of Rocklin for the duration of the project's construction and operation. The primary energy demands during construction would be associated with construction vehicle fueling over the approximately two-year construction period. Energy in the form of fuel and electricity would be consumed during this period by construction vehicles and equipment operating on the site, trucks delivering equipment and supplies to the site, and construction workers driving to and from the site. Following construction, the primary energy demand on the project site would be associated with building heating and cooling requirements. Energy would also be used to move materials within individual stores (e.g., fork lifts within Home Depot), to provide heating and refrigeration in grocery store and restaurant applications, to deliver water to the site, to provide hot water to meet restroom and food preparation requirements, to meet the site's lighting requirements, and to meet other miscellaneous energy requirements of the individual buildings.

Construction and operation of the proposed buildings on the site would be required to comply with the energy efficiency standards included in Title 24 of the California Code of Regulations. Title 24 identifies specific energy efficiency requirements for building construction and systems operations that are intended to ensure efficient energy usage over the long-term life of the building. Large retailers have responded to these requirements and the rising cost of energy by increasing the energy efficiency of their retail establishments. Wal-Mart in particular includes a variety of energy efficient design components in its stores including the following:

- Daylighting (skylights/dimming) - This system automatically and continuously dims all of the lights within the store as the daylight contribution through skylights increases.

- Night Dimming - Lighting is dimmed to approximately 65% of typical evening illumination during the late night hours.

- Energy Efficient HVAC Units - Super high efficiency packaged heating and air conditioning units with an energy efficiency rating of 10.8 to 13.2.

- Central Energy Management - Stores are equipped with energy management systems, which are monitored and controlled from the Home Office in Bentonville.

- Water Heating - Waste heat is captured from the refrigeration equipment to heat water for the kitchen preparation areas of the store.

- White Roofs - White membrane roofing is used in order to increase solar reflectivity and lower cooling loads.

- Interior Lighting Program - All new stores use efficient T-8 fluorescent lamps and electronic ballasts.
- LED Signage Illumination - LED lighting is used in internally illuminated building signage due to its higher efficiency when compared to fluorescent lighting.
- Water-conserving Fixtures - Restroom sinks use sensor-activated low flow faucets.

Home Depot also includes energy efficient design components in its operations. Home Depot has an Energy Management System for all its main overhead building lighting and HVAC equipment. The system includes a dedicated controller that is connected to a central monitoring station in Atlanta that controls the lighting and HVAC systems to ensure they are operating efficiently and are turned off when they are not needed. A component of this system includes an integrated skylight/photo cell system with photo cells mounted to the outside of the building that measure ambient light levels. Based on these measurements, the Energy Management System can automatically adjust internal lighting levels relative to the amount of light coming through rooftop skylights.

Part of this system also includes carbon dioxide sensor controls that automatically close rooftop flutes to allow for greater re-circulation of already cooled (or heated) air. The flutes automatically re-open when carbon dioxide sensors indicate that more ventilation is necessary. Energy usage is reduced by maximizing the amount of already cooled (or heated) inside air that can be re-circulated rather than having to cool (or heat) new air from outside. In addition, Home Depot uses highly energy efficient rooftop HVAC units and T-5 Fluorescent lighting systems in their stores.

The compliance with the energy efficiency standards included in Title 24 in the construction and operation of the proposed buildings on the site and the implementation of the energy efficient design and operational components by the larger building tenants would help ensure that energy is efficiently used at the project site. Therefore, the proposed site construction and operations would not be expected to cause the inefficient, wasteful or unnecessary consumption of energy.

Energy would also be used both on and off of the project site in vehicles delivering materials or providing services to the site, and store employees and patrons commuting to and from the site. As indicated in Section 4.2, Traffic and Circulation, the proposed project is forecast to generate 18,788 daily vehicle trips during its operations. Mitigation measures have been identified in Section 4.3, Air Quality (Mitigation Measure 4.3-2), that are intended to minimize air quality impacts associated with the project's vehicle trip generation. In addition to reducing the project's air quality impacts, these measures would also reduce the project's overall energy consumption. Therefore, the generation of vehicle trips at the project site would not be expected to cause the inefficient, wasteful or unnecessary consumption of energy. This impact is considered **less than significant**.

Mitigation Measure 4-14.1 Increased Energy Demand.

No mitigation measures are necessary.

Level of Significance After Mitigation

The demand for energy associated with project construction and operations would not cause the inefficient, wasteful and unnecessary consumption of energy. Therefore, the project's energy impacts would be considered less than significant.

5 ECONOMIC IMPACT AND URBAN DECAY ANALYSIS

5.1 INTRODUCTION

This section incorporates the information contained in the *Draft Rocklin Crossings Economic Impact Analysis, Rocklin, California* (Economic Impact Analysis) prepared for the proposed project by CBRE Consulting in December 2006. The complete analysis is included as appendix B in this EIR.

5.1.1 CONSIDERATION OF SOCIOECONOMIC IMPACTS

The State CEQA Guidelines define the parameters under which the consideration of socioeconomic impacts is included in an environmental evaluation. State CEQA Guidelines Section 15131 states that "[e]conomic or social information may be included in an EIR or may be presented in whatever form the agency desires." Further, Section 15131(a) of the Guidelines states that "[e]conomic or social effects of a project shall not be treated as significant effects on the environment. An EIR may trace a chain of cause and effect from a proposed decision on a project through anticipated economic or social changes resulting from the project to *physical changes* caused in turn by the economic or social changes [emphasis added]. The intermediate economic or social changes need not be analyzed in any detail greater than necessary to trace the chain of cause and effect. The focus of the analysis shall be on the physical changes." State CEQA Guidelines Section 15131(b) also provides that "[e]conomic or social effects of a project may be used to determine the significance of physical changes caused by the project." For example, the level of significance of a physical division of a community from the installation of rail lines could be measured by the social effect on the community.

In the case of the proposed project, concern has been expressed that the location of a major new retail establishment could, through its economic effects, result in secondary environmental impacts. The term commonly used to describe the physical effects that can result when new retail uses cause existing business closures and physical deterioration of the areas in which such businesses are located is urban decay.

In recent years, the California Courts have identified the term "urban decay" as the physical manifestation of a project's potential socioeconomic impacts and have specifically identified the need to address the potential for urban decay in environmental documents for large retail projects. The leading case is *Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4th 1184, in which the court set aside two environmental impact reports for two proposed Wal-Mart projects that would have been located less than five miles from each other. This was the first court decision to use the term "urban decay," as opposed to the term "blight." The court quoted "experts [who] are now warning about land use decisions that cause a chain reaction of store closures and long-term vacancies, ultimately destroying existing neighborhoods and leaving decaying shells in their wake." (Id. at p. 1204.) The court also discussed prior case law that addressed the potential for large retail projects to cause "physical deterioration of [a] downtown area" or "a general deterioration of [a] downtown area." (Id. at pp. 1206, 1207). The *Bakersfield* court also described the circumstances in which the duty to address urban decay issues arise.

Accordingly, there are two pertinent questions to be asked with regard to the effects of the proposed project in terms of this economic impact and urban decay analysis: 1) would the proposed new retail use result in sales losses that are sufficiently large at existing retail establishments to force some to close; and 2) would the affected closed stores stay idle long enough to create physical changes that could be defined as urban decay? The potential environmental impacts of shifts in retail sales from existing retail establishments to the proposed project may be deemed to be significant if the project:

- Is projected to result in economic or social changes from the project that would cause substantial and adverse physical changes; or
- Would cause urban decay.

Unless these criteria are met, impacts such as potential store closures and the potential shift of retail jobs, would not be deemed to be significant. While the City may determine that the effects of the proposed project on existing projects need to be taken into consideration in evaluating the merits of the proposed project, this Draft EIR does not identify a significant impact unless the aforementioned criteria are met.

5.2 STUDY CONCLUSIONS

5.2.1 STUDY METHODOLOGY

The purpose of the Economic Impact Analysis was to assess the economic impact of the proposed project on existing primary market area retailers, especially those offering goods similar to those expected to be sold at the project site. The Economic Impact Analysis also estimated the extent to which the project may or may not contribute to urban decay in the primary market area, as described below.

Several steps were performed in developing the Economic Impact Analysis in order to assess the project's economic impacts. In brief, these steps included the following:

- define the primary and secondary market areas;
- identify major competitive retailers in the market area;
- conduct fieldwork to evaluate existing market conditions;
- estimate the planned project's sales;
- collect and analyze market area taxable retail sales;
- conduct retail sales leakage analysis for the primary market area and the secondary market area;
- estimate the share of the project's sales to be generated by the primary and secondary market areas versus tertiary demand;
- estimate the maximum project impacts on existing primary market area retailers;
- estimate the share of the project's sales likely to be new to the primary market area;
- assess the competitiveness of existing primary market area stores and likely project impacts;
- identify planned retail projects in the primary market area;
- assess the cumulative impacts of planned retail projects in the primary market area; and
- assess the extent to which opening of the project may or may not contribute to urban decay in the primary market area.

5.2.2 SALES PROJECTIONS

As shown in Appendix B, the Economic Impact Analysis estimated that stabilized retail sales from the proposed project would total approximately $230.5 million in 2009 dollars, comprised of:

- $55.3 million in home furnishings and appliances;
- $37.6 million in building materials;

- $32.9 million in food store sales;
- $30.9 million in general merchandise sales;
- $14.2 million in apparel sales;
- $5.1 million in eating and drinking places;
- $54.5 million in "other retail stores" sales (including office supplies, gardening, or other specialty retail offerings).

Of these sales, approximately 95 percent, or $219.0 million, is estimated to be generated by primary (Rocklin and Loomis) and secondary market area (Auburn and portions of unincorporated Placer County) residents. The remaining 5 percent of sales generated at the project site are expected to comprise tertiary demand, originating from unspecified locations outside the primary and secondary market area. Stabilized sales are not expected to occur the first year of facility operations, but rather the second or third year, which is typical of new retail operations. In order to be conservative, the analysis assumed stabilized sales are achieved in 2009. Accordingly, all dollar figures unless otherwise noted are presented in 2009 dollars.

5.2.3 IMPACTS ON EXISTING PRIMARY MARKET AREA RETAILERS

For the purposes of this analysis, the City of Rocklin and the Town of Loomis were identified as the project's primary market area. A secondary market area was defined as the City of Auburn, and unincorporated parts of Placer County along the Interstate 80 corridor and in the neighborhood of Granite Bay. The City of Roseville was excluded from the market area because it is already served by two Wal-Mart stores (one of which is a Supercenter), two Home Depots, and a Lowe's store. Therefore, it is unlikely that residents of Roseville would travel to the project site when they have the same or similar stores nearby.

Assuming that the new primary and secondary market area sales of the proposed project occurred at the proportional expense of existing primary market area retailers, then existing retailers would experience a maximum annual impact of $33.9 million in sales upon stabilization of the proposed project in 2009 dollars. Table 5-1 details the potential sales diversion, which includes $26.9 million in home furnishings and appliances sales and $7.0 million in "other retail stores" sales. Because there is currently significant leakage in the apparel, general merchandise, food stores, eating and drinking places, and building materials categories, (i.e., residents of the primary market area spend money in those categories outside of Rocklin and Loomis), those categories would have no diverted sales. The total diverted impact, 5.0 percent of total sales, supportable square feet, and number of years for new retail demand to mitigate the diverted sales are broken down by retail category in Table 5-1 as follows:

Table 5-1
Summary of Impacts on Primary Market Area Retailers

Retail Category	Diverted Sales (Mil)	Percent of Total Market Area Sales	Supportable Square Feet	Years to Mitigate
Apparel	$0.0	0.0%	0	N/A
General Merchandise	$0.0	0.0%	0	N/A
Food Stores	$0.0	0.0%	0	N/A
Eating and Drinking Places	$0.0	0.0%	0	N/A
Home Furnishings and Appliances	$26.9	52.0%	97,700	20+ years
Building Materials	$0.0	0.0%	0	N/A
"Other Retail Stores"	$7.0	4.4%	19,500	1 to 2 years
Total	**$33.9**	**5.0%***	**117,200**	

Source: CBRE Consulting
* This percentage represents the total diverted sales divided by the total market area sales.

For “other retail stores” there is 19,500 square feet of retail space at risk of long-term sales diversion. However, some future demand for retail is likely to come from population growth. In fact, population growth is estimated to compensate for lost sales at “other retail stores” sales within two years after the project is built.

The Economic Impact Analysis concludes that the only retail sector at risk of long-term sales diversion, and potential store closure, is home furnishings and appliances. For home furnishings and appliances, the amount of retail space at risk is 97,700 square feet. Theoretically, it could take more than 20 years for population growth to compensate for sales impacts on home furnishing and appliance stores. One reason why the Home Furnishings and Appliances category shows this amount of diversion is because of the new RC Willey store. However, given RC Willey’s location along the Highway 65 corridor, the primary market area for that store likely extends past Rocklin and Loomis to Roseville and Lincoln. A significant proportion of RC Willey’s sales are likely to originate with persons living outside of Rocklin and Loomis. Therefore, sales diversions are likely to be shared with Roseville and Lincoln.

5.2.4 CUMULATIVE ECONOMIC IMPACTS

The Economic Impact Analysis identified five other major planned retail projects in the primary market area: Stanford Plaza, Blue Oaks Town Center, Rocklin Commons, the Granite Drive project and Rocklin Marketplace. Because the Rocklin Commons, the Granite Drive project and Rocklin Marketplace are still in the planning stages, the specific tenants that will ultimate locate in these developments is not currently known. However, some tenants have been preliminarily identified for the Rocklin Commons Project including Target, Kohl’s and/or Linen & Things. The Stanford Plaza shopping center is currently under construction and has a bank tenant. The remaining space has yet to be occupied. The Blue Oaks Town Center project is mostly built and operational, and has major tenants that include RC Willey, Sportsman’s Warehouse, Mervyn’s, Dress Barn, Steinmart and Shoe Pavilion. These five projects have the potential to generate retail sales totaling $497.2 million, in addition to the $230.5 million projected for the proposed project.

Assuming all the projects are built, including the proposed project, the maximum annual impact to primary market area retailers is estimated at $212.0 million in diverted sales, with the apparel category representing $38.5 million, the home furnishings and appliances representing $68.7 million, and “other retail stores” representing $104.9 million in diverted sales. Assuming the five cumulative projects are built, there would be a significant increase in diverted sales from primary market area retailers in the home furnishings and appliances and “other retail stores” categories. Without the cumulative projects, there are no impacts on the apparel category, but including the five projects creates a substantial effect on apparel stores sales. Because of substantial retail leakage in the general merchandise, food stores, eating and drinking places and building materials categories, there are no diverted sales impacts estimated.

Based upon analysis of the market area’s retail base, and expectations regarding sales diversions, the Economic Impact Analysis concludes that the following retail square footage in the market area is most at risk due to the cumulative projects (i.e., the proposed project and the five planned projects):

- Apparel stores totaling 151,500 square feet;
- Home furnishing and appliance stores totaling 249,700 square feet; and
- “Other retail stores” totaling 292,200 square feet.

These figures are conservative, as they do not take into account factors such as prospective market corrections or enhancements following the introduction of the cumulative projects into the marketplace or the potential increase in consumer spending pursuant to real income growth. Also, given the large amount of potential retail development that is planned for Rocklin, it is possible that Rocklin could transition to a retail hub serving the secondary market area. In this case, Rocklin would become a city that attracts sales from non-residents, similar to the City of Roseville.

5.2.5 URBAN DECAY DETERMINATION

IMPACT 5-1 Urban Decay. *Implementation of the proposed project would result in some diverted sales and some closures of primary market area stores may occur. However, these diverted sales and possible closures are unlikely to result in urban decay. This would be considered a* ***less-than-significant*** *impact.*

The Economic Impact Analysis assessed the probability of urban decay ensuing from development of the proposed project and the additional planned projects, with urban decay defined as physical deterioration that is so prevalent and substantial it impairs the proper utilization of affected real estate or the health, safety, and welfare of the surrounding community. If, for example, any market area stores close due to the proposed project, the analysis considers if they are likely to remain vacant for a prolonged period of time (i.e., more than one to two years) or be leased to other retailers within a reasonable marketing period (i.e., within three months to one year).

The retail market research conducted as part of the Economic Impact Analysis indicated that the retail market in Rocklin/Loomis has been strong, with low vacancy rates. This low vacancy is an indication of the market's stable performance and the ability to re-tenant vacancies as they occur. Brokers indicate that local grocery stores are likely to experience negative sales impacts from the proposed Wal-Mart Supercenter at the project site, but none of the brokers expected that impacts would lead to store closures. Brokers also indicated that if stores close, vacancies would eventually be filled, although it might take up to a year in some cases, and the new stores may not be traditional retailers (e.g., an automotive repair/supply use replacing a former supermarket). The closest grocery stores to the project site are the Safeway in the Rocklin Square Shopping Center and the Raley's Supermarket in the Loomis Town Center. These stores are the most likely to experience some sales impacts from the proposed Wal-Mart Supercenter at the project site.

However, the opinions of brokers that no grocery store is likely to close is supported by the retail leakage analysis, which shows that two recent grocery store closures in the City of Rocklin leave more than enough demand to support the currently operating grocery stores and the projected grocery sales of a Supercenter at the project site.

The Economic Impact Analysis concluded that while it is expected that the proposed project would result in some diverted sales and that some closures of primary market area stores may occur, these events are not expected to lead to physical deterioration so prevalent and substantial that it impairs the proper utilization of affected real estate or the health, safety, and welfare of the surrounding community. Therefore, although development of the proposed project may contribute to further retail vacancies in the primary market area, those vacancies are unlikely to result in urban decay. Therefore, this impact would be considered **less than significant**.

Mitigation Measure 5-1: Urban Decay.

No mitigation measures would be necessary.

Level of Significance after Mitigation

The project's urban decay impacts would be considered less than significant.

6 CUMULATIVE AND GROWTH INDUCING IMPACTS

This section includes a detailed analysis of the cumulative impacts that would be anticipated with the proposed project with a specific focus on the project's cumulative traffic impacts. In addition, this section includes a detailed discussion of the proposed project's growth-inducing impacts, the project's significant and irreversible commitment of resources, and the project's effects on global climate change.

6.1 CUMULATIVE IMPACTS OF THE PROPOSED PROJECT

This draft environmental impact report (Draft EIR) provides an analysis of overall cumulative impacts of the project taken together with other past, present, and probable future projects producing related impacts, as required by Section 15130 of the California Environmental Quality Act Guidelines (State CEQA Guidelines). The goal of such an exercise is twofold: first, to determine whether the overall long-term impacts of all such projects would be cumulatively significant; and second, to determine whether the Rocklin Crossings project itself would cause a "cumulatively considerable" (and thus significant) incremental contribution to any such cumulatively significant impacts. (See State CEQA Guidelines Sections 15130[a]-[b], Section 15355[b], Section 15064[h], Section 15065[c]; *Communities for a Better Environment v. California Resources Agency* [2002] 103 Ca1.App.4th 98, 120.) In other words, the required analysis intends to first create a broad context in which to assess the project's incremental contribution to anticipated cumulative impacts, viewed on a geographic scale well beyond the project site itself, and then to determine whether the project's incremental contribution to any significant cumulative impacts from all projects is itself significant (i.e., "cumulatively considerable" in CEQA parlance).

Pursuant to Section 15130 of the State CEQA Guidelines, "(t)he discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone. The discussion should be guided by the standards of practicality and reasonableness, and should focus on the cumulative impacts to which the identified other projects contribute rather than the attributes of other projects which do not contribute to the cumulative impact." The proposed project is considered to have a significant cumulative effect if:

1. The cumulative effects of development without the project are not significant and the project's additional impact is substantial enough, when added to the cumulative effects, to result in a significant impact; or

2. The cumulative effects of development without the project are already significant and the project contributes measurably to the effect. The term "measurably" is subject to interpretation. The standards used herein to determine measurability are that either the impact must be noticeable to a reasonable person, or must exceed an established threshold of significance.

Mitigation measures are to be developed to reduce the project's contribution to cumulative effects to a less-than-significant level or otherwise to the degree it is feasible to do so. The State CEQA Guidelines acknowledge that sometimes the only feasible method for mitigating or avoiding significant cumulative effects is to adopt ordinances or regulations that apply to all projects that contribute to the cumulative effect.

The State CEQA Guidelines Section 15130(b)(1) provide two approaches to analyzing cumulative impacts. The first is the list approach, which requires a listing of past, present, and reasonably anticipated future projects producing related or cumulative impacts. The second is the summary approach wherein the relevant projections contained in an adopted general plan or related planning document that is designed to evaluate regional or areawide conditions are summarized. For this Draft EIR, both the list and the plan approach have been combined to generate the most reliable future projections possible. A list approach is used to define specific projects that are currently proposed, but are not necessarily considered within an approved planning document. The plan approach is used to consider development consistent with an adopted plan.

6.1.1 CUMULATIVE DEVELOPMENT ASSUMPTIONS

The Rocklin General Plan is intended to provide a long-term guide for the orderly growth and development of the City of Rocklin. In describing the potential effects of this long-term growth, the general plan identified two population growth trajectories. These included a moderate growth scenario and a high growth scenario. Both of these scenarios projected population growth out to 2010. For the moderate growth scenario, the 2010 population was estimated to be approximately 36,200 people. For the high growth scenario, the 2010 population was estimated to be approximately 48,600 people. The City's existing population exceeded the high growth scenario projection by 2,310 people in 2006. Current population in the City is estimated to be 51,080 (Department of Finance 2007e).

In order to identify the long-term cumulative growth anticipated in the region, the high growth scenario population projections identified in the general plan were supplemented with projections developed by the California Department of Finance for the County. Based on these projections, the County's estimated 2006 population of 322,428 is estimated to increase by 8% to 349,113 by 2010 and by approximately 41% to 456,040 by 2020. For all resource issues with the exception of traffic, the cumulative growth baseline was based on these population growth estimates for the year 2020, which include City growth. The cumulative growth assumptions used in the traffic analysis are described in the traffic section below.

The area cumulatively affected by the individual project impacts varies depending upon the resource issue being evaluated. For example, nuisance impacts associated with dust generation during construction would be limited to areas directly surrounding the project site while the project's generation of air emissions would contribute cumulatively to the entire air basin. To ensure that the potential localized cumulative impacts are adequately evaluated, an analysis of the cumulative effects of the proposed Rocklin 60 residential development are discussed, when appropriate. As described in Chapter 3, Project Description, the proposed Rocklin 60 project includes the development of 179 single-family residential units on approximately 57 acres located directly east of the proposed project (Exhibit 3-2).

The Croftwood Estates project is located southeast of the proposed project site across Secret Ravine Creek. The Croftwood Estates project was approved by the City of Rocklin and is planned to develop 106 single family homes and 50 custom lots.

The Sierra College Boulevard/Interstate 80 interchange project is designed to improve vehicle movement and circulation at this intersection in anticipation of future urban development in the immediate area. The California Department of Transportation (Caltrans) is the lead agency for implementation of improvements to this interchange and construction is currently occurring.

The Sierra College Center, located on approximately 9.83 acres at the southeastern corner of Sierra College Boulevard and Rocklin Road, proposes construction of thirteen single story office and retail buildings. The office buildings would total approximately 59,218 square feet of floor space and the retail buildings would total approximately 18,370 square feet of floor space for an overall total of 77,588 square feet of floor space. The main use of the office space is projected to be dental/medical with a mix of other small businesses.

Placer Vineyards Specific Plan area encompasses approximately 5,230 acres located in the southwest corner of Placer County, bounded on the north by Baseline Road, on the south by the Sacramento-Placer County line, on the west by the Sutter-Placer County line, and on the east by Dry Creek and Walerga Road. As approved by the Placer County Board of Supervisors in July 2007, the Placer Vineyards Specific Plan is a mixed-use master planned community that includes residential, employment, commercial, open space, recreational, and public/quasi-public land uses. Placer Vineyards Specific Plan envisions construction of 14,132 homes in a range of housing types, styles, and densities. At build out, projected to occur over a twenty year time frame, Placer Vineyards would have a population of approximately 33,000 people, 434 acres of employment centers, 166 acres of retail commercial centers, and 920 acres of new parks and open space.

The Placer Ranch Specific Plan area encompasses approximately 2,213 acres located north and adjacent to the City of Roseville and West Roseville Specific Plan area, approximately one mile west of the SR 65/Sunset Boulevard interchange, and bisected by Fiddyment Road. The proposed Placer Ranch Specific Plan includes a mixture of industrial, commercial, office and professional, educational, and residential land uses. The Placer Ranch Specific Plan is envisioned to develop 4,618 residential units and includes land that would be developed with a California State University campus sized to accommodate between 15,000 and 25,000 full time students at build out.

The Regional University and Community Specific Plan area encompasses approximately 1,136 acres located north of Baseline Road, east of Brewer Road, and west of the future extension of Watt Avenue. The proposed Regional University and Community Specific Plan includes two primary components: a University campus (600 acres) and an adjoining community (536 acres). The Regional University is planned to accommodate approximately 6,000 students, along with 800 professors and staff, and to offer both undergraduate and graduate degrees. In addition to the institutional facilities on campus, the campus would include approximately 1,155 residential units for students and faculty, as well as retirement housing. The preliminary University program includes a full range of academic, administrative, athletic, and performing arts facilities; faculty and staff housing; student housing; and a retirement village. In addition, a portion of the campus is planned for a potential private high school that could accommodate 1,200 students and accompanying staff and faculty. The proposed Community would involve mixed-use development with a variety of residential, commercial, employment, open space, parks, and public uses. The Community would include 3,232 residential units of varying densities, commercial, open space, and recreation areas.

The West Roseville Specific Plan area, located in the northwestern-most portion of the City of Roseville, encompasses 3,162 acres and is adjacent to and east of the Placer Vineyards Specific Plan located in Placer County. The approved West Roseville Specific Plan land use plan identifies a blend of residential, service, employment, open space, and public uses and envisions housing approximately 20,810 residents and providing jobs for 3,726 employees.

The Morgan's Orchard at Secret Ravine project would develop 15.9 acres located at the southwest comer of I-80 and Penryn Parkway east of the Town of Loomis. This project would construct 68 residential lots sized to contain only the building footprint of its respective dwelling unit, thereby allowing the remainder of the land to be held as common open space. All residential lots would be developed with detached housing units.

SUMMARY OF CURRENTLY PLANNED AND PROPOSED PROJECTS

Table 6-1 provides a summary of the projects considered in the cumulative analysis. As described above and shown in Table 6-1, substantial development and growth is anticipated to occur throughout the vicinity and region.

6.1.2 CUMULATIVE IMPACTS

LAND USE

As described in the Land Use section of this Draft EIR, the impacts of the project relative to environmental plans, policies, and regulations are less than significant. As also discussed, the project is at the edge of Rocklin and would not physically divide an established community. The cumulative development within the region would result in a dramatic change in regional land uses and individual projects would need to be considered in the context of their contribution to this change. However, given that the project would not contribute to any significant impacts related to specific CEQA land use issues (division of a community, consistency with plans and policies adopted for the purpose of avoiding environmental impacts), the project would not contribute to cumulative land use impacts in the region. Therefore, the proposed project would result in a **less-than-significant** cumulative land use impact.

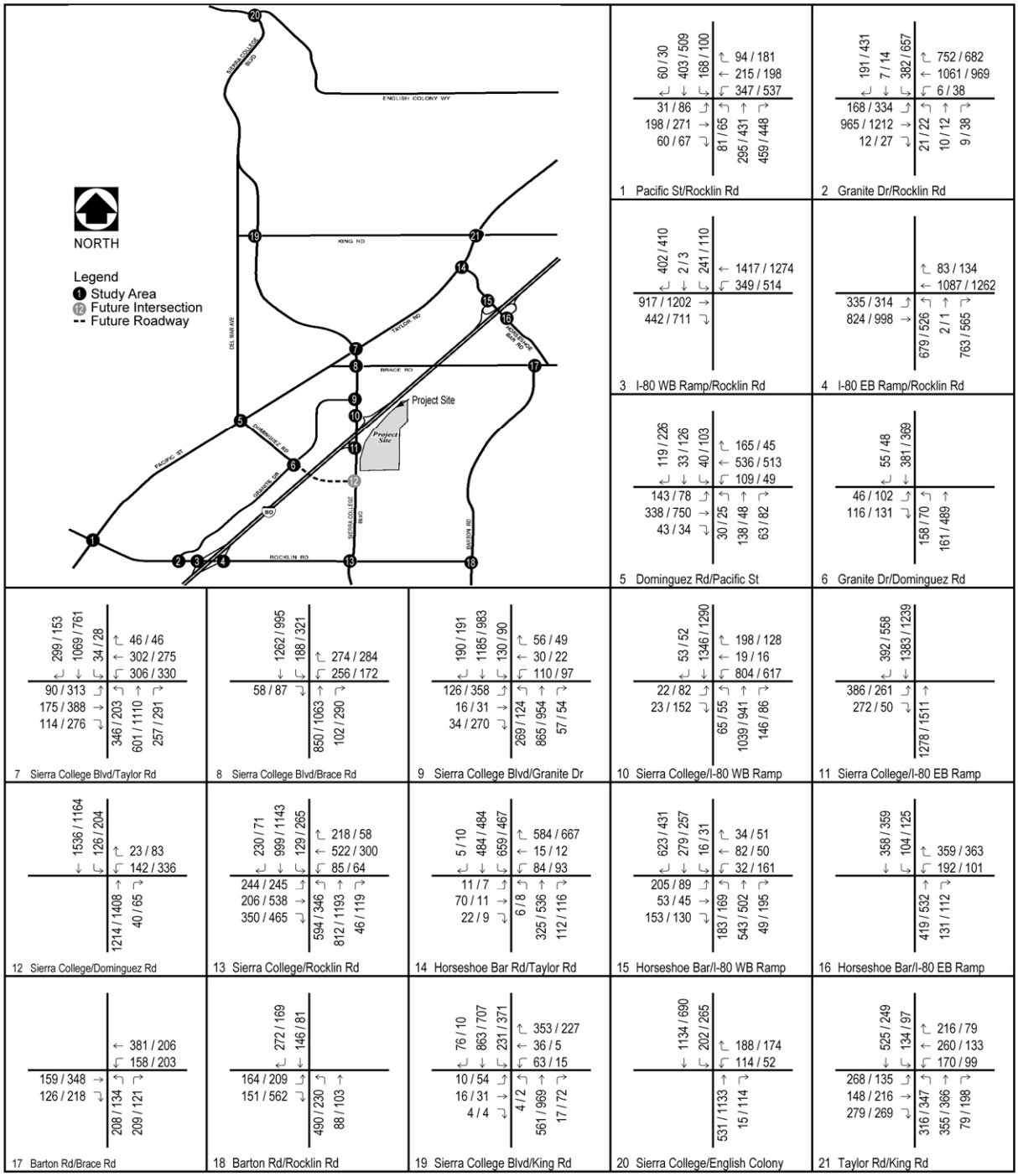
Table 6-1 Cumulative Projects				
Cumulative Project	Total Acres	Residential Land Uses (units)	Commercial/Industrial Land Uses (acres)	Population (persons)
Croftwood Estates Development	83.3	156	0	427
Rocklin 60 Development	56.9	179	0	490
Sierra College Boulevard/I-80 Interchange	N/A	0	0	0
Sierra College Center	9.83	0	9.83	0
Placer Vineyards Specific Plan	5,230	14,132	600	33,000
Placer Ranch Specific Plan	2,213	6,758*	740	18,280
Regional University and Community Specific Plan	1,136	4,387*	45	Unknown
West Roseville Specific Plan	3,162	8,390	177.2	20,810
Morgan's Orchard at Secret Ravine	15.9	68	0	186
Total	11,906.9	34,070	1,572.03	73,193
* Includes university student housing				

TRAFFIC

The City's traffic model forecasts traffic volume out to the year 2025 based on the land use and circulation system included in the City's General Plan. Therefore, for the cumulative traffic impacts, the cumulative baseline year is 2025 rather than 2020. The interchange improvements at Interstate 80/Sierra College Boulevard that are currently being constructed are assumed to be in place in 2025 for both the cumulative baseline and cumulative-plus-project scenarios. The analysis examines the traffic impacts expected to result from the addition of vehicle traffic generated by the proposed project on the cumulative traffic condition at surrounding intersections and roadway segments. The roadway map included in Exhibit 6-1 identifies the area or context of the cumulative impact analysis. This analysis also recommends mitigation measures based on the project's effects under the cumulative scenarios.

6.1.3 DEVELOPMENT OF FUTURE TRAFFIC VOLUMES

Traffic volume data for 2025 conditions were developed using forecasts from the City of Rocklin traffic model. The traffic model is based on the land use and circulation system shown in the City's General Plan. The 2025 projected volume for this analysis is based on the summary of projections method contained in the adopted General Plan. This method does not assume full buildout of all of the land uses identified in the General Plan's land use map. Instead, base-year and future-year p.m. peak-hour arterial segment volumes were forecast using the City's model, which is considered a more accurate source of information about 2025 conditions, as it reflects demographic and market assumptions superimposed on land use plans. Turn movements for the p.m. peak hour were postprocessed according to the methodology described below.



Source: LSA 2007

Year 2025 No Project Peak Hour Traffic Volumes - Without Dominguez Road **Exhibit 6-1**

6.1.4 INTERSECTION TURNING MOVEMENTS

For passenger vehicles, the base-year scenario in the City's traffic model is 2001, and the future-year scenario is 2025. The following describes the methodology used to convert traffic model volumes into a.m. and p.m. peak-hour intersection turn volumes for 2025 conditions:

1. The difference between the modeled 2001 and 2025 peak-hour directional arterial traffic volumes (for each intersection approach and departure) was identified from loaded highway network plots. This difference defines growth in traffic over the 24-year period. The incremental growth in peak-period approach and departure volumes between 2001 and 2025 was factored to develop the incremental change in peak-hour volumes.

2. The forecast growth in approach and departure volumes from 2006 to future-year 2025 was added to the existing approach and departure volumes, resulting in postprocessed forecast-year 2025 approach and departure volumes. Volume development worksheets summarizing the steps are included in Appendix E.

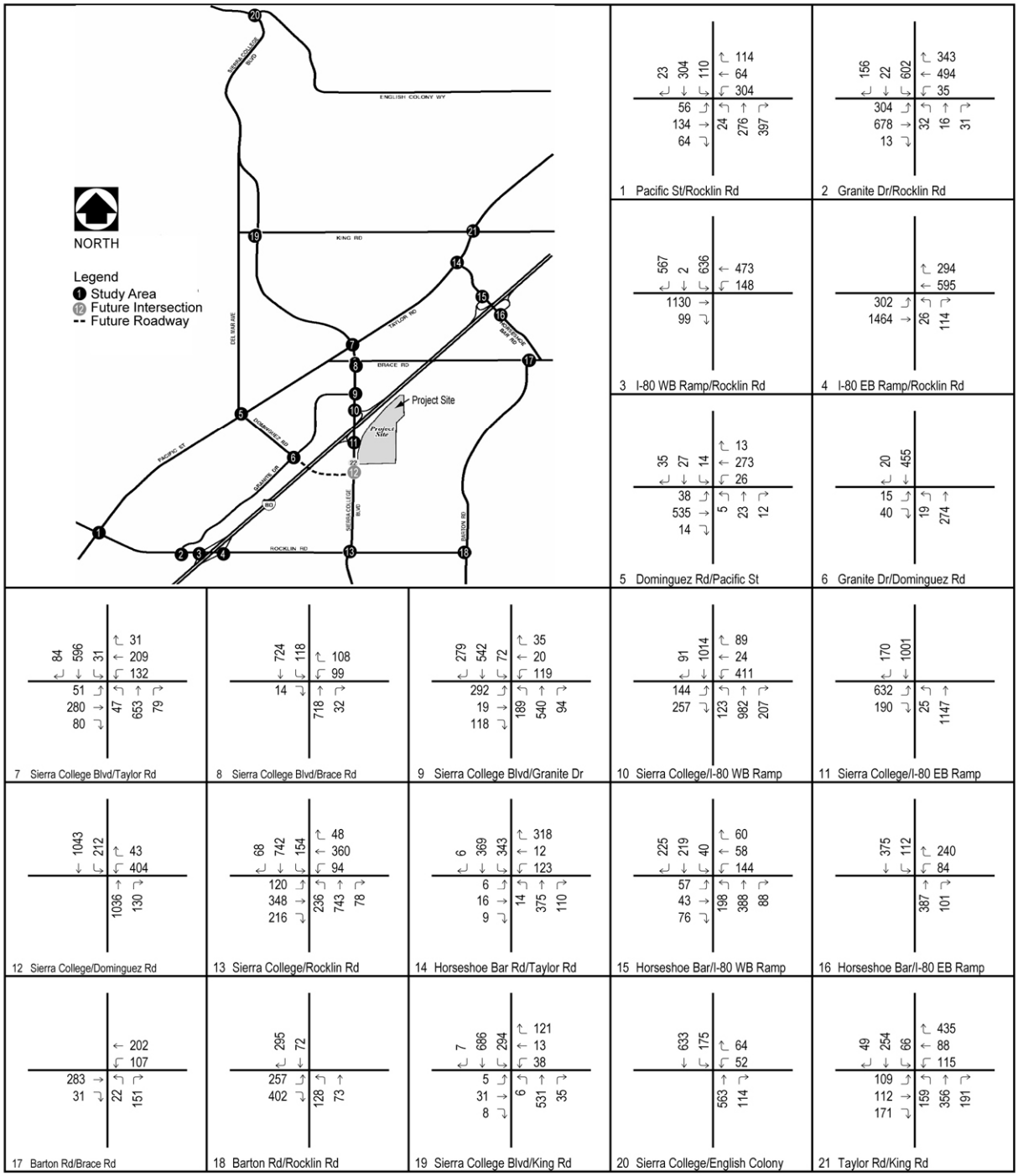
3. Forecast year 2025 turn volumes were developed using existing turn volumes and the future approach and departure volumes, based on the methodologies contained in the National Cooperative Highway Research Program Report (NCHRP) 255: *Highway Traffic Data for Urbanized Area Project Planning and Design* (Transportation Research Board, December 1982). NCHRP 255 worksheets are included in Appendix G.

The City's current traffic model is not validated for the a.m. peak hour and does not have forecasting capability for the Saturday peak hour. To validate the 2025 model a.m. peak-hour traffic volumes, the existing a.m. peak-hour traffic volumes were compared to the existing p.m. peak-hour traffic volumes and ratios between existing a.m. and p.m. peak volume were calculated. These ratios were then applied to the 2025 a.m. peak model numbers. These adjusted 2025 a.m. peak directional arterial traffic volumes were then used in the methodology described above in Step 1 to obtain the growth in traffic during the a.m. peak hour. Similarly, to develop future intersection turn movements for the Saturday peak hours, the ratios of the existing p.m. peak to Saturday peak hours were used. These ratios were applied to the postprocessed year 2025 no project p.m. peak hour traffic volumes to determine the 2025 no project Saturday peak-hour traffic volumes. Project trips were then manually added to the study area intersections to determine the 2025 plus project traffic volumes.

Year 2025 traffic volumes were forecast for two roadway networks. The network used for project impact analysis assumes that Dominguez Road terminates at Granite Drive, as in the existing condition, and is referred to as "without Dominguez Road." The alternative network assumes that Dominguez Road is extended east to Sierra College Boulevard. This alternative network is referred to as "with Dominguez Road" and is intended to provide an analysis of the effects of extending Dominguez Road. The Dominguez Road extension is in the City's Traffic Impact Fee and Capital Improvement Program and is included in the City's current General Plan although no schedule exists for construction of the new segment. The analysis of these two roadway networks is provided below with the identification of separate impacts depending upon which network is assumed. Following this analysis is an identification of the project's cumulative impacts at the Interstate 80/Sierra College Boulevard interchange and along the Interstate 80 mainline.

6.1.5 2025 NO PROJECT WITHOUT DOMINGUEZ ROAD

Weekday and Saturday peak-hour forecast traffic volumes for the 2025 no project without Dominguez Road scenario are shown in Exhibit 6-1 and Exhibit 6-2. The LOS for study area intersections and roadway segments are shown in Table 6-2 and Table 6-3. The 2025 no project without Dominguez Road traffic volume development and LOS worksheets are provided in Appendix C. All 2025 LOS include the roadway improvements assumed in the baseline condition as well as implementation of the City's General Plan roadway system as documented in the City General Plan Circulation Element. The LOS also includes the following improvements to the intersection of Sierra College Boulevard/Rocklin Road, which is planned as part of the Sierra College Boulevard widening



Source: LSA 2007

Year 2025 No Project Saturday Peak Hour Traffic Volumes - Without Dominguez Road **Exhibit 6-2**

Table 6-2
2025 No Project without Dominguez Road Condition Peak Hour Intersection Level of Service Summary

	Intersection	2025 No Project without Dominguez Road Condition					
		AM Peak Hour		PM Peak Hour		Saturday	
		V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS
1	Rocklin Road/Pacific Street [1]	0.639	B	0.674	B	0.488	A
2	Rocklin Road/Granite Drive	0.564	A	0.771	C	0.570	A
3	Rocklin Road/I-80 Westbound Ramps	0.734	C	0.993	E	0.818	D
4	Rocklin RoadI-80 Eastbound Ramps	0.878	D	0.856	D	0.490	A
5	Dominguez Road/Pacific Street [1]	0.502	A	0.657	B	0.368	A
6	Dominguez Road/Granite Drive [1]	13.0 sec	B	15.1 sec	C	11.1 sec	B
7	Sierra College Boulevard/Taylor Road (Loomis)	0.825	D	0.788	C	0.466	A
8	Sierra College Boulevard/Brace Road (Loomis)	0.497	A	0.640	B	0.288	A
9	Sierra College Boulevard/Granite Drive	0.551	A	0.559	A	0.482	A
10	Sierra College Boulevard/I-80 Westbound Ramps	0.593	A	0.592	A	0.572	A
11	Sierra College Boulevard/I-80 Eastbound Ramps	0.584	A	0.462	A	0.529	A
12	Sierra College Boulevard/Dominguez Road	0.377	A	0.533	A	0.499	A
13	Sierra College Boulevard/Rocklin Road [1]	0.705	C	0.649	B	0.392	A
14	Taylor Road/Horseshoe Bar Road (Loomis)	1.025	F	1.087	F	0.698	B
15	Horseshoe Bar Road/I-80 Westbound Ramps (Loomis)	0.475	A	0.437	A	0.401	A
16	Horseshoe Bar Road/I-80 Eastbound Ramps [2] (Loomis)	29.8 sec	D	26.9 sec	D	16.7 sec	C
17	Barton Road/Brace Road [1,2] (Loomis)	81.4 sec	F	59.9 sec	F	12.4 sec	B
18	Barton Road/Rocklin Road [1,2] (Loomis)	261.4 sec	F	20.4 sec	C	17.0 sec	C
19	Sierra College Boulevard/King Road [1] (Loomis)	0.607	B	0.744	C	0.481	A
20	Sierra College Boulevard/English Colony Way [1,2] (Placer County)	266.4 sec	F	593.7 sec	F	32.9 sec	D
21	Taylor Road/King Road [1] (Loomis)	0.802	D	0.509	A	0.589	A

Notes:
ICU V/C ratio is used for signalized intersections. HCM delay in seconds is used for unsignalized intersections.
[1] LOS C required for these intersections. LOS D acceptable for all other intersections.
[2] Peak Hour volumes meet Signal Warrant #3 of the Manual of Uniform Traffic Control Devices
Outline indicates exceeds level of service criteria

Table 6-3
2025 No Project Without Dominguez Road Daily Roadway Segment Level of Service Summary

Roadway	Segment	Capacity	Volume	Capacity Configuration	V/C	LOS
Taylor Road	King Road and Horseshoe Bar Road [1] (Loomis)	15,000	19,499	Two-lane Collector	1.30	F
	Horseshoe Bar Road and Sierra College Boulevard[1] (Loomis)	15,000	14,891	Two-lane Collector	0.99	E
Pacific Street	Sierra College Boulevard and Dominguez Road [1]	30,000	17,725	Four-lane Undivided Arterial	0.59	A
	Dominguez Road and Rocklin Road [1]	30,000	22,105	Four-lane Undivided Arterial	0.74	C
Rocklin Road	Pacific Street and Granite Drive	30,000	37,534	Four-lane Undivided Arterial	1.25	F
	I-80 and Sierra College Boulevard	30,000	16,346	Four-lane Undivided Arterial	0.54	A
	Sierra College Boulevard and Barton Road [1] (Loomis)	30,000	14,281	Four-lane Undivided Arterial	0.48	A
Barton Road	Rocklin Road and Brace Road [1] (Loomis)	15,000	6,372	Two-lane Collector	0.42	A
Horseshoe Bar Road	I-80 and Brace Road (Loomis)	15,000	9,983	Two-lane Collector	0.67	B
Brace Road	I-80 and Barton Road [1] (Loomis)	15,000	9,754	Two-lane Collector	0.65	B
	I-80 and Sierra College Boulevard [1] (Loomis)	15,000	9,202	Two-lane Collector	0.61	B
Sierra College Boulevard	English Colony Way and King Road [1] (Placer County)	30,000	22,994	Four-lane Undivided Arterial	0.77	C
	King Road and Taylor Road [1] (Loomis)	30,000	21,382	Four-lane Undivided Arterial	0.71	C
	Taylor Road and I-80	50,525	32,940	Six-lane Arterial	0.65	B
	I-80 and Dominguez Road	50,525	26,424	Six-lane Arterial	0.52	A
	Dominguez Road and Rocklin Road [1]	50,525	32,628	Six-lane Arterial	0.65	B
Granite Drive	Dominguez Road and Sierra College Boulevard [1]	30,000	11,367	Four-lane Undivided Arterial	0.38	A
	Dominguez Road and Rocklin Road [1]	30,000	14,008	Four-lane Undivided Arterial	0.47	A
Dominguez Road	Taylor Road and Granite Drive [1]	15,000	4,942	Two-lane Collector	0.33	A
King Road	Sierra College Boulevard and Taylor Road [1] (Loomis)	15,000	7,037	Two-lane Collector	0.47	A

Notes:
[1] LOS C required for these segments. LOS D acceptable for all other segments.
Outline indicates exceeds level of service criteria.
Shaded areas indicate roadway Improvements consistent with City of Rocklin General Plan, Town of Loomis General Plan, and the Horseshoe Bar/Penryn Community Plan.

project: (1) Northbound – addition of a second left, third through, and exclusive right-turn lanes; (2) Southbound – addition of a third through and exclusive right-turn lanes; and (3) Westbound – addition of a second left and second through lanes. The 2025 intersection geometrics and traffic control are shown in Exhibit 6-3.

As shown in Table 6-2, the following six intersections are forecast to operate at unsatisfactory LOS in the 2025 No Project without Dominguez Road condition:

- Rocklin Road/I-80 Westbound Ramps
- Taylor Road/Horseshoe Bar Road (Loomis)
- Barton Road/Brace Road (Loomis)
- Barton Road/Rocklin Road (Loomis)
- Sierra College Boulevard/English Colony Way (Placer County)
- Taylor Road/King Road (Loomis)

The results of the roadway analysis as shown in Table 6-3 indicate that most of the study area roadway segments are forecast to operate within their daily roadway capacities with the exception of the following three segments:

- Taylor Road between King Road and Horseshoe Bar Road (Loomis)
- Taylor Road between Horseshoe Bar Road and Sierra College Boulevard (Loomis)
- Rocklin Road between Pacific Street and Granite Drive

6.1.6 2025 PLUS PROJECT WITHOUT DOMINGUEZ ROAD

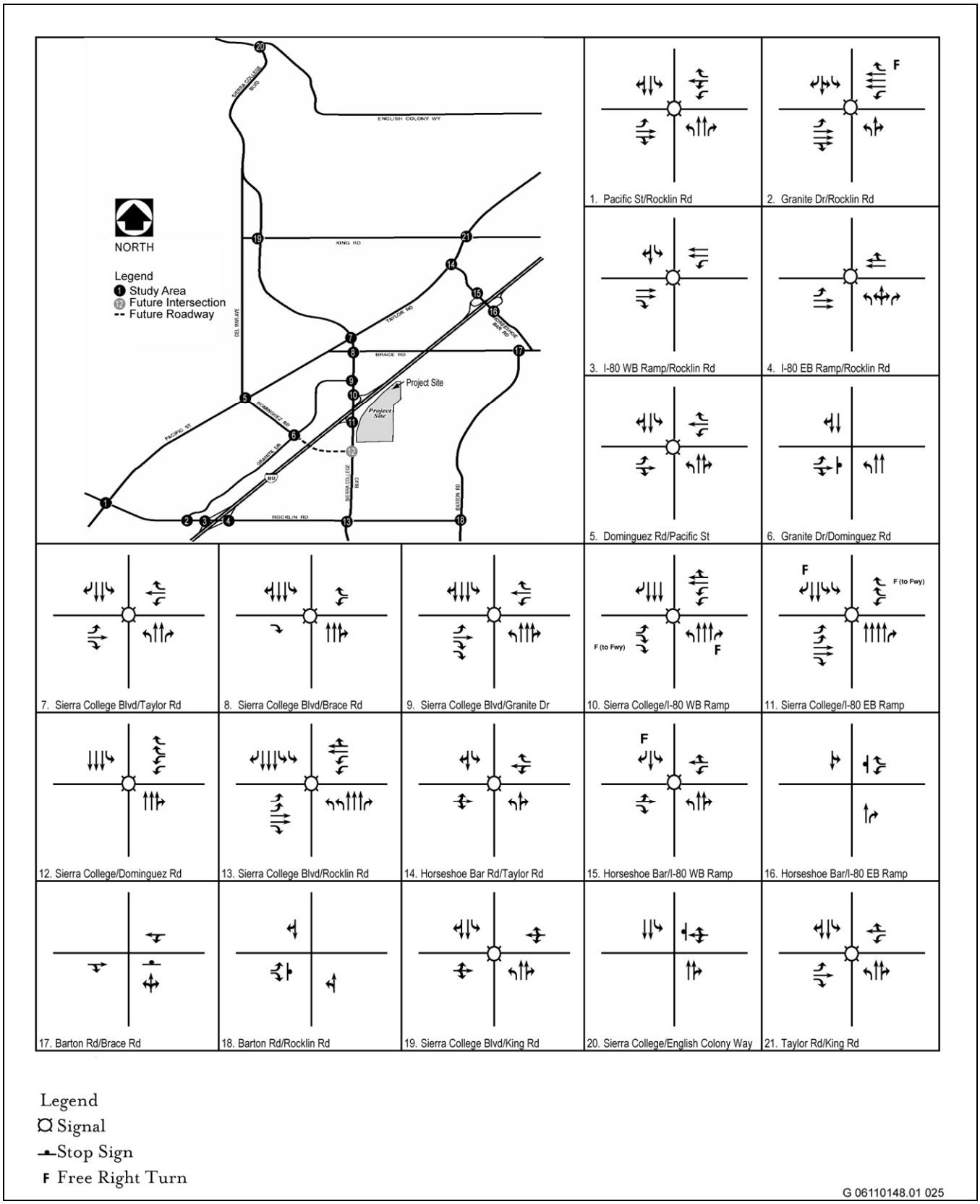
Traffic volumes generated by the proposed project were added to the 2025 no project traffic volumes, and LOS were calculated for the 2025 plus project scenario. Weekday and Saturday peak-hour forecast traffic volumes for the 2025 plus project without Dominguez Road scenario are shown in Exhibit 6-4 and Exhibit 6-5. The LOS for study area intersections and roadway segments in the 2025 plus project without Dominguez Road scenario are shown in Table 6-4 and Table 6-5. The 2025 plus project without Dominguez Road LOS worksheets are provided in Appendix C.

The proposed mitigation measures for the 2025 plus project impacts (without Dominguez Road scenario) are shown in Exhibit 6-6. These mitigation measures are also identified following the specific traffic impacts described below. Per Town of Loomis[1] and Horseshoe Bar/Penryn Community Plan, Sierra College Boulevard is planned to be widened to a four-lane arterial between Taylor Road and SR-193. This improvement is assumed to occur prior to 2025. In addition, the Town of Loomis has a proposed signal installation at the intersection of Barton Road/Rocklin Road for the near future.

IMPACT 6-1 Rocklin Road/I-80 Westbound Ramps Without Dominguez Road. *The addition of project-related traffic to cumulative traffic volumes would degrade traffic operations at the westbound ramps of the Rocklin Road/I-80 intersection during the p.m. peak hour from LOS E to LOS F. This impact would be considered* ***significant****.*

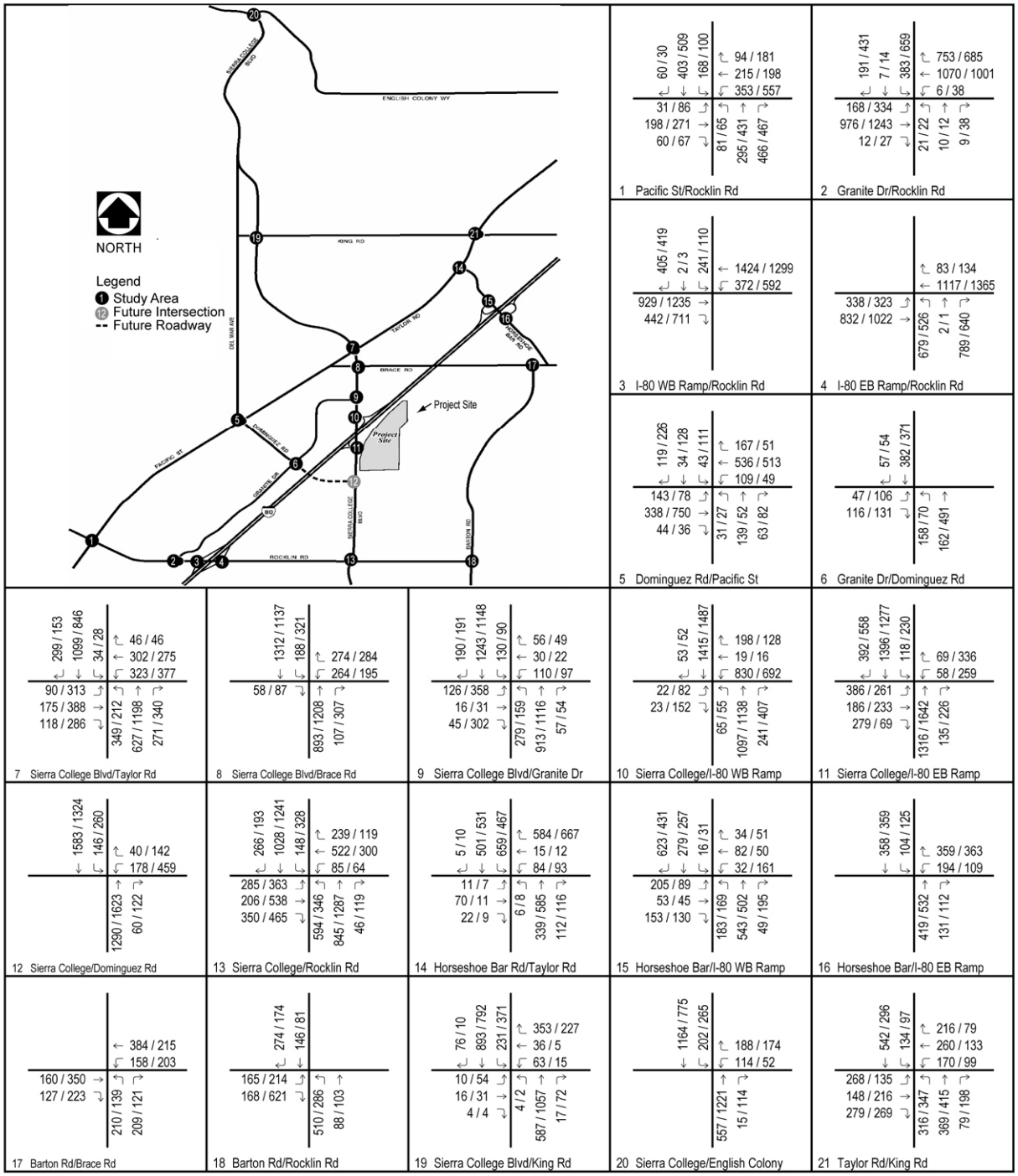
The addition of project-related traffic to cumulative traffic volumes would degrade traffic operations at the westbound ramps of the Rocklin Road/I-80 intersection (Table 6-4). For the cumulative condition, this intersection operates at an LOS E and would degrade to LOS F with the addition of project traffic. This degradation would cause the intersection's unsatisfactory LOS to deteriorate by one letter grade. Because the cumulative impacts of development are already significant and the project would exceed the established significance threshold, the project would cause a **significant** cumulative impact.

[1] Brian Fraggio, Town of Loomis. Personal communication, January 17, 2007.



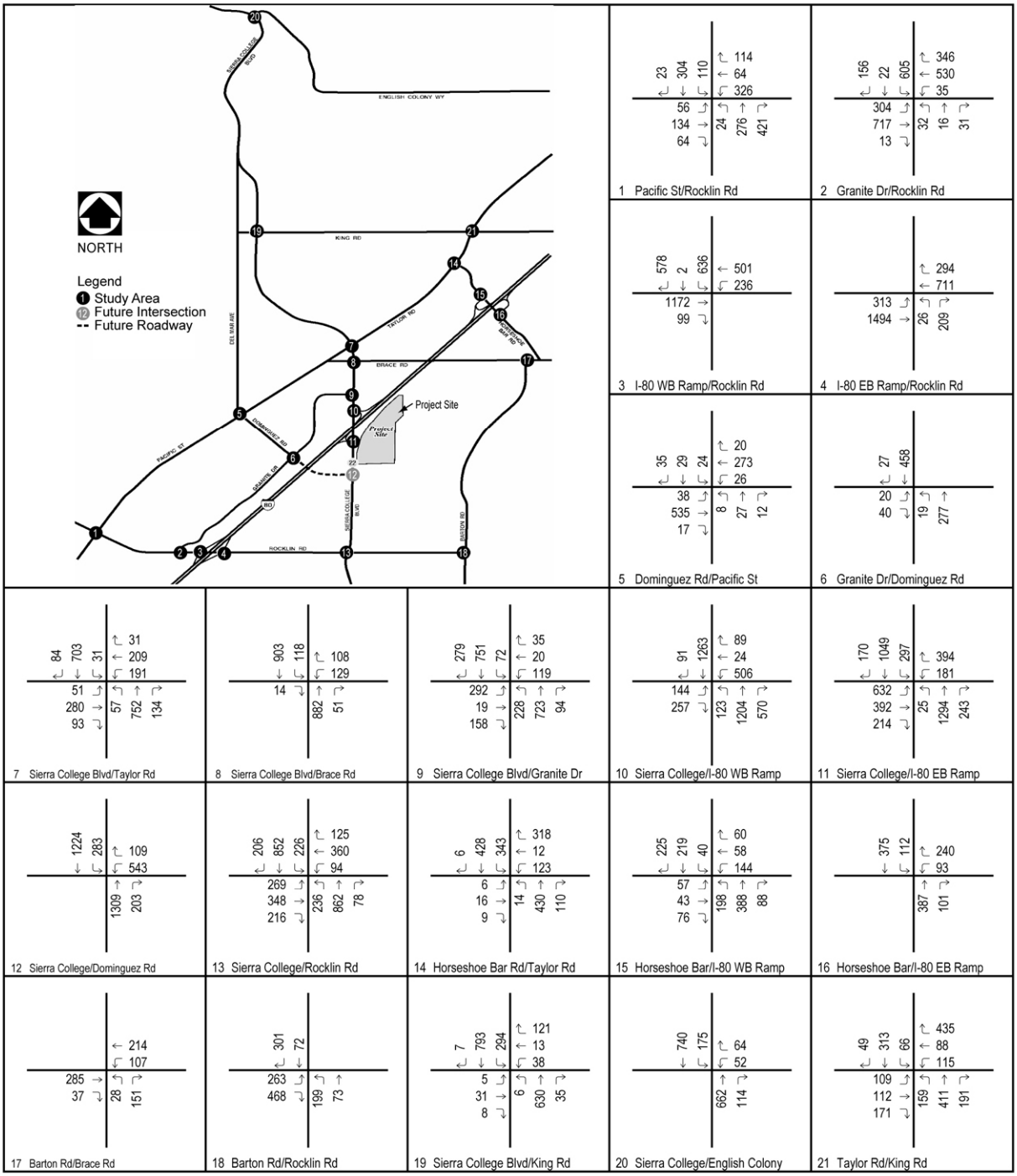
Source: LSA 2007

Year 2025 Geometrics and Traffic Control **Exhibit 6-3**



Source: LSA 2007

Year 2025 Plus Project Peak Hour Traffic Volumes - Without Dominguez Road **Exhibit 6-4**



Source: LSA 2007

Year 2025 Plus Project Saturday Peak Hour Traffic Volumes - Without Dominguez Road Exhibit 6-5

Table 6-4
2025 Plus Project without Dominguez Road Condition Peak Hour Intersection Level of Service Summary

	Intersection	2025 No Project without Dominguez Road Condition						2025 Plus Project without Dominguez Road Condition					
		AM Peak Hour		PM Peak Hour		Saturday		AM Peak Hour		PM Peak Hour		Saturday	
		V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS
1	Rocklin Road/Pacific Street [1]	0.639	B	0.674	B	0.488	A	0.645	B	0.692	B	0.510	A
2	Rocklin Road/Granite Drive	0.564	A	0.771	C	0.570	A	0.567	A	0.780	C	0.582	A
3	Rocklin Road/I-80 Westbound Ramps	0.734	C	0.993	E	0.818	D	0.754	C	1.045	F	0.884	D
4	Rocklin RoadI-80 Eastbound Ramps	0.878	D	0.856	D	0.490	A	0.895	D	0.909	E	0.564	A
5	Dominguez Road/Pacific Street [1]	0.502	A	0.657	B	0.368	A	0.502	A	0.659	B	0.377	A
6	Dominguez Road/Granite Drive [1]	13.0 sec	B	15.1 sec	C	11.1 sec	B	13.1 sec	B	15.5 sec	C	11.5 sec	B
7	Sierra College Boulevard/Taylor Road (Loomis)	0.825	D	0.788	C	0.466	A	0.846	D	0.848	D	0.532	A
8	Sierra College Boulevard/Brace Road (Loomis)	0.497	A	0.640	B	0.288	A	0.511	A	0.673	B	0.347	A
9	Sierra College Boulevard/Granite Drive	0.551	A	0.559	A	0.482	A	0.569	A	0.614	B	0.544	A
10	Sierra College Boulevard/I-80 Westbound Ramps	0.593	A	0.592	A	0.572	A	0.616	B	0.657	B	0.654	B
11	Sierra College Boulevard/I-80 Eastbound Ramps	0.584	A	0.462	A	0.529	A	0.634	B	0.678	B	0.782	C
12	Sierra College Boulevard/Dominguez Road	0.377	A	0.533	A	0.499	A	0.421	A	0.663	B	0.658	B
13	Sierra College Boulevard/Rocklin Road [1]	0.705	C	0.649	B	0.392	A	0.731	C	0.672	B	0.487	A
14	Taylor Road/Horseshoe Bar Road (Loomis)	1.025	F	1.087	F	0.698	B	1.033	F [2]	1.116	F [2]	0.732	C

Table 6-4
2025 Plus Project without Dominguez Road Condition Peak Hour Intersection Level of Service Summary

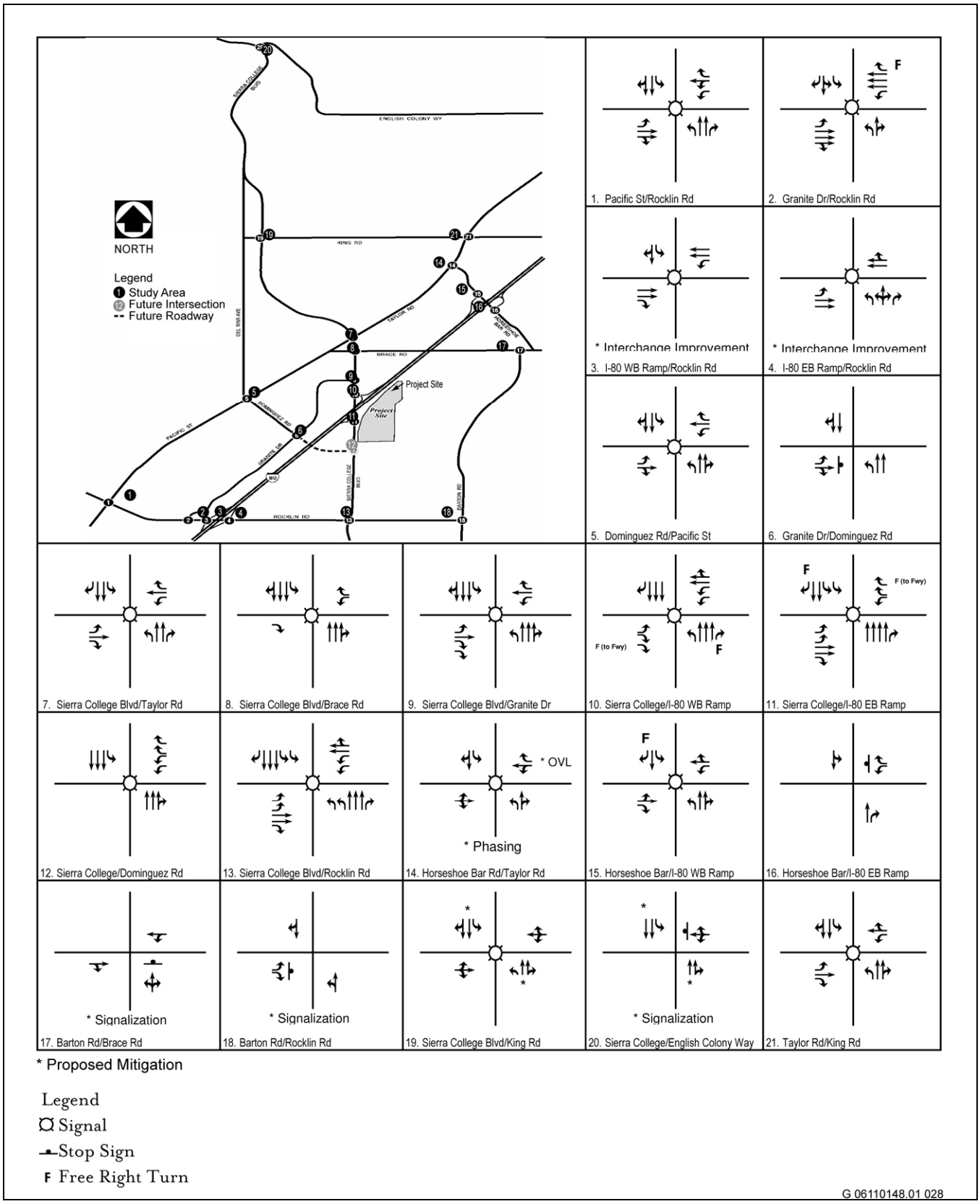
	Intersection	2025 No Project without Dominguez Road Condition						2025 Plus Project without Dominguez Road Condition					
		AM Peak Hour		PM Peak Hour		Saturday		AM Peak Hour		PM Peak Hour		Saturday	
		V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS
15	Horseshoe Bar Road/I-80 Westbound Ramps (Loomis)	0.475	A	0.437	A	0.401	A	0.475	A	0.437	A	0.401	A
16	Horseshoe Bar Road/I-80 Eastbound Ramps [3] (Loomis)	29.8 sec	D	26.9 sec	D	16.7 sec	C	30.2 sec	D	27.7 sec	D	17.3 sec	C
17	Barton Road/Brace Road [1,3] (Loomis)	81.4 sec	F	59.9 sec	F	12.4 sec	B	85.2 sec	F [2]	68.0 sec	F	12.8 sec	B
18	Barton Road/Rocklin Road [1,3] (Loomis)	261.4 sec	F	20.4 sec	C	17.0 sec	C	304.7 sec	F	27.6 sec	D	23.9 sec	C
19	Sierra College Boulevard/King Road [1] (Loomis)	0.607	B	0.744	C	0.481	A	0.615	B	0.771	C	0.511	A
20	Sierra College Boulevard/English Colony Way [1, 3] (Placer County)	266.4 sec	F	593.7 sec	F	32.9 sec	D	305.0 sec	F	840.9 sec	F	47.3 sec	E
21	Taylor Road/King Road [1] (Loomis)	0.802	D	0.509	A	0.589	A	0.807	D [2]	0.523	A	0.605	B

Notes:
ICU V/C ratio is used for signalized intersections. HCM delay in seconds is used for unsignalized intersections.
[1] LOS C required for these intersections. LOS D acceptable for all other intersections.
[2] Project impact is less than 5% of total intersection V/C or delay and therefore not a significant impact.
[3] Peak Hour volumes meet Signal Warrant #3 of the Manual of Uniform Traffic Control Devices
* Delay exceeds 1000 seconds
Outline indicates exceeds level of service criteria
Shaded areas indicate a Significant Impact

Table 6-5
2025 Plus Project Without Dominguez Road Daily Roadway Segment Level of Service Summary

Roadway	Segment	Capacity	Volume	Capacity Configuration	V/C	LOS
Taylor Road	King Road and Horseshoe Bar Road [1] (Loomis)	15,000	20,459	Two-lane Collector	1.36	F
	Horseshoe Bar Road and Sierra College Boulevard[1] (Loomis)	15,000	15,471	Two-lane Collector	1.03	F
Pacific Street	Sierra College Boulevard and Dominguez Road [1]	30,000	18,235	Four-lane Undivided Arterial	0.61	B
	Dominguez Road and Rocklin Road [1]	30,000	22,385	Four-lane Undivided Arterial	0.75	C
Rocklin Road	Pacific Street and Granite Drive	30,000	37,864	Four-lane Undivided Arterial	1.26	F
	I-80 and Sierra College Boulevard	30,000	18,006	Four-lane Undivided Arterial	0.60	B
	Sierra College Boulevard and Barton Road [1] (Loomis)	30,000	15,501	Four-lane Undivided Arterial	0.52	A
Barton Road	Rocklin Road and Brace Road [1] (Loomis)	15,000	6,962	Two-lane Collector	0.46	A
Horseshoe Bar Road	I-80 and Brace Road (Loomis)	15,000	10,033	Two-lane Collector	0.67	B
Brace Road	I-80 and Barton Road [1] (Loomis)	15,000	9,864	Two-lane Collector	0.66	B
	I-80 and Sierra College Boulevard [1] (Loomis)	15,000	9,202	Two-lane Collector	0.61	B
Sierra College Boulevard	English Colony Way and King Road [1] (Placer County)	30,000	24,724	Four-lane Undivided Arterial	0.82	D
	King Road and Taylor Road [1] (Loomis)	30,000	23,682	Four-lane Undivided Arterial	0.79	C
	Taylor Road and I-80	50,525	36,360	Six-lane Arterial	0.72	C
	I-80 and Dominguez Road	50,525	35,494	Six-lane Arterial	0.70	B
	Dominguez Road and Rocklin Road [1]	50,525	36,348	Six-lane Arterial	0.72	C
Granite Drive	Dominguez Road and Sierra College Boulevard [1]	30,000	11,387	Four-lane Undivided Arterial	0.38	A
	Dominguez Road and Rocklin Road [1]	30,000	14,068	Four-lane Undivided Arterial	0.47	A
Dominguez Road	Taylor Road and Granite Drive [1]	15,000	5,042	Two-lane Collector	0.34	A
King Road	Sierra College Boulevard and Taylor Road [1] (Loomis)	15,000	7,037	Two-lane Collector	0.47	A

Notes:
[1] LOS C required for these segments. LOS D acceptable for all other segments.
Outline indicates exceeds level of service criteria.
Shaded areas indicate roadway Improvements consistent with City of Rocklin General Plan, Town of Loomis General Plan, and the Horseshoe Bar/Penryn Community Plan.



Source: LSA 2007

Year 2025 Plus Project Without Dominguez Road – Mitigations **Exhibit 6-6**

Mitigation Measure 6-1 Rocklin Road/I-80 Westbound Ramps Without Dominguez Road

Implement Mitigation Measure 4.2-1.

Level of Significance after Mitigation

As identified in Table 6-6, with implementation of the identified mitigation measure, the LOS would be improved to LOS B during the a.m. and p.m. peak hours, and LOS C during the Saturday peak hour. This would be an acceptable level and this impact would be considered less than significant. In other words, by paying the traffic fee required by Mitigation Measure 4.2-1, the applicant would be paying its incremental fair share towards constructing facilities that will render the significant cumulative impact less than significant.

IMPACT 6-2 Rocklin Road/I-80 Eastbound Ramps Without Dominguez Road. *The addition of project-related traffic to cumulative traffic volumes would degrade traffic operations at the eastbound ramps of the Rocklin Road/I-80 intersection from LOS D to LOS E during the p.m. peak hour. This impact would be considered* ***significant****.*

The addition of project-related traffic to cumulative traffic volumes would degrade traffic operations at the eastbound ramps of the Rocklin Road/I-80 intersection (Table 6-4). For the cumulative condition, this intersection operates at an LOS D with a volume/capacity ratio of 0.856 during the p.m. peak hour. The project would degrade the intersection operations to an LOS E with a volume/capacity ratio of 0.909 during the p.m. peak hour. This degradation would cause the intersection's LOS to deteriorate from a satisfactory to an unsatisfactory condition. Because the project would exceed the established significance threshold, the project would cause a **significant** cumulative impact.

Mitigation Measure 6-2 Rocklin Road/I-80 Eastbound Ramps Without Dominguez Road

Implement Mitigation Measure 4.2-1 in order to reduce westbound through traffic at the intersection of Rocklin Road/I-80 eastbound ramps and improve operations at this intersection to acceptable levels.

Level of Significance after Mitigation

As identified in Table 6-6, with implementation of the identified mitigation measure, the LOS would be improved to LOS C during the a.m. and p.m. peak hours, and LOS A during the Saturday peak hour. This would be an acceptable level and this impact would be considered less than significant. In other words, by paying the traffic fee required by Mitigation Measure 4.2-1, the applicant would be paying its incremental fair share towards constructing facilities that will render the significant cumulative impact less than significant.

IMPACT 6-3 Barton Road/Brace Road Intersection Without Dominguez Road. *The addition of project-related traffic to cumulative traffic volumes would degrade traffic operations at the Barton Road/Brace Road intersection during the a.m. and p.m. peak hour. Because this intersection already operates unacceptably and the project's contribution would be greater than 5 percent, this impact would be considered* ***significant****.*

This intersection is operating at an LOS F during the a.m. and p.m. peak hours in the cumulative condition (Table 6-4). The intersection is forecast to meet the peak-hour traffic signal warrant in the cumulative without Dominguez Road extension scenario. The intersection would continue to meet the peak-hour traffic signal warrant with the addition of project traffic. Because the cumulative impacts of development are already significant and the project would exceed the established significance threshold of a contribution of greater than 5 percent, the project would cause a **significant** cumulative impact.

Table 6-6
2025 Plus Project without Dominguez Road Condition Peak Hour Intersection Level of Service Summary – With Mitigation

	Intersection	2025 Plus Project without Dominguez Road Condition						2025 Plus Project without Dominguez Road Condition - With Mitigation					
		AM Peak Hour		PM Peak Hour		Saturday		AM Peak Hour		PM Peak Hour		Saturday	
		V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS
1	Rocklin Road/Pacific Street [1]	0.645	B	0.692	B	0.510	A	0.645	B	0.692	B	0.510	A
2	Rocklin Road/Granite Drive	0.567	A	0.780	C	0.582	A	0.567	A	0.780	C	0.582	A
3	Rocklin Road/I-80 Westbound Ramps	0.754	C	1.045	F	0.884	D	0.678	B	0.687	B	0.741	C
4	Rocklin RoadI-80 Eastbound Ramps	0.895	D	0.909	E	0.564	A	0.782	C	0.730	C	0.522	A
5	Dominguez Road/Pacific Street [1]	0.502	A	0.659	B	0.377	A	0.502	A	0.659	B	0.377	A
6	Dominguez Road/Granite Drive [1]	13.1 sec	B	15.5 sec	C	11.5 sec	B	13.1 sec	B	15.5 sec	C	11.5 sec	B
7	Sierra College Boulevard/Taylor Road (Loomis)	0.846	D	0.848	D	0.532	A	0.846	D	0.848	D	0.532	A
8	Sierra College Boulevard/Brace Road (Loomis)	0.511	A	0.673	B	0.347	A	0.511	A	0.673	B	0.347	A
9	Sierra College Boulevard/Granite Drive	0.569	A	0.614	B	0.544	A	0.569	A	0.614	B	0.544	A
10	Sierra College Boulevard/I-80 Westbound Ramps	0.616	B	0.657	B	0.654	B	0.616	B	0.657	B	0.654	B
11	Sierra College Boulevard/I-80 Eastbound Ramps	0.634	B	0.678	B	0.782	C	0.634	B	0.678	B	0.782	C
12	Sierra College Boulevard/Dominguez Road	0.421	A	0.663	B	0.658	B	0.421	A	0.663	B	0.658	B
13	Sierra College Boulevard/Rocklin Road [1]	0.731	C	0.672	B	0.487	A	0.731	C	0.672	B	0.487	A
14	Taylor Road/Horseshoe Bar Road (Loomis)	1.033	F	1.116	F	0.732	C	1.033	F	1.116	F	0.732	C
15	Horseshoe Bar Road/I-80 Westbound Ramps (Loomis)	0.475	A	0.437	A	0.401	A	0.475	A	0.437	A	0.401	A

Table 6-6
2025 Plus Project without Dominguez Road Condition Peak Hour Intersection Level of Service Summary – With Mitigation

	Intersection	2025 Plus Project without Dominguez Road Condition						2025 Plus Project without Dominguez Road Condition - With Mitigation					
		AM Peak Hour		PM Peak Hour		Saturday		AM Peak Hour		PM Peak Hour		Saturday	
		V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS
16	Horseshoe Bar Road/I-80 Eastbound Ramps [2] (Loomis)	30.2 sec	D	27.7 sec	D	17.3 sec	C	30.2 sec	D	27.7 sec	D	17.3 sec	C
17	Barton Road/Brace Road [1, 2] (Loomis)	85.2 sec	F	68.0 sec	F	12.8 sec	B	0.582	A	0.628	B	0.368	A
18	Barton Road/Rocklin Road [1, 2] (Loomis)	304.7 sec	F	27.6 sec	D	23.9 sec	C	0.665	B	0.704	C	0.630	B
19	Sierra College Boulevard/King Road [1] (Loomis)	0.615	B	0.771	C	0.511	A	0.615	B	0.771	C	0.511	A
20	Sierra College Boulevard/English Colony Way [1, 2] (Placer County)	305.0 sec	F	840.9 sec	F	47.3 sec	E	0.536	A	0.702	C	0.491	A
21	Taylor Road/King Road [1] (Loomis)	0.807	D	0.523	A	0.605	B	0.807	D	0.523	A	0.605	B

Notes:
ICU V/C ratio is used for signalized intersections. HCM delay in seconds is used for unsignalized intersections.
[1] LOS C required for these intersections. LOS D acceptable for all other intersections.
[2] Peak Hour volumes meet Signal Warrant #3 of the Manual of Uniform Traffic Control Devices
* Delay exceeds 1000 seconds
Outline = Mitigated condition
Shaded areas indicate a Significant Impact

Mitigation Measure 6-3 Barton Road/Brace Road Intersection Without Dominguez Road

The project applicant shall pay their fair share to the signalization of this intersection. The project applicant shall pay a traffic impact fee in an amount that constitutes the project's fair share contribution to the construction of the proposed improvement as part of the City's development review process, consistent with the City's CIP program, SPRTA program, or other applicable funding program.

Level of Significance after Mitigation

As identified in Table 6-6, with implementation of the identified mitigation measure, the LOS would be improved to LOS A during the a.m. and Saturday peak hours, and LOS B during the p.m. peak hour. This would be an acceptable level and this impact would be considered less than significant.

IMPACT 6-4 Barton Road/Rocklin Road Intersection Without Dominguez Road. *The addition of project-related traffic to cumulative traffic volumes would degrade traffic operations at the Barton Road/Rocklin Road intersection during the a.m. and p.m. peak hour. Because this intersection already operates unacceptably and the project's contribution would be greater than 5 percent, this impact would be considered* ***significant****.*

This intersection is operating at an LOS F during the a.m. peak hours in the cumulative condition (Table 6-4). The intersection is forecast to meet the peak-hour traffic signal warrant in the cumulative without Dominguez Road extension scenario. The intersection would continue to meet the peak-hour traffic signal warrant with the addition of project traffic. Because the cumulative impacts of development are already significant and the project would exceed the established significance threshold of a contribution of greater than 5 percent, the project would cause a **significant** cumulative impact.

Mitigation Measure 6-4 Barton Road/Rocklin Road Intersection Without Dominguez Road

The project applicant shall pay their fair share to the signalization of this intersection. The project applicant shall pay a traffic impact fee in an amount that constitutes the project's fair share contribution to the construction of the proposed improvement as part of the City's development review process, consistent with the City's CIP program, SPRTA program, or other applicable funding program.

Level of Significance after Mitigation

As identified in Table 6-6, with implementation of the identified mitigation measure, the LOS would be improved to LOS B during the a.m. and Saturday peak hours, and LOS C during the p.m. peak hour. This would be an acceptable level and this impact would be considered less than significant.

IMPACT 6-5 Sierra College Boulevard/English Colony Way Intersection Without Dominguez Road. *The addition of project-related traffic to baseline traffic volumes would degrade traffic operations at the Sierra College Boulevard/English Colony Way intersection during the a.m. and p.m. peak hour and during Saturday conditions. Because this intersection already operates unacceptably and the project's contribution would be greater than 5 percent, this impact would be considered* ***significant****.*

This intersection is operating at an LOS F during the a.m. and p.m. peak hours in the cumulative condition (Table 6-4). This intersection is also operating at an LOS D during the Saturdays in the cumulative condition. The intersection is forecast to meet the peak-hour traffic signal warrant in the cumulative without Dominguez Road extension scenario. The intersection would continue to meet the peak-hour traffic signal warrant with the addition of project traffic. Because the cumulative impacts of development are already significant and the project would exceed the established significance threshold of a contribution of greater than 5 percent, the project would cause a **significant** cumulative impact.

Mitigation Measure 6-5 Sierra College Boulevard/English Colony Way Intersection Without Dominguez Road

The project applicant shall pay their fair share to the signalization of this intersection. The project applicant shall pay a traffic impact fee in an amount that constitutes the project's fair share contribution to the construction of the proposed improvement as part of the City's development review process, consistent with the City's CIP program, SPRTA program, or other applicable funding program.

Level of Significance after Mitigation

As identified in Table 6-6, with implementation of the identified mitigation measure, the LOS would be improved to LOS A during the a.m. and Saturday peak hours, and LOS C during the p.m. peak hour. This would be an acceptable level and this impact would be considered less than significant.

IMPACT 6-6 Taylor Road /Horseshoe Bar Road Intersection Without Dominguez Road. *The addition of project-related traffic to cumulative traffic volumes would degrade traffic operations at the Taylor Road/Horseshoe Bar Road intersection. Although this intersection already operates unacceptably, the project's contribution would represent less than a 5 percent decrease in the volume/capacity ratio. Therefore, this impact would be considered* ***less than significant****.*

The addition of project-related traffic to cumulative traffic volumes would degrade traffic operations at the Taylor Road/Horseshoe Bar Road intersection (Table 6-4). For the cumulative condition, the Taylor Road/Horseshoe Bar Road intersection would operate at an LOS F with a volume/capacity ratio of 1.025 during the a.m. peak hour and 1.087 during the p.m. peak hour. The intersection would continue to operate at LOS F with the proposed project and the volume/capacity ratio would be degraded to 1.033 during the a.m. peak hour and 1.116 during the p.m. peak hour. This degradation represents less than a 5 percent decrease in the volume/capacity ratio.

Because the volume/capacity ratio would not be degraded by more than 5 percent for this intersection with the contribution of project traffic, the project's impacts at this intersection would be considered **less than significant**.

Mitigation Measure 6-6 Taylor Road /Horseshoe Bar Road Intersection Without Dominguez Road

No mitigation is necessary.

Level of Significance after Mitigation

The project's impacts on the Taylor Road/Horseshoe Bar Road intersection would be considered less than significant.

IMPACT 6-7 Taylor Road/King Road Intersection Without Dominguez Road. *The addition of project-related traffic to cumulative traffic volumes would degrade traffic operations at the Taylor Road/King Road intersection. Although this intersection already operates unacceptably, the project's contribution would represent less than a 5 percent decrease in the volume/capacity ratio. Therefore, this impact would be considered* ***less than significant****.*

The addition of project-related traffic to cumulative traffic volumes would degrade traffic operations at the Taylor Road/King Road intersection (Table 6-4). For the cumulative condition, the Taylor Road/King Road intersection would operate at an LOS D with a volume/capacity ratio of 0.802 during the a.m. peak hour. The intersection would continue to operate at LOS D with the proposed project and the volume/capacity ratio would be degraded to 0.807, which represents less than a 5 percent decrease.

Because the volume/capacity ratio would not be degraded by more than 5 percent for this intersection with the contribution of project traffic, the project's impacts at this intersection would be considered **less than significant**.

Mitigation Measure 6-7 Taylor Road/King Road Intersection Without Dominguez Road

No mitigation is necessary.

Level of Significance after Mitigation

The project's impacts on the Taylor Road/King Road intersection would be considered less than significant.

IMPACT 6-8 Roadway Segments Without Dominguez Road. *The proposed project would cause four roadway segments to exceed the threshold of daily capacity. However, in both the a.m. and p.m. peak hours, the traffic on all four roadway segments are forecast to operate with satisfactory volume/capacity ratios in both peak hours with project conditions. Therefore, the project's impacts on roadway segments would be considered* ***less than significant****.*

As shown in Table 6-5, the results of the roadway segment analysis indicate that the following four roadway segments are forecast to operate with unsatisfactory LOS in the 2025 plus project without Dominguez Road scenario:

- Taylor Road between King Road and Horseshoe Bar Road (Loomis)
- Taylor Road between Horseshoe Bar Road and Sierra College Boulevard (Loomis)
- Rocklin Road between Pacific Street and Granite Drive
- Sierra College Boulevard between English Colony Way and King Road (Placer County)

These segments would exceed the threshold of daily capacity in the cumulative plus project scenario. However, in both the a.m. and p.m. peak hours, as well as the Saturday peak hour, the traffic on all four roadway segments is forecast to operate with satisfactory volume/capacity ratios with project conditions, as shown in Table 6-7. Therefore, the project's impacts on roadway segments would be considered **less than significant**.

Mitigation Measure 6-8 Roadway Segments Without Dominguez Road

No mitigation is necessary.

Level of Significance after Mitigation

The project's cumulative impacts on roadway segments would be considered less than significant.

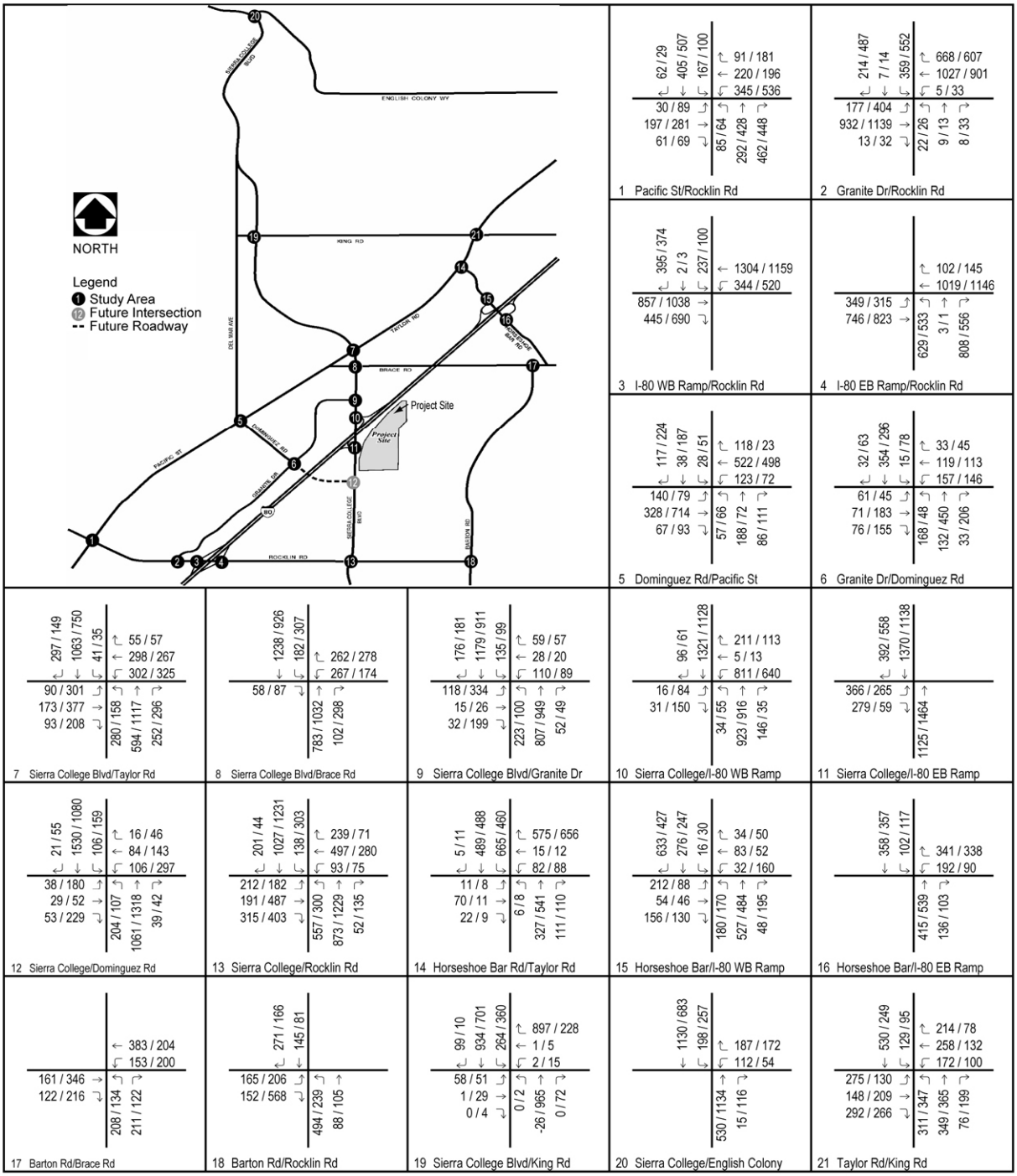
6.1.7 DOMINGUEZ ROAD ANALYSIS

An analysis of forecast year 2025 traffic volumes was prepared assuming that Dominguez Road is extended east to Sierra College Boulevard. This alternative network is referred to as "with Dominguez Road" and is intended to provide an analysis of the effects of extending Dominguez Road.

2025 NO PROJECT WITH DOMINGUEZ ROAD

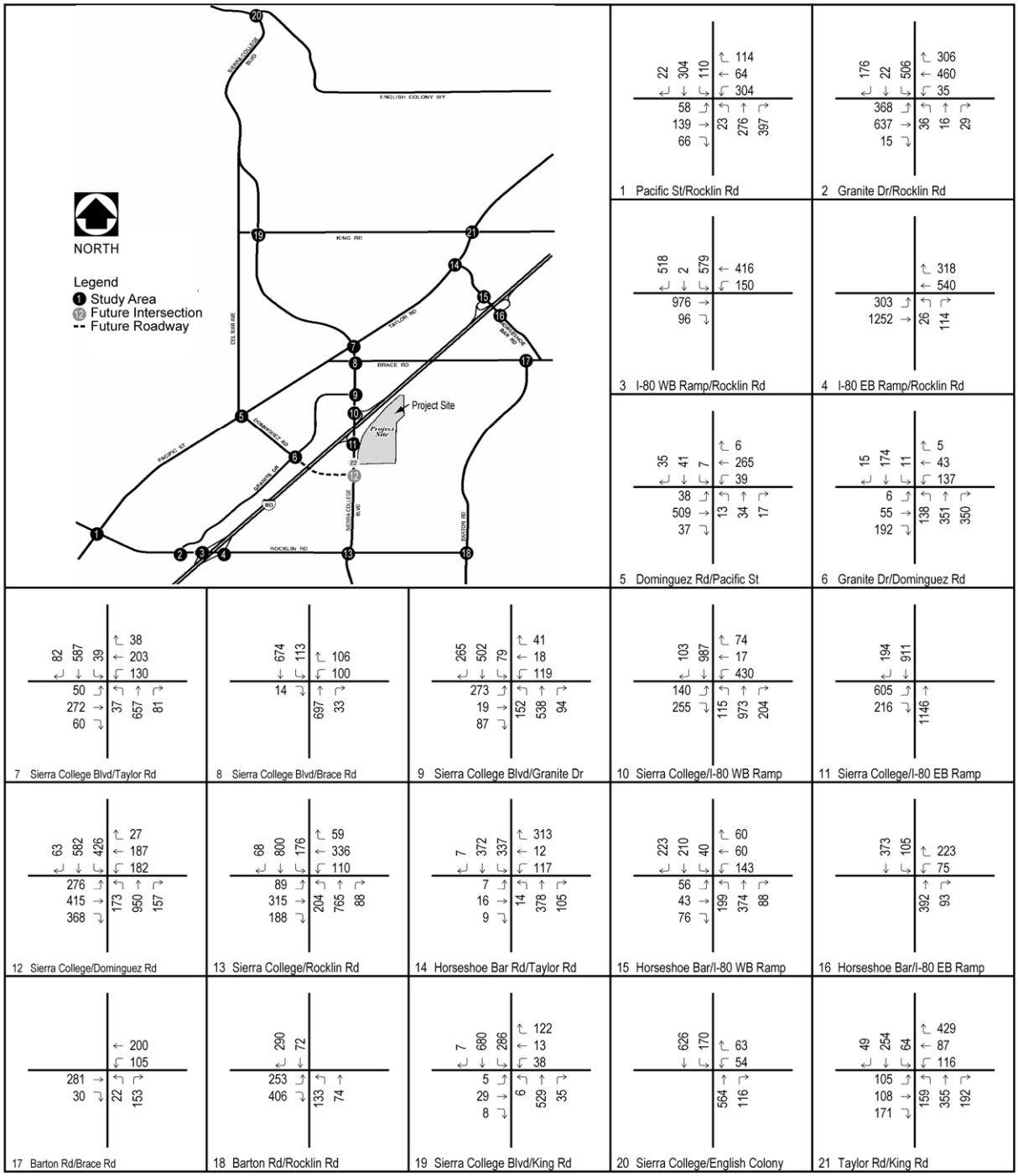
Weekday and Saturday peak-hour forecast traffic volumes for the 2025 no project with Dominguez Road scenario are shown in Exhibit 6-7 and Exhibit 6-8. The LOS for study area intersections and roadway segments are shown in Table 6-8 and Table 6-9. The 2025 no project with Dominguez Road traffic volume development and LOS worksheets are provided in Appendix C.

Table 6-7 2025 Without Dominguez Road Peak Hour Roadway Segment Level of Service Summary								
Roadway	Segment	Capacity	2025 No Project			2025 Plus Project		
			Volume	V/C	LOS	Volume	V/C	LOS
Taylor Road	**King Rd and Horseshoe Bar Rd (Loomis)**							
	A.M. Peak Hour Northbound	1,650	657	0.40	A	674	0.41	A
	A.M. Peak Hour Southbound	1,650	846	0.51	A	860	0.52	A
	Total A.M. Peak Hour	*3,300*	*1,503*	*0.46*	*A*	*1,534*	*0.46*	*A*
	P.M Peak Hour Northbound	1,650	586	0.36	A	633	0.38	A
	P.M Peak Hour Southbound	1,650	660	0.40	A	709	0.43	A
	Total P.M. Peak Hour	*3,300*	*1,246*	*0.38*	*A*	*1,342*	*0.41*	*A*
	SAT Peak Hour Northbound	1,650	501	0.30	A	560	0.34	A
	SAT Peak Hour Southbound	1,650	898	0.54	A	953	0.58	A
	Total SAT Peak Hour	*3,300*	*1,399*	*0.42*	*A*	*1,513*	*0.46*	*A*
Taylor Road	**Horseshoe Bar Rd and Sierra College Blvd (Loomis)**							
	A.M. Peak Hour Northbound	1,650	1,147	0.70	C	1,164	0.71	C
	A.M. Peak Hour Southbound	1,650	921	0.56	A	935	0.57	A
	Total A.M. Peak Hour	*3,300*	*2,068*	*0.63*	*B*	*2,099*	*0.64*	*B*
	P.M Peak Hour Northbound	1,650	961	0.58	A	1,008	0.61	B
	P.M Peak Hour Southbound	1,650	1,210	0.73	C	1,259	0.76	C
	Total P.M. Peak Hour	*3,300*	*2,171*	*0.66*	*B*	*2,267*	*0.69*	*B*
	SAT Peak Hour Northbound	1,650	718	0.44	A	777	0.47	A
	SAT Peak Hour Southbound	1,650	699	0.42	A	754	0.46	A
	Total SAT Peak Hour	*3,300*	*1,417*	*0.43*	*A*	*1,531*	*0.46*	*A*
Rocklin Road	**Pacific St and Granite Dr**							
	A.M. Peak Hour Eastbound	3,300	1,815	0.55	A	1,825	0.55	A
	A.M. Peak Hour Westbound	3,300	1,355	0.41	A	1,367	0.41	A
	Total A.M. Peak Hour	*6,600*	*3,170*	*0.48*	*A*	*3,192*	*0.48*	*A*
	P.M Peak Hour Eastbound	3,300	1,691	0.51	A	1,726	0.52	A
	P.M Peak Hour Westbound	3,300	1,907	0.58	A	1,940	0.59	A
	Total P.M. Peak Hour	*6,600*	*3,598*	*0.55*	*A*	*3,666*	*0.56*	*A*
	SAT Peak Hour Eastbound	3,300	870	0.26	A	911	0.28	A
	SAT Peak Hour Westbound	3,300	1,310	0.40	A	1,352	0.41	A
	Total SAT Peak Hour	*6,600*	*2,180*	*0.33*	*A*	*2,263*	*0.34*	*A*
Sierra College Boulevard	**English Colony Way and King Road (Placer County)**							
	A.M. Peak Hour Northbound	3,300	1,333	0.40	A	1,363	0.41	A
	A.M. Peak Hour Southbound	3,300	718	0.22	A	744	0.23	A
	Total A.M. Peak Hour	*6,600*	*2,051*	*0.31*	*A*	*2,107*	*0.32*	*A*
	P.M Peak Hour Northbound	3,300	955	0.29	A	1,040	0.32	A
	P.M Peak Hour Southbound	3,300	1,307	0.40	A	1,395	0.42	A
	Total P.M. Peak Hour	*6,600*	*2,262*	*0.34*	*A*	*2,435*	*0.37*	*A*
	SAT Peak Hour Northbound	3,300	808	0.24	A	776	0.24	A
	SAT Peak Hour Southbound	3,300	627	0.19	A	915	0.28	A
	Total SAT Peak Hour	*6,600*	*1,435*	*0.22*	*A*	*1,691*	*0.26*	*A*



Source: LSA 2007

Year 2025 No Project Peak Hour Traffic Volumes - With Dominguez Road **Exhibit 6-7**



Source: LSA 2007

Year 2025 No Project Saturday Peak Hour Traffic Volumes – With Dominguez Road **Exhibit 6-8**

Table 6-8
2025 No Project With Dominguez Road Condition Peak Hour Intersection Level of Service Summary

	Intersection	2025 No Project without Dominguez Road Condition					
		AM Peak Hour		PM Peak Hour		Saturday	
		V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS
1	Rocklin Road/Pacific Street [1]	0.641	B	0.676	B	0.490	A
2	Rocklin Road/Granite Drive	0.562	A	0.829	D	0.565	A
3	Rocklin Road/I-80 Westbound Ramps	0.719	C	0.962	E	0.738	C
4	Rocklin RoadI-80 Eastbound Ramps	0.871	D	0.824	D	0.482	A
5	Dominguez Road/Pacific Street [1]	0.507	A	0.708	C	0.385	A
6	Dominguez Road/Granite Drive [1]	48.8 sec	E	*	F	70.6 sec	F
7	Sierra College Boulevard/Taylor Road (Loomis)	0.780	C	0.785	C	0.466	A
8	Sierra College Boulevard/Brace Road (Loomis)	0.486	A	0.623	B	0.285	A
9	Sierra College Boulevard/Granite Drive	0.516	A	0.518	A	0.443	A
10	Sierra College Boulevard/I-80 Westbound Ramps	0.577	A	0.565	A	0.567	A
11	Sierra College Boulevard/I-80 Eastbound Ramps	0.584	A	0.433	A	0.478	A
12	Sierra College Boulevard/Dominguez Road	0.445	A	0.600	B	0.762	C
13	Sierra College Boulevard/Rocklin Road [1]	0.687	B	0.619	B	0.380	A
14	Taylor Road/Horseshoe Bar Road (Loomis)	1.024	F	1.076	F	0.691	B
15	Horseshoe Bar Road/I-80 Westbound Ramps (Loomis)	0.476	A	0.431	A	0.395	A
16	Horseshoe Bar Road/I-80 Eastbound Ramps [2] (Loomis)	29.0 sec	D	24.6 sec	C	16.0 sec	C
17	Barton Road/Brace Road [1,2] (Loomis)	78.4 sec	F	57.3 sec	F	12.3 sec	B
18	Barton Road/Rocklin Road [1,2] (Loomis)	272.1 sec	F	20.8 sec	C	17.0 sec	C
19	Sierra College Boulevard/King Road [1] (Loomis)	0.607	B	0.734	C	0.475	A
20	Sierra College Boulevard/English Colony Way [1,2] (Placer County)	246.7 sec	F	587.0 sec	F	33.2 sec	D
21	Taylor Road/King Road [1] (Loomis)	0.802	D	0.508	A	0.581	A

Notes:
ICU V/C ratio is used for signalized intersections. HCM delay in seconds is used for unsignalized intersections.
[1] LOS C required for these intersections. LOS D acceptable for all other intersections.
[2] Peak Hour volumes meet Signal Warrant #3 of the Manual of Uniform Traffic Control Devices
* Delay exceeds 1000 seconds
Outline indicates exceeds level of service criteria

Table 6-9
2025 No Project With Dominguez Road Daily Roadway Segment Level of Service Summary

Roadway	Segment	Capacity	Volume	Capacity Configuration	V/C	LOS
Taylor Road	King Road and Horseshoe Bar Road [1] (Loomis)	15,000	19,454	Two-lane Collector	1.30	F
	Horseshoe Bar Road and Sierra College Boulevard[1] (Loomis)	15,000	14,950	Two-lane Collector	1.00	E
Pacific Street	Sierra College Boulevard and Dominguez Road [1]	30,000	16,466	Four-lane Undivided Arterial	0.55	A
	Dominguez Road and Rocklin Road [1]	30,000	22,389	Four-lane Undivided Arterial	0.75	C
Rocklin Road	Pacific Street and Granite Drive	30,000	37,537	Four-lane Undivided Arterial	1.25	F
	I-80 and Sierra College Boulevard	30,000	13,176	Four-lane Undivided Arterial	0.44	A
	Sierra College Boulevard and Barton Road [1] (Loomis)	30,000	14,496	Four-lane Undivided Arterial	0.48	A
Barton Road	Rocklin Road and Brace Road [1] (Loomis)	15,000	6,292	Two-lane Collector	0.42	A
Horseshoe Bar Road	I-80 and Brace Road (Loomis)	15,000	9,908	Two-lane Collector	0.66	B
Brace Road	I-80 and Barton Road 1 (Loomis)	15,000	9,715	Two-lane Collector	0.65	B
	I-80 and Sierra College Boulevard [1] (Loomis)	15,000	9,161	Two-lane Collector	0.61	B
Sierra College Boulevard	English Colony Way and King Road [1] (Placer County)	30,000	23,002	Four-lane Undivided Arterial	0.77	C
	King Road and Taylor Road [1] (Loomis)	30,000	21,470	Four-lane Undivided Arterial	0.72	C
	Taylor Road and I-80	50,525	31,973	Six-lane Arterial	0.63	B
	I-80 and Dominguez Road	50,525	25,276	Six-lane Arterial	0.50	A
	Dominguez Road and Rocklin Road [1]	50,525	34,148	Six-lane Arterial	0.68	B
Granite Drive	Dominguez Road and Sierra College Boulevard [1]	30,000	9,210	Four-lane Undivided Arterial	0.31	A
	Dominguez Road and Rocklin Road [1]	30,000	13,319	Four-lane Undivided Arterial	0.44	A
Dominguez Road	Taylor Road and Granite Drive 1	15,000	7,278	Two-lane Collector	0.49	A
King Road	Sierra College Boulevard and Taylor Road [1] (Loomis)	15,000	7,019	Two-lane Collector	0.47	A

Notes:
[1] LOS C required for these segments. LOS D acceptable for all other segments.
Outline indicates exceeds level of service criteria
Shade indicates roadway improvements consistent with City of Rocklin General Plan, Town of Loomis General Plan, and the Horseshoe Bar/Penryn Community Plan

As shown in Table 6-8, the following seven intersections are forecast to operate at unsatisfactory LOS in the 2025 no project with Dominguez Road condition:

- Rocklin Road/I-80 Westbound Ramps
- Dominguez Road/Granite Drive
- Taylor Road/Horseshoe Bar Road (Loomis)
- Barton Road/Brace Road (Loomis)
- Barton Road/Rocklin Road (Loomis)
- Sierra College Boulevard/English Colony Way (Placer County)
- Taylor Road/King Road (Loomis)

2025 PLUS PROJECT WITH DOMINGUEZ ROAD

Traffic volumes generated by the proposed project were added to the 2025 no project traffic volumes, and LOS were calculated for the 2025 plus project with Dominguez Road scenario. Weekday and Saturday peak-hour forecast traffic volumes for the 2025 plus project with Dominguez Road scenario are shown in Exhibit 6-9 and Exhibit 6-10. The LOS for study area intersections and roadway segments in the 2025 plus project with Dominguez Road scenario is shown in Table 6-10 and Table 6-11. The 2025 plus project with Dominguez Road LOS worksheets are provided in Appendix C. The proposed mitigations for the 2025 plus project with Dominguez Road scenario are shown in Exhibit 6-11.

IMPACT 6-9 Rocklin Road/I-80 Westbound Ramps With Dominguez Road. *The addition of project-related traffic to cumulative traffic volumes would degrade traffic operations at the westbound ramps of the Rocklin Road/I-80 intersection during the p.m. peak hour from LOS E to LOS F. This impact would be considered* ***significant****.*

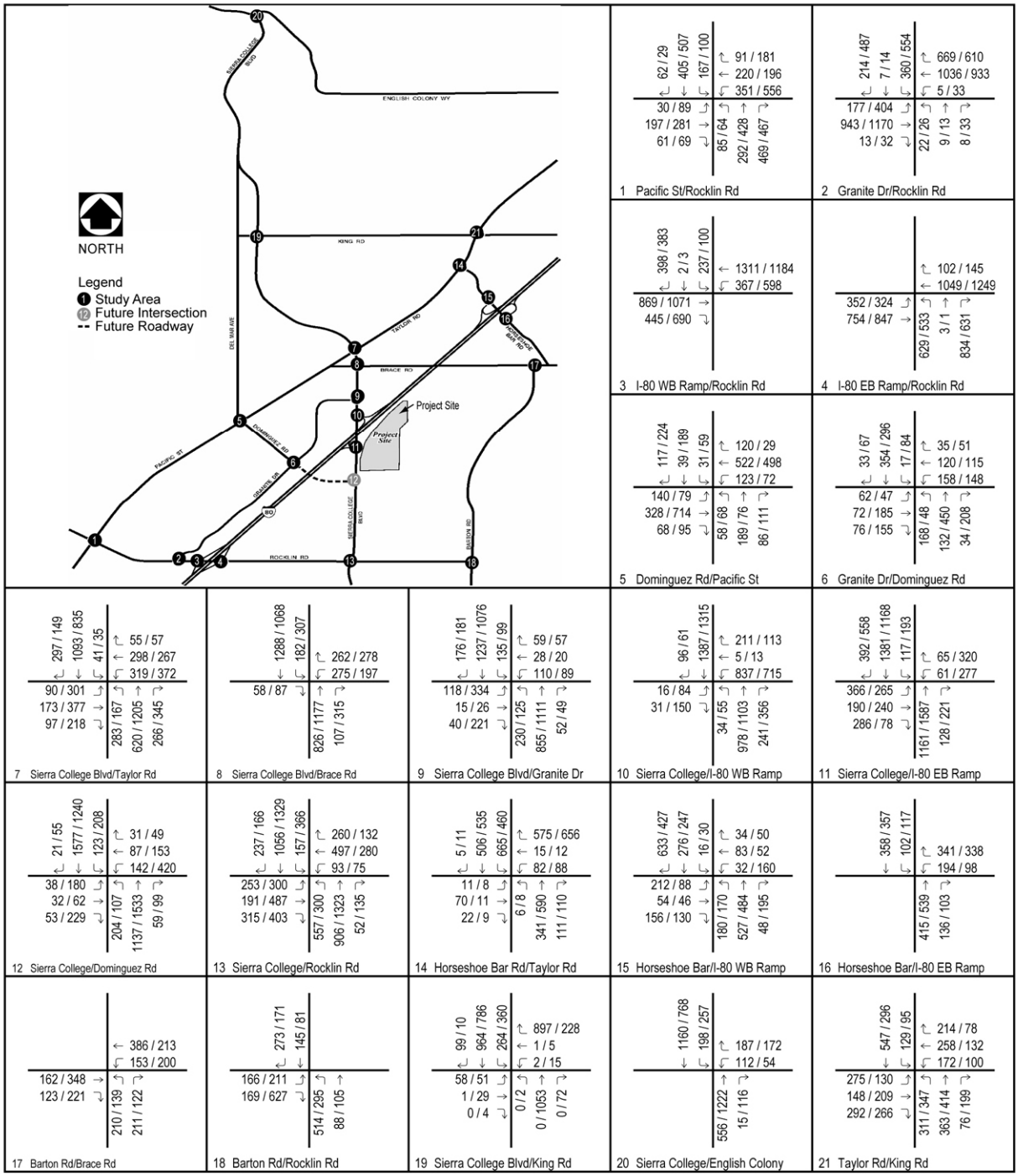
The addition of project-related traffic to cumulative traffic volumes would degrade traffic operations at the westbound ramps of the Rocklin Road/I-80 intersection (Table 6-10). For the cumulative condition, this intersection operates at an LOS E and would degrade to LOS F with the addition of project traffic. The volume/capacity ratio would degrade from 0.962 to 1.015, which represents an increase of greater than five percent. Because the cumulative impacts of development are already significant and the project would exceed the established significance threshold of a contribution of greater than 5 percent, the project would cause a **significant** cumulative impact.

Mitigation Measure 6-9 Rocklin Road/I-80 Westbound Ramps with Dominguez Road

Implement Mitigation Measure 4.2-1.

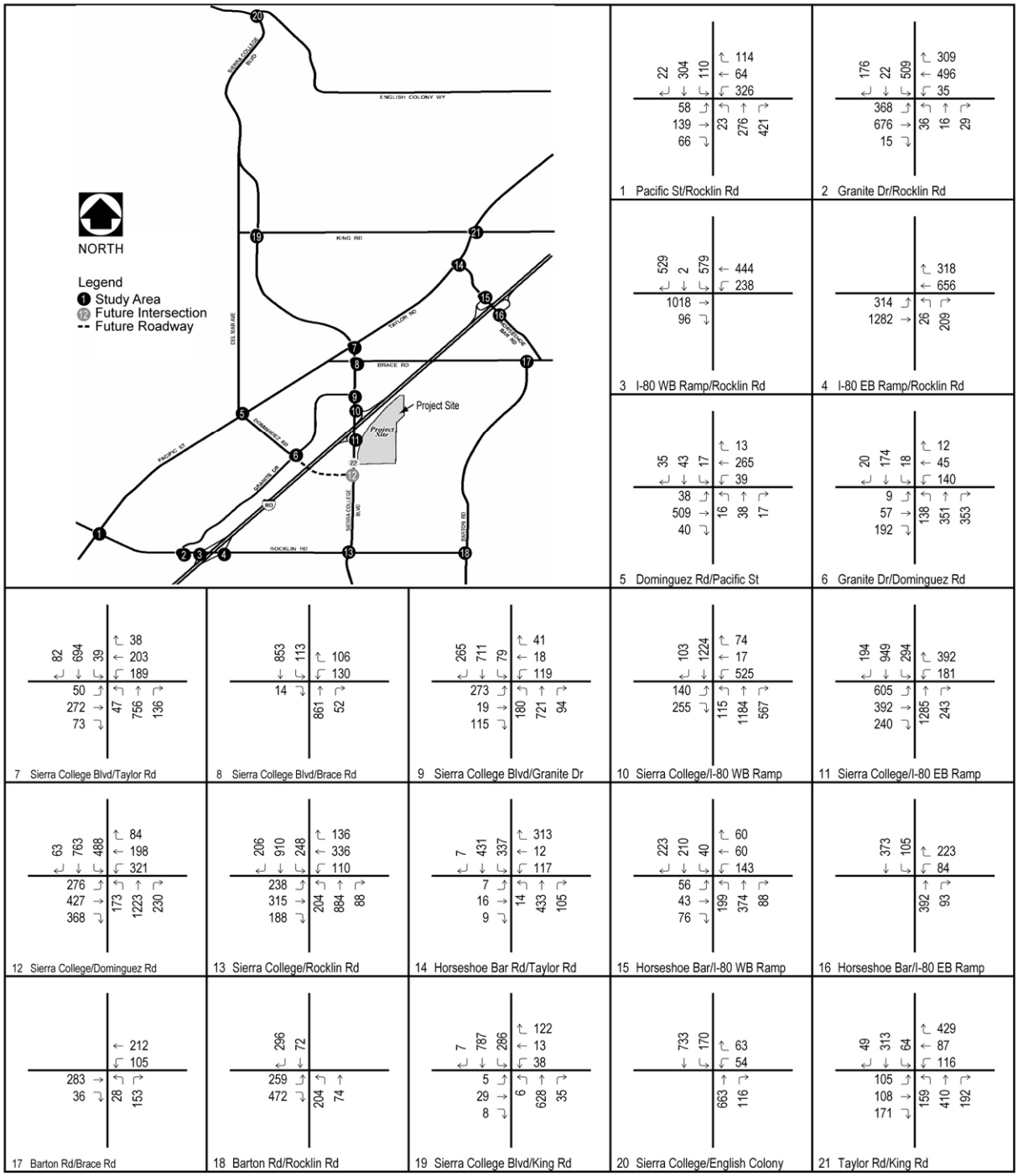
Level of Significance after Mitigation

As identified in Table 6-12, with implementation of the identified mitigation measure, the LOS would be improved to LOS C or better during the intersections peak hours. This would be an acceptable level and this impact would be considered less than significant.



Source: LSA 2007

Year 2025 Plus Project Peak Hour Traffic Volumes – With Dominguez Road **Exhibit 6-9**



Source: LSA 2007

Year 2025 Plus Project Saturday Peak Hour Traffic Volumes – With Dominguez Road **Exhibit 6-10**

Table 6-10
2025 Plus Project With Dominguez Road Condition Peak Hour Intersection Level of Service Summary

	Intersection	2025 No Project with Dominguez Road Condition						2025 Plus Project with Dominguez Road Condition					
		AM Peak Hour		PM Peak Hour		Saturday		AM Peak Hour		PM Peak Hour		Saturday	
		V/C Ratio/ Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS
1	Rocklin Road/ Pacific Street [1]	0.641	B	0.676	B	0.490	A	0.647	B	0.694	B	0.512	A
2	Rocklin Road/ Granite Drive	0.562	A	0.829	D	0.565	A	0.564	A	0.838	D	0.577	A
3	Rocklin Road/ I-80 Westbound Ramps	0.719	C	0.962	E	0.738	C	0.735	C	1.015	F	0.804	D
4	Rocklin Road/I-80 Eastbound Ramps	0.871	D	0.824	D	0.482	A	0.888	D	0.878	D	0.555	A
5	Dominguez Road/ Pacific Street [1]	0.507	A	0.708	C	0.385	A	0.507	A	0.711	C	0.390	A
6	Dominguez Road/ Granite Drive [1,3]	48.8 sec	E	*	F	70.6 sec	F	50.6 sec	F	*	F	81.3 sec	F
7	Sierra College Boulevard/ Taylor Road (Loomis)	0.780	C	0.785	C	0.466	A	0.801	D	0.840	D	0.532	A
8	Sierra College Boulevard/ Brace Road (Loomis)	0.486	A	0.623	B	0.285	A	0.501	A	0.656	B	0.340	A
9	Sierra College Boulevard/ Granite Drive	0.516	A	0.518	A	0.443	A	0.532	A	0.567	A	0.497	A
10	Sierra College Boulevard/ I-80 Westbound Ramps	0.577	A	0.565	A	0.567	A	0.599	A	0.628	B	0.647	B
11	Sierra College Boulevard/ I-80 Eastbound Ramps	0.584	A	0.433	A	0.478	A	0.631	B	0.636	B	0.732	C
12	Sierra College Boulevard/ Dominguez Road	0.445	A	0.600	B	0.762	C	0.466	A	0.715	C	0.909	E
13	Sierra College Boulevard/ Rocklin Road [1]	0.687	B	0.619	B	0.380	A	0.713	C	0.659	B	0.484	A
14	Taylor Road/Horseshoe Bar Road (Loomis)	1.024	F	1.076	F	0.691	B	1.032	F [2]	1.105	F [2]	0.724	C
15	Horseshoe Bar Road/ I-80 Westbound Ramps (Loomis)	0.476	A	0.431	A	0.395	A	0.476	A	0.431	A	0.395	A

Table 6-10
2025 Plus Project With Dominguez Road Condition Peak Hour Intersection Level of Service Summary

	Intersection	2025 No Project with Dominguez Road Condition						2025 Plus Project with Dominguez Road Condition					
		AM Peak Hour		PM Peak Hour		Saturday		AM Peak Hour		PM Peak Hour		Saturday	
		V/C Ratio/ Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS
16	Horseshoe Bar Road/ I-80 Eastbound Ramps [3] (Loomis)	29.0 sec	D	24.6 sec	C	16.0 sec	C	29.4 sec	D	25.3 sec	D	16.5 sec	C
17	Barton Road/Brace Road [1,3] (Loomis)	78.4 sec	F	57.3 sec	F	12.3 sec	B	82.1 sec	F [2]	64.9 sec	F	12.8 sec	B
18	Barton Road/Rocklin Road [1,3] (Loomis)	272.1 sec	F	20.8 sec	C	17.0 sec	C	316.9 sec	F	28.5 sec	D	24.0 sec	C
19	Sierra College Boulevard/ King Road [1] (Loomis)	0.607	B	0.734	C	0.475	A	0.615	B	0.760	C	0.505	A
20	Sierra College Boulevard/ English Colony Way [1,3] (Placer County)	246.7 sec	F	587.0 sec	F	33.2 sec	D	283.5 sec	F	829.8 sec	F	47.9 sec	E
21	Taylor Road/King Road [1] (Loomis)	0.802	D	0.508	A	0.581	A	0.807	D [2]	0.522	A	0.598	A

Notes:
ICU V/C ratio is used for signalized intersections. HCM delay in seconds is used for unsignalized intersections.
[1] LOS C required for these intersections. LOS D acceptable for all other intersections.
[2] Project impact is less than 5% of total intersection V/C or delay and therefore not a significant impact.
[3] Peak Hour volumes meet Signal Warrant #3 of the Manual of Uniform Traffic Control Devices
[*] Delay exceeds 1000 seconds
Outline indicates exceeds level of service criteria
Shaded areas indicate a Significant Impact

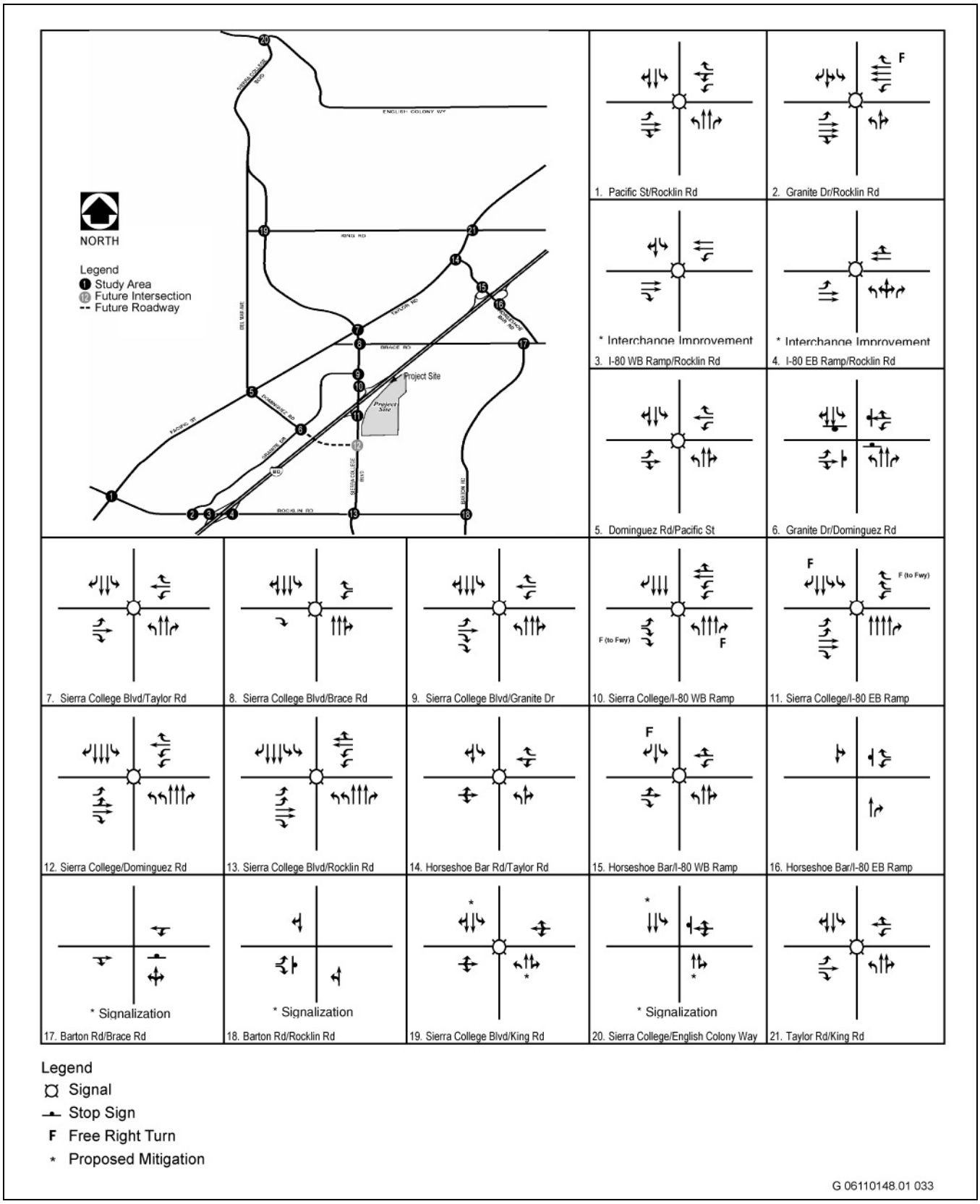
Table 6-11
2025 Plus Project With Dominguez Road Daily Roadway Segment Level of Service Summary

Roadway	Segment	Capacity	Volume	Capacity Configuration	V/C	LOS
Taylor Road	King Road and Horseshoe Bar Road [1] (Loomis)	15,000	20,414	Two-lane Collector	1.36	F
	Horseshoe Bar Road and Sierra College Boulevard[1] (Loomis)	15,000	15,530	Two-lane Collector	1.04	F
Pacific Street	Sierra College Boulevard and Dominguez Road [1]	30,000	16,976	Four-lane Undivided Arterial	0.57	A
	Dominguez Road and Rocklin Road [1]	30,000	22,669	Four-lane Undivided Arterial	0.76	C

Table 6-11
2025 Plus Project With Dominguez Road Daily Roadway Segment Level of Service Summary

Roadway	Segment	Capacity	Volume	Capacity Configuration	V/C	LOS
Rocklin Road	Pacific Street and Granite Drive	30,000	37,867	Four-lane Undivided Arterial	1.26	F
	I-80 and Sierra College Boulevard	30,000	14,836	Four-lane Undivided Arterial	0.49	A
	Sierra College Boulevard and Barton Road [1] (Loomis)	30,000	15,716	Four-lane Undivided Arterial	0.52	A
Barton Road	Rocklin Road and Brace Road [1] (Loomis)	15,000	6,882	Two-lane Collector	0.46	A
Horseshoe Bar Road	I-80 and Brace Road (Loomis)	15,000	9,958	Two-lane Collector	0.66	B
Brace Road	I-80 and Barton Road [1] (Loomis)	15,000	9,825	Two-lane Collector	0.65	B
	I-80 and Sierra College Boulevard [1] (Loomis)	15,000	9,161	Two-lane Collector	0.61	B
Sierra College Boulevard	English Colony Way and King Road [1] (Placer County)	30,000	24,732	Four-lane Undivided Arterial	0.82	D
	King Road and Taylor Road [1] (Loomis)	30,000	23,770	Four-lane Undivided Arterial	0.79	C
	Taylor Road and I-80	50,525	35,393	Six-lane Arterial	0.70	B
	I-80 and Dominguez Road	50,525	34,346	Six-lane Arterial	0.68	B
	Dominguez Road and Rocklin Road [1]	50,525	37,868	Six-lane Arterial	0.75	C
Granite Drive	Dominguez Road and Sierra College Boulevard [1]	30,000	9,230	Four-lane Undivided Arterial	0.31	A
	Dominguez Road and Rocklin Road [1]	30,000	13,379	Four-lane Undivided Arterial	0.45	A
Dominguez Road	Taylor Road and Granite Drive [1]	15,000	7,378	Two-lane Collector	0.49	A
King Road	Sierra College Boulevard and Taylor Road [1] (Loomis)	15,000	7,019	Two-lane Collector	0.47	A

Notes:
[1] LOS C required for these segments. LOS D acceptable for all other segments.
Outline indicates exceeds level of service criteria
Shade indicates roadway improvements consistent with City of Rocklin General Plan, Town of Loomis General Plan, and the Horseshoe Bar/Penryn Community Plan



Source: LSA 2007

Year 2025 Plus Project With Dominguez Road – Mitigations **Exhibit 6-11**

Table 6-12
2025 Plus Project with Dominguez Road Condition Peak Hour Intersection Level of Service Summary - With Mitigation

	Intersection	2025 Plus Project with Dominguez Road Condition						2025 Plus Project with Dominguez Road Condition - With Mitigation					
		AM Peak Hour		PM Peak Hour		Saturday		AM Peak Hour		PM Peak Hour		Saturday	
		V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS
1	Rocklin Road/Pacific Street [1]	0.647	B	0.694	B	0.512	A	0.647	B	0.694	B	0.512	A
2	Rocklin Road/Granite Drive	0.564	A	0.838	D	0.577	A	0.564	A	0.838	D	0.577	A
3	Rocklin Road/I-80 Westbound Ramps	0.735	C	1.015	F	0.804	D	0.636	B	0.580	A	0.713	C
4	Rocklin RoadI-80 Eastbound Ramps	0.888	D	0.878	D	0.555	A	0.888	D	0.878	D	0.555	A
5	Dominguez Road/Pacific Street [1]	0.507	A	0.711	C	0.390	A	0.507	A	0.711	C	0.390	A
6	Dominguez Road/Granite Drive [1]	50.6 sec	F	*	F	81.3 sec	F	13.2 sec	B	20.8 sec	C	14.5 sec	B
7	Sierra College Boulevard/Taylor Road (Loomis)	0.801	D	0.840	D	0.532	A	0.801	D	0.840	D	0.532	A
8	Sierra College Boulevard/Brace Road (Loomis)	0.501	A	0.656	B	0.340	A	0.501	A	0.656	B	0.340	A
9	Sierra College Boulevard/Granite Drive	0.532	A	0.567	A	0.497	A	0.532	A	0.567	A	0.497	A
10	Sierra College Boulevard/I-80 Westbound Ramps	0.599	A	0.628	B	0.647	B	0.599	A	0.628	B	0.647	B
11	Sierra College Boulevard/I-80 Eastbound Ramps	0.631	B	0.636	B	0.732	C	0.631	B	0.636	B	0.732	C
12	Sierra College Boulevard/Dominguez Road	0.466	A	0.715	C	0.909	E	0.460	A	0.600	B	0.886	D
13	Sierra College Boulevard/Rocklin Road [1]	0.713	C	0.659	B	0.484	A	0.713	C	0.659	B	0.484	A
14	Taylor Road/Horseshoe Bar Road (Loomis)	1.032	F	1.105	F	0.724	C	1.032	F	1.105	F	0.724	C
15	Horseshoe Bar Road/I-80 Westbound Ramps (Loomis)	0.476	A	0.431	A	0.395	A	0.476	A	0.431	A	0.395	A

Table 6-12
2025 Plus Project with Dominguez Road Condition Peak Hour Intersection Level of Service Summary - With Mitigation

	Intersection	2025 Plus Project with Dominguez Road Condition						2025 Plus Project with Dominguez Road Condition - With Mitigation					
		AM Peak Hour		PM Peak Hour		Saturday		AM Peak Hour		PM Peak Hour		Saturday	
		V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS
16	Horseshoe Bar Road/I-80 Eastbound Ramps [2] (Loomis)	29.4 sec	D	25.3 sec	D	16.5 sec	C	29.4 sec	D	25.3 sec	D	16.5 sec	C
17	Barton Road/Brace Road [1, 2] (Loomis)	82.1 sec	F	64.9 sec	F	12.8 sec	B	0.579	A	0.617	B	0.367	A
18	Barton Road/Rocklin Road [1, 2] (Loomis)	316.9 sec	F	28.5 sec	D	24.0 sec	C	0.652	B	0.639	B	0.633	B
19	Sierra College Boulevard/King Road [1] (Loomis)	0.615	B	0.760	C	0.505	A	0.615	B	0.760	C	0.505	A
20	Sierra College Boulevard/English Colony Way [1, 2] (Placer County)	283.5 sec	F	829.8 sec	F	47.9 sec	E	0.524	A	0.672	B	0.410	A
21	Taylor Road/King Road [1] (Loomis)	0.807	D	0.522	A	0.598	A	0.807	D	0.522	A	0.598	A

Notes:
ICU V/C ratio is used for signalized intersections. HCM delay in seconds is used for unsignalized intersections.
[1] LOS C required for these intersections. LOS D acceptable for all other intersections.
[2] Peak Hour volumes meet Signal Warrant #3 of the Manual of Uniform Traffic Control Devices
* Delay exceeds 1000 seconds
Outline = Mitigated condition
Shaded areas indicate a Significant Impact

IMPACT 6-10 Dominguez Road/Granite Drive Intersection With Dominguez Road. *The addition of project-related traffic to cumulative traffic volumes would degrade traffic operations at the Dominguez Road/Granite Drive intersection. Because this intersection already operates unacceptably and the project's contribution would be greater than 5 percent, this impact would be considered* ***significant****.*

The addition of project-related traffic to cumulative traffic volumes would degrade traffic operations at the Dominguez Road/Granite Drive intersection (Table 6-10). For the cumulative condition, this intersection operates at an LOS F during the p.m. peak hour and Saturday conditions, and LOS E during the a.m. peak hour. The project would further degrade the intersection operations. The degradation in the volume/capacity ratio would be greater than 5 percent. Because the cumulative impacts of development are already significant and the project would exceed the established significance threshold of a contribution of greater than 5 percent, the project would cause a **significant** cumulative impact.

Mitigation Measure 6-10 Dominguez Road/Granite Drive Intersection With Dominguez Road

The project applicant shall pay their fair share to changing the stop control from a two-way unsignalized stop to a four-way unsignalized stop. The project applicant shall pay a traffic impact fee in an amount that constitutes the project's fair share contribution to the construction of the proposed improvement as part of the City's development review process, consistent with the City's CIP program, SPRTA program, or other applicable funding program.

Level of Significance after Mitigation

As identified in Table 6-12, with implementation of the identified mitigation measure, the LOS would be improved to LOS C or better during the intersections peak hours. This would be an acceptable level and this impact would be considered less than significant.

IMPACT 6-11 Sierra College Boulevard/Dominguez Road Intersection With Dominguez Road. *The addition of project-related traffic to cumulative traffic volumes would cause this intersection to operate unacceptably with the current roadway striping. This impact would be considered* ***significant****.*

The addition of project-related traffic to cumulative traffic volumes would cause this intersection to operate unacceptably with the current roadway striping because sufficient lane capacity would not be available for the projected volume of traffic (Table 6-10). The intersection would operate at LOS E during Saturday conditions. Because the project would exceed the established significance threshold, the project would cause a **significant** cumulative impact.

Mitigation Measure 6-11 Sierra College Boulevard/Dominguez Road Intersection With Dominguez Road

The project applicant shall pay their fair share to restriping this intersection to accommodate one exclusive left turn lane, one shared left/through lane, one exclusive through lane, and one exclusive right turn lane on the eastbound leg of Dominguez Road at the time of its construction. The project applicant shall pay a traffic impact fee in an amount that constitutes the project's fair share contribution to the construction of the proposed improvement as part of the City's development review process, consistent with the City's CIP program, SPRTA program, or other applicable funding program.

Level of Significance after Mitigation

As identified in Table 6-12, with implementation of the identified mitigation measure, the LOS would be improved to LOS D or better during the intersections peak hours. This would be an acceptable level and this impact would be considered less than significant.

IMPACT 6-12 Barton Road/Brace Road Intersection With Dominguez Road. *The addition of project-related traffic to cumulative traffic volumes would degrade traffic operations at the Barton Road/Brace Road intersection during the a.m. and p.m. peak hour. Because this intersection already operates unacceptably and the project's contribution would be greater than 5 percent, this impact would be considered* ***significant****.*

This intersection is operating at an LOS F during the a.m. and p.m. peak hours in the cumulative condition (Table 6-10). The intersection is forecast to meet the peak-hour traffic signal warrant in the cumulative With Dominguez Road extension scenario. The intersection would continue to meet the peak-hour traffic signal warrant with the addition of project traffic. Because the cumulative impacts of development are already significant and the project would exceed the established significance threshold of a contribution of greater than 5 percent, the project would cause a **significant** cumulative impact.

Mitigation Measure 6-12 Barton Road/Brace Road Intersection With Dominguez Road

The project applicant shall pay their fair share to the signalization of this intersection. The project applicant shall pay a traffic impact fee in an amount that constitutes the project's fair share contribution to the construction of the proposed improvement as part of the City's development review process, consistent with the City's CIP program, SPRTA program, or other applicable funding program.

Level of Significance after Mitigation

As identified in Table 6-12, with implementation of the identified mitigation measure, the LOS would be improved to LOS B or better during the intersections peak hours. This would be an acceptable level and this impact would be considered less than significant.

IMPACT 6-13 Barton Road/Rocklin Road Intersection With Dominguez Road. *The addition of project-related traffic to cumulative traffic volumes would degrade traffic operations at the Barton Road/Rocklin Road intersection during the a.m. peak hour. Because this intersection already operates unacceptably and the project's contribution would be greater than 5 percent, this impact would be considered* ***significant****.*

This intersection is operating at an LOS F during the a.m. peak hours in the cumulative condition (Table 6-10). The intersection is forecast to meet the peak-hour traffic signal warrant in the cumulative With Dominguez Road extension scenario. The intersection would continue to meet the peak-hour traffic signal warrant with the addition of project traffic. Because the cumulative impacts of development are already significant and the project would exceed the established significance threshold of a contribution of greater than 5 percent, the project would cause a **significant** cumulative impact.

Mitigation Measure 6-13 Barton Road/Rocklin Road Intersection With Dominguez Road

The project applicant shall pay their fair share to the signalization of this intersection. The project applicant shall pay a traffic impact fee in an amount that constitutes the project's fair share contribution to the construction of the proposed improvement as part of the City's development review process, consistent with the City's CIP program, SPRTA program, or other applicable funding program.

Level of Significance after Mitigation

As identified in Table 6-12, with implementation of the identified mitigation measure, the LOS would be improved to LOS B during the intersections peak hours. This would be an acceptable level and this impact would be considered less than significant.

IMPACT 6-14 Sierra College Boulevard/English Colony Way Intersection With Dominguez Road. *The addition of project-related traffic to baseline traffic volumes would degrade traffic operations at the Sierra College Boulevard/English Colony Way intersection during the a.m. and p.m. peak hour and during Saturday conditions. Because this intersection already operates unacceptably and the project's contribution would be greater than 5 percent, this impact would be considered* ***significant****.*

This intersection is operating at an LOS F during the a.m. and p.m. peak hours in the cumulative condition (Table 6-10). This intersection is also operating at an LOS D during Saturdays in the cumulative condition. The intersection is forecast to meet the peak-hour traffic signal warrant in the cumulative With Dominguez Road extension scenario. The intersection would continue to meet the peak-hour traffic signal warrant with the addition of project traffic. Because the cumulative impacts of development are already significant and the project would exceed the established significance threshold of a contribution of greater than 5 percent, the project would cause a **significant** cumulative impact.

Mitigation Measure 6-14 Sierra College Boulevard/English Colony Way Intersection With Dominguez Road

The project applicant shall pay their fair share to the signalization of this intersection. The project applicant shall pay a traffic impact fee in an amount that constitutes the project's fair share contribution to the construction of the proposed improvement as part of the City's development review process, consistent with the City's CIP program, SPRTA program, or other applicable funding program.

Level of Significance after Mitigation

As identified in Table 6-12, with implementation of the identified mitigation measure, the LOS would be improved to LOS B or better during the intersections peak hours. This would be an acceptable level and this impact would be considered less than significant.

IMPACT 6-15 Taylor Road /Horseshoe Bar Road Intersection With Dominguez Road. *The addition of project-related traffic to cumulative traffic volumes would degrade traffic operations at the Taylor Road/Horseshoe Bar Road intersection during the weekday peak hour. Although this intersection already operates unacceptably, the project's contribution would represent less than a 5 percent decrease in the volume/capacity ratio. Therefore, this impact would be considered* ***less than significant****.*

The addition of project-related traffic to cumulative traffic volumes would degrade traffic operations at the Taylor Road/Horseshoe Bar Road intersection (Table 6-10). For the cumulative condition, the Taylor Road/Horseshoe Bar Road intersection would operate at an LOS F with a volume/capacity ratio of 1.024 during the a.m. peak hour and 1.076 during the p.m. peak hour. The intersection would continue to operate at LOS F with the proposed project and the volume/capacity ratio would be degraded to 1.032 during the a.m. peak hour and 1.105 during the p.m. peak hour. This degradation represents less than a 5 percent decrease in the volume/capacity ratio. Because the volume/capacity ratio would not be degraded by more than 5 percent for this intersection with the contribution of project traffic, the project's impacts at this intersection would be considered **less than significant**.

Mitigation Measure 6-15 Taylor Road /Horseshoe Bar Road Intersection With Dominguez Road

No mitigation is necessary.

Level of Significance after Mitigation

The project's impacts on the Taylor Road/Horseshoe Bar Road intersection would be considered less than significant.

IMPACT 6-16 Taylor Road/King Road Intersection With Dominguez Road. *The addition of project-related traffic to cumulative traffic volumes would degrade traffic operations at the Taylor Road/King Road intersection during the a.m. peak hour. Although this intersection already operates unacceptably, the project's contribution would represent less than a 5 percent decrease in the volume/capacity ratio. Therefore, this impact would be considered* ***less than significant****.*

The addition of project-related traffic to cumulative traffic volumes would degrade traffic operations at the Taylor Road/King Road intersection (Table 6-10). For the cumulative condition, the Taylor Road/King Road intersection would operate at an LOS D with a volume/capacity ratio of 0.802 during the a.m. peak hour. The intersection would continue to operate at LOS D with the proposed project and the volume/capacity ratio would be degraded to 0.807, which represents less than a 5 percent decrease. Because the volume/capacity ratio would not be degraded by more than 5 percent for this intersection with the contribution of project traffic, the project's impacts at this intersection would be considered **less than significant**.

Mitigation Measure 6-16 Taylor Road/King Road Intersection With Dominguez Road

No mitigation is necessary.

Level of Significance after Mitigation

The project's impacts on the Taylor Road/King Road intersection would be considered less than significant.

IMPACT 6-17 Roadway Segments With Dominguez Road. *The proposed project would cause four roadway segments to exceed the threshold of daily capacity. However, in both the a.m. and p.m. peak hours, the traffic on all four roadway segments are forecast to operate with satisfactory volume/capacity ratios in both peak hours with project conditions. Therefore, the project's impacts on roadway segments would be considered* ***less than significant****.*

As shown in Table 6-11, the results of the roadway segment analysis indicate that the following four roadway segments are forecast to operate with unsatisfactory LOS in the 2025 plus project with Dominguez Road scenario:

- Taylor Road between King Road and Horseshoe Bar Road (Loomis)
- Taylor Road between Horseshoe Bar Road and Sierra College Boulevard (Loomis)
- Rocklin Road between Pacific Street and Granite Drive
- Sierra College Boulevard between English Colony Way and King Road (Placer County)

These segments would exceed the threshold of daily capacity in the cumulative plus project scenario. However, in both the a.m. and p.m. peak hours, the traffic on all four roadway segments is forecast to operate with satisfactory volume/capacity ratios in both peak hours with project conditions. Therefore, the project's impacts on roadway segments would be considered **less than significant**.

Mitigation Measure 6-17 Roadway Segments With Dominguez Road

No mitigation is necessary.

Level of Significance after Mitigation

The project's cumulative impacts on roadway segments would be considered less than significant.

6.1.8 I-80/SIERRA COLLEGE INTERCHANGE

IMPACT 6-18 Interstate 80/Sierra College Boulevard Interchange. *The proposed project would not degrade the Interstate 80/Sierra College Boulevard Interchange during the cumulative scenario. Therefore, the project's cumulative impacts on this interchange would be considered* ***less than significant****.*

An Environmental Impact Report, including a traffic operations analysis, was previously completed for the I-80/Sierra College interchange project. The traffic operations analysis was completed using the Highway Capacity Manual (HCM) methodology for signalized intersections. Traffic volumes for the I-80/Sierra College interchange project analysis were forecast using the Sacramento Metropolitan (SACMET-2001) traffic model developed by the Sacramento Area Council of Governments (SACOG). As discussed previously, 2025 forecasts for the proposed project's traffic impact analysis were prepared using the City's traffic model and the Circular 212 "Critical Movement Analysis" planning methodology for signalized intersections. However, an LOS analysis using the HCM methodology has been prepared at the interchange ramp intersections using the traffic forecasts developed for this traffic impact analysis. The purpose of this analysis is to demonstrate that the intersection would still operate satisfactorily with the planned improvements when analyzed using the City's traffic model projections and the HCM methodology.

The levels of service were analyzed at the freeway ramp intersections in the cumulative plus project with and without Dominguez Road scenarios. The LOS calculation sheets are provided in Appendix C. Table 6-13 summarizes the results of the freeway interchange analysis.

Table 6-13
I-80/Sierra College Boulevard Freeway Ramp Intersection Analysis (2025 Plus Project)

Intersection	AM Peak Hour			PM Peak Hour		
	Delay (sec)	LOS	Off-ramp Queue (ft)	Delay (sec)	LOS	Off-ramp Queue (ft)
10. I-80 Westbound/Sierra College Boulevard						
Rocklin Traffic Model with Dominguez Road[1]	38.5	D	631	45.7	D	475
Rocklin Traffic Model without Dominguez Road[1]	36.4	D	533	46.3	D	393
SACMET-2001 Model[2]	18.7	B		14.3	B	
11. I-80 Eastbound/Sierra College Boulevard						
Rocklin Traffic Model with Dominguez Road1	18.0	B	205	32.4	C	160
Rocklin Traffic Model without Dominguez Road1	21.3	C	194	32.7	C	137
SACMET-2001 Model2	30.9	C		96.6	F	

1 Intersections analyzed using the Highway Capacity Manual rather than the Circular 212 methodology and using the traffic projections included in the City's traffic model.
2 Traffic Operations Analysis, I-80/Sierra College Boulevard Interchange, Table 4, Alternative A. OMNI-MEANS, January 8, 2003

As shown in Table 6-13, the interchange would operate at LOS D or better during both peak hours when the Rocklin Traffic Model with and without Dominguez Road traffic volumes are analyzed using the HCM methodology. As identified in the thresholds of significance above, LOS D is an acceptable level of service for intersections located within ½ mile from direct access to an interstate freeway and is acceptable for freeway ramp intersections and mainline routes. Because the cumulative impacts of development would not exceed the established significance thresholds and the project would not contribute substantially to the impact, the project's cumulative impacts on this interchange would be considered **less than significant**.

Mitigation Measure 6-18 Interstate 80/Sierra College Boulevard Interchange

No mitigation is necessary.

Level of Significance after Mitigation

The project's cumulative impacts on the Interstate 80/Sierra College Boulevard Interchange would be considered less than significant.

6.1.9 FREEWAY MAINLINE ANALYSIS

IMPACT 6-19 Freeway Mainlines. *The freeway mainlines would operate acceptably during the cumulative scenario with the addition of project traffic. Therefore, the project's cumulative impacts on the freeway mainlines would be considered* ***less than significant****.*

To assess the operation of the highway system in the vicinity of the project in 2025 without and with project conditions, the I-80 freeway mainline between the Horseshoe Bar Road and Atlantic Avenue interchanges and the SR-65 mainline between the I-80 junction and Blue Oaks Boulevard were analyzed for both without and with Dominguez Road extension scenarios. The Caltrans I-80 freeway improvement project[2] between Riverside Avenue/Auburn Boulevard and SR-65, proposes to increase freeway capacity by adding HOV lane and auxiliary lanes by 2009. Since the improvement project has been approved and has funding, the improvements are used in the baseline conditions for purposes of this analysis. Therefore, the I-80 freeway mainline between Atlantic Avenue and SR-65 was analyzed as a future eight-lane (mainline) freeway, and the freeway mainline segment between SR-65 and Horseshoe Bar Road interchange was analyzed as a six-lane freeway. As shown in Table 6-14, all freeway mainline segments along I-80 are projected to operate at LOS D or better in 2025 with the proposed project (for both without and with Dominguez Road extension scenarios) with the future eight-lane freeway for the segment between Atlantic Avenue and SR-65. Also, all freeway segments along SR-65 are projected to operate at LOS D or better in 2025 with the proposed project (the HCS worksheets are provided in Appendix C). As identified in the thresholds of significance above, LOS D is an acceptable level of service for freeway mainline routes. Therefore, the project's cumulative impacts on the freeway mainlines would be considered **less than significant**.

Mitigation Measure 6-19 Freeway Mainline

No mitigation is necessary.

Level of Significance after Mitigation

The project's cumulative impacts on the freeway mainline would be considered less than significant.

[2] Freeway Improvement Project on Interstate 80 from 1.1 km west of the Sacramento/Placer County line to 1.56 km east of the Route 65 connector in Placer County, April 2003, Caltrans.

Table 6-14
2025 Peak Hour - Freeway Segment Level of Service Summary

Roadway	Segment	Without Dominguez Road Extension								With Dominguez Road Extension							
		2025 No Project				2025 With Project				2025 No Project				2025 With Project			
		AM		PM		AM		PM		AM		PM		AM		PM	
		Density	LOS	Density	LOS	Density	LOS	Density	LOS	Density	LOS	Density	LOS	Density	LOS	Density	LOS
I-80 EB	Atlantic Street to Taylor Road	26.3	D	32.0	D	26.4	D	32.7	D	26.2	D	32.0	D	26.4	D	32.7	D
	Taylor Road to RTE 65	23.6	C	27.9	D	23.8	C	28.4	D	23.6	C	27.9	D	23.7	C	28.5	D
	RTE 65 to Rocklin Road	23.9	C	27.3	D	24.2	C	28.5	D	23.9	C	27.3	D	24.2	C	28.5	D
	Rocklin Road to Sierra College Boulevard	22.6	C	29.0	D	23.0	C	30.7	D	22.9	C	29.1	D	23.3	C	30.8	D
	Sierra College Boulevard to Horseshoe Bar Road	21.1	C	30.6	D	21.2	C	31.2	D	21.1	C	30.5	D	21.2	C	31.1	D
RTE 65 NB	I-80 to Harding Boulevard	28.0	D	30.3	D	28.2	D	30.8	D	28.0	D	30.2	D	28.1	D	30.8	D
	Harding Boulevard to Blue Oaks Boulevard	27.3	D	30.5	D	27.3	D	30.8	D	27.3	D	31.1	D	27.4	D	31.3	D
I-80 WB	Atlantic Street to Taylor Road	27.7	D	30.6	D	27.9	D	31.2	D	27.5	D	30.7	D	27.7	D	31.3	D
	Taylor Road to RTE 65	24.6	C	26.8	D	24.7	C	27.3	D	24.6	C	26.8	D	24.7	C	27.3	D
	RTE 65 to Rocklin Road	24.2	C	27.9	D	24.5	C	29.1	D	24.2	C	27.8	D	24.5	C	28.9	D
	Rocklin Road to Sierra College Boulevard	26.4	D	25.0	C	26.7	D	26.2	D	26.2	D	24.6	C	26.6	D	25.8	C
	Sierra College Boulevard to Horseshoe Bar Road	27.0	D	23.7	C	27.1	D	23.9	C	26.9	D	23.7	C	27	D	23.9	C
RTE 65 SB	I-80 to Harding Boulevard	19.2	C	21.3	C	19.3	C	21.7	C	19.3	C	21.3	C	19.4	C	21.6	C
	Harding Boulevard to Blue Oaks Boulevard	21.1	C	21.9	C	21.2	C	22.1	C	21.1	C	22	C	21.2	C	22.2	C

I-80 8 lanes from Atlantic to Rte 65 then 6 lanes from Rte 65 to Horseshoe Bar Rd
Rte 65 6 lanes

AIR QUALITY

IMPACT 6-20 Cumulative Regional Air Quality Emissions. *The project would contribute to cumulative regional air pollutant emissions. This would be considered a* ***significant and unavoidable*** *impact.*

All new development within the Sacramento Valley Air Basin that results in an increase in air pollutant emissions above those assumed in regional air plans contributes to cumulative air quality impacts. The increase is considered significant if the project requires a change in the existing land use designation (e.g., plan amendment, rezone) and associated emissions (i.e., ROG and NO_X) are greater than buildout of the site under the existing approved land use designations. The proposed project would require the amendment of the City's existing general plan land use designations on approximately 1.23 acres of the project site from Medium Density Residential (MDR) to Retail Commercial (RC). Due to the relatively small area of the change in land use, it would not substantially conflict with the existing land uses assumed for the site.

However, based on the modeling conducted, project operations would result in worst-case maximum unmitigated daily emissions of approximately 196 lb/day of ROG, 311 lb/day of NO_X, 281 lb/day of PM_{10}, and 2,196 lb/day of CO. Daily unmitigated operational emissions would exceed PCAPCD's significance thresholds of 82 lb/day for ROG, NO_X, and PM_{10}, or 550 lb/day for CO during both the winter and summer periods. These threshold exceedances would represent a substantial contribution of pollutants to the regional air basin that would not be reduced below the significance thresholds with implementation of identified mitigation measures. Therefore, the project's impact would be considered **significant and unavoidable**.

Mitigation Measure 6-20 Cumulative Regional Air Quality Emissions.

In accordance with the PCAPCD recommendations, the applicant shall implement the following mitigation measures during construction and operation of the proposed project (Backus, pers. comm., 2006b).

Implement Mitigation Measures 4.3-1 and 4.3-2.

The project shall implement an offsite mitigation program, coordinated through the PCAPCD, to offset the project's long-term ozone precursor emissions. The project's offsite mitigation program must be approved by PCAPCD. The project's offsite mitigation program provides monetary incentives to sources of air pollutant emissions within the SVAB that are not required by law to reduce their emissions. Therefore, the emission reductions are real, quantifiable and implement provisions of the SIP. The offsite mitigation program reduces emissions within the SVAB that would not otherwise be eliminated.

In lieu of the applicant implementing their own offsite mitigation program, the applicant can choose to participate in the PCAPCD Offsite Mitigation Program by paying an equivalent amount of money into the program. The actual amount of emission reductions needed through the Offsite Mitigation Program would be calculated when the project's average daily emissions have been determined.

Level of Significance after Mitigation

Due to the large size of the project and large number of vehicle trips generated, it is not anticipated that implementation of the mitigation measures identified above would reduce emissions to below the applicable thresholds; however, these measures would likely substantially reduce the level of emissions. In addition, because of existing nonattainment conditions of the project area for ozone and $PM_{10,}$ project implementation could still contribute substantially to an existing or projected violation of ambient air quality standards following implementation of the identified mitigation measures. Therefore, this cumulative impact would remain significant and unavoidable.

IMPACT 6-21 Cumulative Toxic Air Contaminant Emissions. *The project would contribute to localized cumulative toxic air contaminant emissions. However, because other cumulative developments in the region are not located directly adjacent to the proposed project, the combined emissions from the proposed project and other cumulative developments would not be expected to exceed established significance thresholds for sensitive receptors in the local area. This would be considered a* ***less-than-significant*** *impact.*

The cumulative developments in the region would individually contribute to localized cumulative toxic air contaminant emission concentrations. However, because toxic air contaminants disperse with distance, the concentration of emissions in excess of established significance thresholds would not typically occur unless high emission sources are concentrated in a relatively small development area with sensitive receptors within close proximity. As identified in Section 4.3, Air Quality, the proposed project would not generate toxic air contaminants in excess of established significance thresholds. Because other cumulative developments in the region are not located directly adjacent to the proposed project, the combined emissions from the proposed project and other cumulative developments would not be expected to exceed established significance thresholds for sensitive receptors in the local area. Therefore, this impact would be considered a cumulatively **less-than significant** air quality impact.

Mitigation Measure 6-21 Cumulative Toxic Air Contaminant Emissions.

No mitigation is necessary.

Level of Significance after Mitigation

The project's contribution to cumulative toxic air contaminant emissions would be considered less than significant.

NOISE

Because daytime construction is required under the City's construction noise guidelines, it can be reasonably assumed that related projects in the City would include such restrictions. Hence, cumulative noise impacts associated with construction noise sources would be expected to be **less than significant**. Further, construction noise is localized. Thus, if construction activities occur simultaneously, they would likely not result in cumulative impacts unless sites are being developed in close proximity to one another and expose sensitive receptors to significant noise levels at the same time. Construction activities at the Rocklin 60 residential development could contribute cumulatively to construction noise impacts if it is constructed at the same time as the proposed project. However, Impact 4.4-1 discusses the required installation of a sound wall along the site's eastern perimeter. The installation of this wall would be expected to substantially diminish the proposed project's contribution to cumulative construction noise impacts for existing residents to the northeast. Existing residents to the southwest are of sufficient distance from the Rocklin 60 project that construction noise impacts from this project would be negligible. Thus, cumulative construction noise impacts would be considered **less than significant**.

Likewise, following its construction, the Rocklin 60 residential development would not be expected to generate elevated noise levels that would contribute cumulatively to the noise generated from the proposed project. A masonry sound wall would separate the two developments, limiting the combined noise effect on existing residences to the northeast and southwest. Due to the localized nature of noise, other cumulative development in the region would not be expected to combine with the project's noise effects to cumulatively increase noise in the local area. Thus, the cumulative operational noise impacts would be considered **less than significant.**

Cumulative development would be expected to increase traffic volumes, and associated noise levels, on local roadways. Mitigation for this impact would be developed primarily as new development proceeds, resulting in the construction of noise walls, berms, etc. With the implementation of these measures, cumulative noise impacts would be reduced to a less-than-significant level. As described in Section 4.4, Noise, implementation of the

proposed project would slightly increase noise levels along project-area roadways. This impact was concluded to be less than significant. Because the proposed project would not be expected to contribute substantially to cumulative traffic noise levels on local roads, the proposed project would result in a **less-than-significant** cumulative noise impact.

POPULATION AND HOUSING

As described in Section 6.1.2 below, the proposed project would not be expected to substantially contribute to increases in population or housing demand. Thus, the proposed project would result in **less-than-significant** cumulative population and housing impacts.

UTILITIES AND PUBLIC SERVICES

Cumulative development would increase the demands on utilities and public services. However, the adequacy of the existing and planned utility infrastructure and public service capabilities to meet a new project's needs is a key component of the City's project review process. Based on this review process, future development projects that exceed the capacity of the available utility infrastructure and public service capabilities would be required to provide the necessary improvements to ensure significant utility and public service impacts do not occur.

The proposed project is not anticipated to contribute significantly to the demand for utilities and public services. The site would be provided municipal water from the Placer County Water Agency, which has adequate capacity and distribution capabilities to service the project site with the identified offsite water line improvements. The wastewater collection and treatment requirements of the project would be provided through a connection to an existing sewer line along the southern site boundary. The electrical supply would be provided by existing power lines at the site that tap into the PG&E power grid. The demand for police, fire protection and emergency medical services would increase with project implementation; however, the site operator would be required to coordinate closely with local service providers to ensure adequate security and fire prevention measures are implemented at the site. Thus, the proposed project would result in **less-than-significant** cumulative utility and public service impacts.

The cumulative impacts associated with diverting American River water from the permanent American River Pump Station project were addressed in the 1999 Final EIR for the Water Forum Agreement (WFA) (EDAW/SWRI 1999). The WFA is an agreement between multiple stakeholders in the Sacramento metropolitan area and lower foothill regions, including numerous water providers such as PCWA. After seven years of meetings, sub-committee negotiations, and small group operations, the Water Forum members established a working agreement that provides water quality and reliability for all participants. The WFA's co-equal goals were to (1) provide a reliable and safe supply for the region's economic health and planned development through to the year 2030, and (2) preserve the fishery, wildlife, recreational, and aesthetic values of the Lower American River.

From these co-equal goals, the Water Forum signatories determined seven major elements that must be implemented during the next 30 years if the agreement is to be successful. As a signatory of the WFA, PCWA is actively participating in all seven elements. The elements specific to reliability of water supplies include:

- Increased Surface Water Diversions;
- Actions to Meet Customers' Needs While Reducing Diversion Impacts in Drier Years, Water Conservation;
- Groundwater Management; and
- The Water Forum Successor Effort.

Because the final EIR for the Water Forum was not challenged in court, the certified document constitutes a legally satisfactory analysis of all the issues addressed therein, including cumulative water supply impacts (see Public Resources Code Section 21167.2). The findings of the FEIR and the accompanying Water Forum Action

Plan outlined a program whereby water delivery could be supplied to Water Forum Agreement stakeholders, including PCWA, through 2030, provided that the permanent pumping diversion facilities on the Sacramento River and at Auburn are constructed. The document identified and thoroughly evaluated potential impacts on water supplies resulting from implementation of the Water Forum Agreement, including impacts on both the federal Central Valley Project (CVP) run by the United States Bureau of Reclamation and the State Water Project (SWP) operated by the California Department of Water Resources.

Notably, the water demand created by the project, which is estimated to be approximately 135 acre feet per year (AFY), would represent a tiny fraction of 1% of the total Water Forum Agreement delivery agreements, and thus would cause only a virtually negligible fraction of the cumulative impacts assessed in the Water Forum Agreement EIR. (For the sake of context, the American River Pump Station itself – which is only one of many large diversions contemplated by the WFA – involves 35,500 AFY.)

As described in that EIR, implementation of the Water Forum Agreement would result in several significant environmental impacts, most of which would be reduced to a less-than-significant level through implementation of mitigation. These include impacts on groundwater, water quality, fisheries resources and aquatic habitat, flood control, hydropower supply, vegetation and wildlife, recreation, land use and growth inducement, aesthetics, cultural resources, and soils and geology.

Impacts that would remain significant or potentially significant after implementation of mitigation (i.e., significant and unavoidable) include:

- impacts on water quality in the Sacramento River and the Sacramento–San Joaquin Delta;
- impacts on Folsom Reservoir's warmwater fisheries;
- impacts on fall-run Chinook salmon, and flow and temperature impacts on splittail (February–May);
- a decrease in deliveries to SWP customers;
- a decrease in deliveries to CVP customers;
- reduced rafting and boating opportunities on the lower American River;
- reduced Folsom Reservoir boating opportunities;
- reduced availability of Folsom Reservoir swimming beaches;
- land use and growth-inducing impacts in the water service study area; and
- effects of varying water levels on cultural resources in Folsom Reservoir.

The mitigation measures applied to these resource areas would partially reduce the impacts, but would not reduce them to a less-than-significant level. The Water Forum Agreement EIR determined that even after mitigation is applied to these resource areas, the level of significance after mitigation would remain significant and unavoidable. Even so, however, the contributions of the Rocklin Crossings to these significant cumulative impacts are less than cumulatively considerable, as these contributory incremental effects are, for all practical purposes, completely negligible and undetectable in light of the scale of both the Water Forum and the water bodies and storage and conveyance facilities at issue.

CLIMATE CHANGE AND POTENTIAL IMPACTS ON CALIFORNIA WATER RESOURCES OF SIGNIFICANCE TO PLACER COUNTY

From a Statewide perspective, global climate change could affect California's environmental resources through potential, though uncertain, changes related to future air temperatures and precipitation and their resulting impacts on water temperatures, reservoir operations, stream runoff, and sea levels Sacramento Metropolitan (SACMET-2001) traffic model developed by the Sacramento Area Council of Governments (SACOG). These changes in hydrological systems could threaten California's economy, public health, and environment (California Energy Commission 2003). The types of potential climate effects that could occur on California's water resources include:

- **Water Supply.** Several recent studies have shown that existing water supply systems are sensitive to climate change (Wood 1997). Potential impacts of climate change on water supply and availability could directly and indirectly affect a wide range of institutional, economic, and societal factors (Gleick 1997). Much uncertainty remains, however, with respect to the overall impact of global climate change on future water supplies. For example, models that predict drier conditions (i.e.., parallel climate model [PCM]) suggest decreased reservoir inflows and storage and decreased river flows, relative to current conditions. By comparison, models that predict wetter conditions (i.e., HadCM2) project increased reservoir inflows and storage, and increased river flows (Brekke 2004). Both projections are equally probable based on which model is chosen for the analyses (Ibid.). Much uncertainty also exists with respect to how climate change will affect future demand of water supply (DWR 2006). Still, changes in water supply are expected to occur and many regional studies have shown that large changes in the reliability of water yields from reservoirs could result from only small changes in inflows (Kiparsky and Gleick 2003; see also Cayan et al. 2006a).

- **Surface Water Quality.** Global climate change could affect surface water quality as well. Water quality is affected by several variables, including the physical characteristics of the watershed, water temperature, and runoff rate and timing. A combination of a reduction in precipitation, the shift in volume and timing of runoff flows, and the increased temperature in lakes and rivers could affect a number of natural processes that eliminate pollutants in water bodies. For example, the overall decrease in stream flows could potentially concentrate pollutants and prevent the flushing of contaminants from point sources. The increased storm flows could tax urban water systems and cause greater flushing of pollutants to the Sacramento-San Joaquin Delta and coastal regions (Kiparsky and Gleick 2003). Still, considerable work remains to determine the potential effect of global climate change to water quality.

- **Groundwater.** Little work has been done on the effects of climate change on specific groundwater basins, groundwater quality or groundwater recharge characteristics (Kiparsky and Gleick 2003). Changes in rainfall and changes in the timing of the groundwater recharge season would result in changes in recharge. Warmer temperatures could increase the period where water on the ground by reducing soil freeze. Conversely, warmer temperatures could lead to higher evaporation or shorter rainfall seasons, which could mean that soil deficits would persist for longer time periods, shortening recharge seasons. Warmer, wetter winters would increase the amount of runoff available for groundwater recharge. This additional winter runoff, however, would be occurring at a time when some basins, particularly in Northern California, are being recharged at their maximum capacity. Reductions in spring runoff and higher evapotranspiration, on the other hand, could reduce the amount of water available for recharge. However, the extent to which climate will change and the impact of that change on groundwater are both unknown. A reduced snowpack, coupled with increased rainfall, could require a change in the operating procedures for California's existing dams and conveyance facilities (Kiparsky and Gleick 2003).

- **Fisheries and Aquatic Resources.** In California, the timing and amounts of water released from reservoirs and diverted from streams are constrained by their effects on various native fish, especially those that are listed under the federal and state endangered species acts as threatened or endangered. Several potential hydrological changes associated with global climate change could influence the ecology of aquatic life in California and have several negative effects on cold-water fish (Department of Water Resources [hereafter "DWR"] 2006). For example, if climate change raises air temperature by just a few degrees Celsius, this change could be enough to raise the water temperatures above the tolerance of salmon and trout in many streams, favoring instead non-native fishes such as sunfish and carp (DWR 2006). Unsuitable summer temperatures would be particularly problematic for many of the threatened and endangered fish that spend summers in cold-water streams, either as adults, juveniles, or both (DWR 2006). In short, climate change could significantly affect threatened and endangered fish in California. It could also cause non-threatened and non-endangered fish to reach the point where they become designated as such (DWR 2006).

- **Sea Levels.** Global climate change could cause thermal expansion of ocean waters and melting of ice from land surfaces, which in turn could cause sea levels to rise. Among the risks of sea level rise would be threats to levee integrity and tidal marshes and increased salinity in the Delta region (Kiparsky and Gleick 2003). The increased intrusion of salinity from the ocean could degrade freshwater supplies pumped from the Delta, which could require increased freshwater releases from upstream reservoirs to maintain compliance with water quality standards (DWR 2006).

- **Flood Control.** It is difficult to assess implications of climate change for flood frequency, in large part because of the absence of detailed regional precipitation information from climate models and because human settlement patterns and water-management choices can substantially influence overall flood risk (Kiparsky and Gleick 2003). Still, increased amounts of winter runoff could be accompanied by increases in flood event severity and warrant additional dedication of wet season storage space for flood control as opposed to supply conservation. This need to manage water storage facilities to handle increased runoff could in turn lead to more frequent water shortages during high water demand periods (Brekke 2004). It is recognized that these impacts would result in increased challenges for reservoir management and balancing the competing concerns of flood protection and water supply (DWR 2006).

- **Sudden Climate Change.** Most global climate models project that anthropogenic climate change will be a continuous and fairly gradual process through the end of this century (DWR 2006). California is expected to be able to adapt to the water supply challenges posed by climate change, even at some of the warmer and dryer projections for change. Sudden and unexpected changes in climate, however, could leave water managers unprepared and could, in extreme situations, have significant implications for California and its water supplies. For example, there is speculation that some of the recent droughts that occurred in California and the western United States could have been due, at least in part, to oscillating oceanic conditions resulting from climatic changes. The exact causes of these events are, however, unknown, and evidence suggests such events have occurred during at least the past 2000 years. (DWR 2006).

Because considerable uncertainty remains with respect to the overall impact of global climate change on future water supply in California, it is unknown to what degree global climate change will impact future Placer County water supply and availability. However, based on consideration of the recent regional and local climate change studies, and based on an assessment of water supply for the project, it is reasonably expected that the impacts of global climate change on water supply for urban projects in Placer County would be **less than significant.**

AESTHETIC RESOURCES

IMPACT 6-22 Cumulative Visual Impacts. *The project would contribute to cumulative changes in the local viewshed by converting undeveloped land to urban uses. This would be considered a* ***significant and unavoidable*** *impact.*

Implementation of the proposed project would substantially alter the visual character of the project site through the conversion of relatively undeveloped land to developed urban uses, resulting in a significant aesthetic impact related to degradation of visual character. Although design, architectural, development, and landscaping standards are included to ensure that urban development on the project site conforms to certain aesthetic guidelines, due to the scale and location of the proposed project, there is no mechanism to allow its implementation while avoiding the conversion of the local viewshed to urban development.

The EIR for the City of Rocklin General Plan concluded that development in accordance with the general plan would substantially alter viewsheds and vistas in the region as open grasslands and hill areas are replace in part by mixed urban development and as new sources of light and glare are generated in the region. Based on these anticipated changes in the regional visual resources, the General Plan EIR concluded that this impact would be significant and unavoidable. The project would combine with the Rocklin 60 residential project and other development along the Interstate 80 corridor to substantially alter the visual character of the area and to

substantially increase new sources of light and glare. Because the cumulative impacts of development are identified in the General Plan EIR as significant and the project would contribute measurably to this change, the project's visual resource impacts would be considered **significant and unavoidable**.

Mitigation Measure 6-22 Cumulative Visual Impacts.

Implement the mitigation measures identified in Section 4.7, Aesthetics.

Level of Significance after Mitigation

The proposed project would result in significant and unavoidable cumulative aesthetic resource impacts.

PUBLIC HEALTH AND HAZARDS

Cumulative commercial and industrial development could result in potential public health hazards associated with the transport, storage, use and sale of hazardous materials. However, existing state and federal regulations require pollution controls, release prevention plans, and accident response plans for commercial and industrial facilities to minimize the potential risk to the surrounding populations. With the implementation of these plans, the cumulative public health hazard impacts of development would be considered less than significant. The proposed project would generate potential hazards and would include the storage, use and sale of hazardous materials at the site. As with other new developments, the proposed project would be subject to existing state and federal regulations require pollution controls, release prevention plans, and accident response plans to minimize the potential risk to the surrounding populations. Because compliance with these regulations is required, the implementation of the proposed project would not result in a substantial increase in the exposure of people to public health and safety events. Thus, the proposed project would result in a **less-than-significant** cumulative public health and hazards impact.

GEOLOGY AND SOILS

The proposed project would result in potentially significant impacts related to exposure of people and structures to seismic hazards, including ground shaking and subsidence or compression of unstable soils. However, these impacts would be reduced to a less-than-significant level with implementation of recommendations included in the preliminary geotechnical report and a comprehensive site-specific geotechnical report for the proposed project. Any residual impacts would be confined to the project site; they would not combine with any geotechnical effects associated with development in other areas. Similarly, development of cumulative projects would not be expected to result in geology and soils impacts that could not be addressed by standard engineering practices. Thus, the proposed project would result in a **less-than-significant** cumulative geology and soils impact.

HYDROLOGY AND WATER QUALITY

Cumulative flooding impacts could occur if cumulative development projects contribute substantially to additional storm water runoff, resulting in increased erosion or flood hazards. However, individual development projects would be required to control storm water discharge, consistent with the storm water management requirements of the City of Rocklin and other local jurisdictions. Therefore, significant flooding impacts would not be anticipated with cumulative development. Because the proposed project's drainage system would capture peak stormwater flows on the site and on the adjacent Rocklin 60 residential development, the project would not be expected to contribute measurably to cumulative downstream flooding impacts.

Cumulative development could degrade surface water quality in the region and the proposed project could contribute to this degradation. However, individual development projects would be required to manage discharge water quality consistent with National Pollutant Discharge Elimination System (NPDES) permit requirements. With the implementation of these permit requirements, significant water quality impacts would not be anticipated

with cumulative development. The proposed project would be required to implement detailed mitigation measures to minimize the project's potential impacts on surface water quality, including specific NPDES permit requirements. With the implementation of these mitigation measures, the project would not be anticipated to substantially contribute to local water quality degradation. Therefore, the proposed project would result in **less-than-significant** cumulative hydrology and water quality impacts.

AGRICULTURE

The proposed project would result in less-than-significant impacts related to farmland conversion. The project would not convert important farmlands to urban uses and would not conflict with lands zoned for agricultural uses. Thus, the proposed project would result in a **less-than-significant** cumulative agricultural resource impact.

BIOLOGICAL RESOURCES

IMPACT 6-23 Cumulative Biological Resource Impacts. *The project would contribute to the cumulative loss of biological resources in the region. This would be considered a* ***significant and unavoidable*** *impact.*

The proposed project would result in significant impacts related to the loss of wetlands, the loss of native oaks and heritage trees, the loss of valley elderberry longhorn beetle habitat, the disturbance of raptors and migratory birds, and the degradation of fish habitat. With the exception of the short-term loss of native oaks and heritage trees, these impacts would be reduced to a less-than-significant level with implementation of mitigation measures identified in Section 4.12, Biological Resources of this Draft EIR. These mitigation measures would either compensate for the loss of sensitive biological resources by replacing lost resources or by actually avoiding the potential disturbance. However, as identified in the EIR for the City of Rocklin General Plan, the impacts on biological resources due to cumulative development within western Placer County would be significant and unavoidable. California has lost over 90 percent of its wetland and riparian habitats, and oak woodlands are also rapidly disappearing. The General Plan EIR concluded that implementation of general plan policies, the existing tree protection ordinances, and ongoing wetlands preservation practices, would not be adequate to reduce the loss of vegetation and wildlife habitat associated with cumulative development. Because the cumulative biological impacts of development are identified in the General Plan EIR as significant and unavoidable, and the project would contribute measurably to this change, the project's biological resource impacts would be considered **significant and unavoidable**.

Mitigation Measure 6-23 Cumulative Biological Resource Impacts.

Implement the mitigation measures identified in Section 4.12, Biological Resources.

Level of Significance after Mitigation

The proposed project would result in a significant and unavoidable cumulative biological resource impact.

CULTURAL RESOURCES

Due to the nature of cultural resources, adverse impacts are site-specific and need to be determined on a project-by-project basis. However, with cumulative development in the region, the number of significant cultural resources in the region may be diminished. The loss of significant cultural resources that may be eligible for listing on the California Register of Historical Resources or the National Register of Historic Places would be considered a significant impact associated with cumulative development in the region. However, implementation of the proposed project would not be expected to adversely affect significant cultural resources. Because the proposed project would not be expected to measurably contribute to significant cumulative cultural resources impacts, the proposed project would result in a **less-than-significant** cumulative cultural resource impact.

ENERGY

The proposed project would increase energy demand during both project construction and operation. Increased energy demands have the ability to contribute to environmental impacts on a national and international level associated with the development of new energy resources and expanded energy production. However, due to their relatively small scale, the region's cumulative energy demands would not be expected to substantially alter national energy development or generation activities. Because new development within California is required to comply with the energy efficiency standards outlined in Title 24 of the California Code of Regulations, the cumulative effects of development in the western Placer County region would not be expected to cause the inefficient, wasteful or unnecessary consumption of energy. In addition, the proposed project includes a number of energy efficient design components, as outlined in Section 4-14, Energy of this report that would minimize the project's consumption of energy. Based on required compliance with Title 24 regulations and the project's energy efficient design components, the proposed project would not be expected to cause the inefficient, wasteful or unnecessary consumption of energy. Thus, the proposed project would result in **less-than-significant** cumulative energy impacts.

6.2 GROWTH-INDUCING IMPACTS OF THE PROPOSED PROJECT

In compliance with CEQA requirements, this section analyzes the growth-inducing impacts of the proposed project. It also evaluates the potential for the significant and irreversible commitment of resources associated with project implementation.

6.2.1 GROWTH-INDUCING IMPACTS

REQUIREMENTS FOR ANALYSIS OF GROWTH-INDUCING IMPACTS

According to Section 15126.2(d) of the State CEQA Guidelines, an EIR must discuss the growth-inducing impacts of the proposed project. Specifically, CEQA states that the EIR shall:

Discuss ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects that would remove obstacles to population growth (a major expansion of a wastewater treatment plant might, for example, allow for more construction in service areas). Increases in the population may tax existing community service facilities, requiring the construction of new facilities that could cause significant environmental effects. Also discuss characteristics of some projects that may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.

A project can have direct and/or indirect growth inducement potential. Direct growth inducement would result if a project involved construction of new housing. Indirect growth inducement would result, for instance, if implementing a project resulted in substantial new permanent employment opportunities (e.g., commercial, industrial, or governmental enterprises); or a construction effort with substantial short-term employment opportunities that indirectly stimulates the need for additional housing and services to support the new employment demand; and/or removal of an obstacle to additional growth and development, such as removing a constraint on a required public utility or service (e.g., construction of a major sewer line with excess capacity through an undeveloped area).

Growth inducement itself is not an environmental effect but may lead to environmental effects. These environmental effects may include increased demand on other community and public services and infrastructure, increased traffic and noise, degradation of air or water quality, degradation or loss of plant or animal habitats, or conversion of agricultural and open space land to urban uses.

POSSIBILITY OF GROWTH INDUCEMENT WITH THE PROPOSED PROJECT

A project may induce growth by creating jobs that attract economic or population growth to the area, promoting the construction of homes that would bring new residents to the area, or removing an existing obstacle that impedes growth in the area. Project implementation would increase construction employment within the City of Rocklin for the duration of the project's construction activities. This temporary increase in employment could increase the demand for temporary housing. According to the latest labor data available from the U.S. Census Bureau (2000), 1,164 residents in Rocklin and 10,860 residents in Placer County are employed in the construction industry. Construction workers serving the project would be expected to come from Rocklin and from nearby communities in Placer and Sacramento counties. Due to the size of the construction industry in the region, the local labor supply is expected to be of sufficient size to meet the project's construction labor needs without requiring substantial employees from out of the region. Local construction workers that already have housing in the region would be expected to commute to the site while construction is ongoing. For construction workers that did come from outside of the region, the temporary nature of the work would typically discourage a permanent relocation. Therefore, the anticipated temporary increase in construction employment would not be expected to result in a significant demand for housing within the City or region.

The proposed project is generally consistent with the City's General Plan and by extension, the employment, commercial development, and housing assumptions evaluated in the City's General Plan EIR. Implementation of the proposed project would generate employment opportunities for current and future residents consistent with the General Plan's goals and policies. Also, new housing is being constructed within the City to accommodate planned employment growth, consistent with the General Plan land use designations and the City's Housing Element requirements. Therefore, the project would not be expected to induce substantial unplanned population growth in the City or region.

The proposed project would generate new employment within the City of Rocklin, which could contribute to the demand for housing. The employment growth anticipated with the proposed project would represent an increase in total employment within the City of approximately 3.2%. However, due to the project's location along the primary transportation corridor within Placer County, employees for the project would be drawn from throughout the region. Also, due to the relatively high median home prices within the City (identified as $449,000 in 2007 [City of Rocklin 2007]) and the majority of the project's employment consisting of lower-paying service jobs, only a relatively small percentage of the project's employees may come from within the City. Employees would logically be expected to reside in communities along the Interstate 80 corridor in both Placer and Sacramento counties. Due to the density of urban development within these communities, a wide variety of housing options are available for project employees. The expected dispersal of employees across the region would minimize the effects of increased housing demands within the City. For these reasons, the proposed project would not be expected to generate a substantial demand for new housing and would not be expected to be growth inducing.

6.3 SIGNIFICANT AND IRREVERSIBLE COMMITMENT OF RESOURCES

CEQA (PRC Section 21100(b)(2)) provides that an EIR shall include a detailed statement setting forth "[i]n a separate section…[a]ny significant effects on the environment that would be irreversible if the project is implemented." State CEQA Guidelines Section 15126.2(c) provides the following guidelines for analyzing the significant irreversible environmental changes of a project:

Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also irretrievable damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.

The proposed project would use both renewable and nonrenewable natural resources for project construction and operation. The proposed project would use nonrenewable fossil fuels in the form of oil and gasoline during construction and operation. Other nonrenewable and slowly-renewable resources consumed as a result of project development would include, but not necessarily be limited to, lumber and other forest products, sand and gravel, asphalt, petrochemical construction materials, steel, copper, lead, and water.

The proposed project involves construction of a regional shopping center resulting in conversion of relatively undeveloped land to urban uses. This change in land use would represent a long-term commitment to urbanization, as the potential for developed land to be reverted back to undeveloped land uses is highly unlikely.

Lastly, the proposed project could result in irreversible damage from environmental accidents, such as an accidental spill or explosion of a hazardous material. During construction, equipment on the site would use various types of fuel. Operation of the proposed project would include the use and sale of hazardous materials, primarily associated with home improvement and gardening products, which could increase the risk of an accidental spill or release. However, these hazardous materials would be sold in relatively small quantities and in California, the storage, use and sale of hazardous substances are strictly regulated and enforced by various local and regional agencies. The enforcement of these existing regulations would be expected to minimize the potential for irreversible damage associated with accidental spills or explosions on the project site.

Although the proposed project would result in the irretrievable commitment of non-renewable resources, the Rocklin City Council could reasonably conclude that such consumption would be justified because the proposed project would provide a convenient shopping center for local and regional businesses and residents, and would contribute to economic development in the region.

6.4 GLOBAL CLIMATE CHANGE

The California Environmental Quality Act (CEQA) requires that lead agencies consider the reasonably foreseeable adverse environmental effects of projects they are considering for approval. Emissions of greenhouse gases (GHGs) have the potential to adversely affect the environment because such emissions contribute, on a cumulative basis, to global climate change. In turn, global climate change has the potential to result in rising sea levels, which can inundate low-lying areas; to affect rain and snow fall, leading to changes in water supply; to affect habitat, leading to adverse affects on biological resources, etc.

Cumulative impacts are the collective impacts of one or more past, present, and future projects, that, when combined, result in adverse changes to the environment. When the adverse change is substantial, the cumulative impact is considered significant. The cumulative project list for this issue (global climate) comprises anthropogenic (i.e., man-made) GHG emission sources across the entire globe, and no project alone would reasonably be expected to contribute to a noticeable incremental change to the global climate. However, legislation and executive orders on the subject of climate change in California have established a statewide context for GHG emissions, and an enforceable statewide cap on GHG emissions. Given the nature of environmental consequences from GHGs and global climate change, CEQA requires the evaluation of the cumulative impacts of GHGs. Even relatively small (on a global basis) additions need to be considered, and small contributions to this cumulative impact (from which significant effects are occurring and are expected to worsen over time) may be potentially considerable (and therefore, significant). Thus, the City of Rocklin has concluded that GHG emissions require consideration under CEQA.

6.4.1 ENVIRONMENTAL SETTING

EXISTING CLIMATE

Climate is the accumulation of daily and seasonal weather events over a long period of time, whereas weather is defined as the condition of the atmosphere at any particular time and place (Ahrens 2003). The proposed project site is located in a climatic zone characterized as dry-summer subtropical or Mediterranean (abbreviated Cs) on the Köppen climate classification system. The Köppen system's classifications are primarily based on annual and monthly averages of temperature and precipitation (See Exhibit 6-12 for a global map of climate classifications).

The Sacramento Valley Air Basin (SVAB) is relatively flat, bordered by mountains to the east, west, and north. The climate is characterized by hot, dry summers and cool, rainy winters. Periods of dense and persistent low-level fog that are most prevalent between storms are characteristic of SVAB winter weather. The extreme summer aridity of the Mediterranean climate is caused by sinking air of subtropical high pressure regions. In the case of the SVAB, the ocean has less influence than in the coastal areas, giving the interior Mediterranean climate (abbreviated Csa on the Köppen climate system) more seasonal temperature variation (Ahrens 2003).

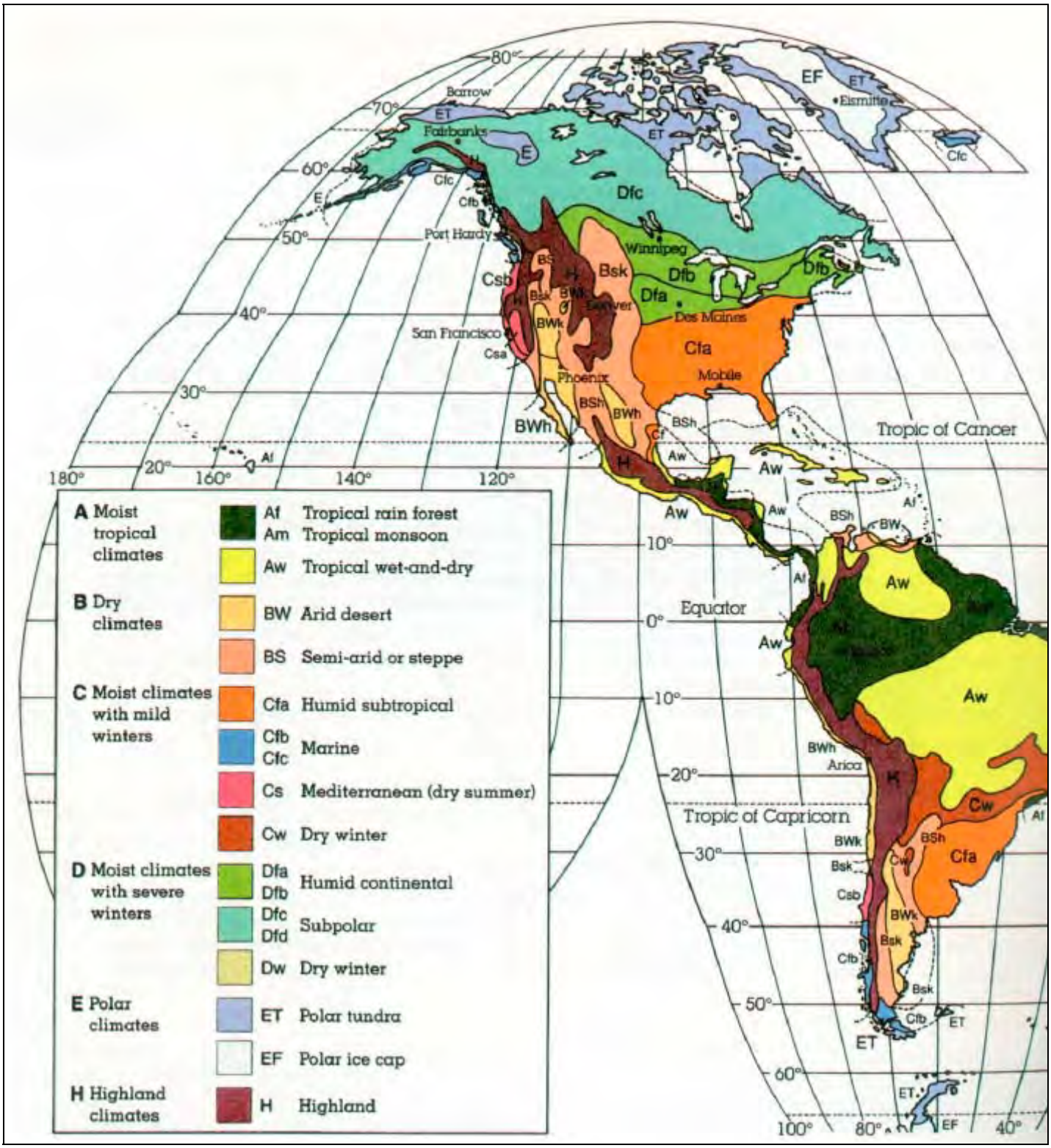
Most precipitation in the area results from air masses that move in from the Pacific Ocean during the winter months. These storms usually move from the west or northwest. More than half the total annual precipitation falls during the winter rainy season (November–February); the average winter temperature is a moderate 49 degrees Fahrenheit (°F). During the summer, daily temperatures range from 50°F to more than 100°F. The inland location and surrounding mountains shelter the area from many of the ocean breezes that keep the coastal regions moderate in temperature.

Local climate of the project site is represented by measurements recorded at the Sacramento station. The normal annual precipitation, which occurs primarily from November through March, is approximately 18 inches. January temperatures range from a normal minimum of 38°F to a normal maximum of 53°F. July temperatures range from a normal minimum of 58°F to a normal maximum of 93°F (National Oceanic and Atmospheric Administration [NOAA] 1992). The predominant wind direction and speed is from the south-southwest at 10 miles per hour (mph) (California Air Resources Board [ARB] 1994).

ATTRIBUTING CLIMATE CHANGE – THE PHYSICAL SCIENTIFIC BASIS

Various gases in the earth's atmosphere, classified as GHGs, play a critical role in determining the earth's surface temperature. Solar radiation enters the earth's atmosphere from space. A portion of the radiation is absorbed by the earth's surface, and a smaller portion of this radiation is reflected back toward space. This absorbed radiation is then emitted from the earth, not as high-frequency solar radiation, but lower frequency infrared radiation. The frequencies at which bodies emit radiation are proportional to temperature. The earth has a much lower temperature than the sun; therefore, the earth emits lower frequency radiation. Most solar radiation passes through GHGs; however, infrared radiation is absorbed by these gases. As a result, radiation that otherwise would have escaped back into space is instead "trapped," resulting in a warming of the atmosphere. This phenomenon, known as the Greenhouse Effect, is responsible for maintaining a habitable climate on Earth. Without the Greenhouse Effect, Earth would not be able to support life as we know it.

Prominent GHGs contributing to the Greenhouse Effect are carbon dioxide (CO_2), methane (CH_4), ozone, nitrous oxide, hydrofluorocarbons, chlorofluorocarbons, and sulfur hexafluoride. Human-caused emissions of these GHGs in excess of natural ambient concentrations are responsible for intensifying the Greenhouse Effect and have led to a trend of unnatural warming of the earth's climate, known as global climate change or global warming (Ahrens 2003). It is *extremely unlikely* that global climate change of the past 50 years can be explained without the contribution from human activities (Intergovernmental Panel on Climate Change [IPCC] 2007).



Source: Ahrens 2003

The Köppen Climate Classification System **Exhibit 6-12**

Climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants (CAPs) and toxic air contaminants (TACs), which are pollutants of regional and local concern. Whereas pollutants with localized air quality effects have relatively short atmospheric lifetimes (about 1 day), GHGs have long atmospheric lifetimes (1 year to several thousand years). GHGs persist in the atmosphere for long enough time periods to be dispersed around the globe. Although the exact lifetime of any particular GHG molecule is dependent on multiple variables and cannot be pinpointed, it is understood that more CO_2 is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, and other forms of sequestration. Of the total annual human-caused CO_2 emissions, approximately 54% is sequestered through ocean uptake, uptake by northern hemisphere forest regrowth, and other terrestrial sinks within a year, whereas the remaining 46% of human-caused CO_2 emissions remains stored in the atmosphere (Seinfeld and Pandis 1998).

Similarly, impacts of GHGs are borne globally, as opposed to localized air quality effects of CAPs and TACs. The quantity of GHGs that it takes to ultimately result in climate change is not precisely known; suffice to say, the quantity is enormous, and no single project alone would be expected to measurably contribute to a noticeable incremental change in the global average temperature, or to global, local, or micro climate. From the standpoint of CEQA, GHG impacts to global climate change are inherently cumulative.

Feedback Mechanisms and Uncertainty

Many complex mechanisms interact within Earth's energy budget to establish the global average temperature and global and regional climate conditions. For example, increases in atmospheric temperature would lead to increases in ocean temperature. As atmospheric and ocean temperatures increase, sea ice and glaciers are expected to melt, adding more fresh water to the ocean and altering salinity conditions. Both increases in ocean temperature and changes in salinity would be expected to lead to changes in circulation of ocean currents. Changes in current circulation would further alter ocean temperatures and alter terrestrial climates where currents have changed. Several interacting atmospheric, climatic, hydrologic, and terrestrial factors affecting global climate change are described below. These factors result in feedback mechanisms that could potentially increase or decrease the effects of global climate change. There is uncertainty about how some factors may affect global climate change because they have the potential to both intensify and neutralize future climate warming. Examples of these conditions are described below.

Direct and Indirect Effects of Aerosols

Aerosols, including particulate matter, reflect sunlight back to space. As air quality goals for particulate matter are met and fewer emissions of particulate matter occur, the cooling effect of aerosols would be reduced, and the Greenhouse Effect would be further intensified. Similarly, aerosols act as cloud condensation nuclei, aiding in cloud formation and increasing cloud lifetime. Under some circumstances (see discussion of the cloud effect below), clouds efficiently reflect solar radiation back to space. With a reduction in emissions of particulate matter, including aerosols, the direct and indirect positive effect of aerosols on clouds would be reduced, potentially further amplifying the Greenhouse Effect.

The Cloud Effect

As global temperature rises, the ability of the air to hold moisture increases, facilitating cloud formation. As stated above, clouds can efficiently reflect solar radiation back to space. If an increase in cloud cover occurs at low or middle altitudes, resulting in clouds with greater liquid water content, such as stratus or cumulus clouds, more radiation would be reflected back to space than under current conditions. This would result in a negative feedback mechanism, in which the increase in cloud cover resulting from global climate change acts to balance the amount of further warming. If clouds form at higher altitudes in the form of cirrus clouds, however, these clouds allow more solar radiation to pass through than they reflect and ultimately act as GHGs themselves. This results in a positive feedback mechanism, in which the side effect of global climate change (an increase in cloud cover) acts to intensify the warming process. Because of the conflicting feedback mechanisms to which increasing cloud

cover can contribute, this cloud effect is an area of relatively high uncertainty for scientists when projecting future global climate change conditions.

Other Feedback Mechanisms

As global temperature continues to rise, CH_4 gas trapped in permafrost is expected to be released into the atmosphere. As identified below in the description of CO_2 equivalents, CH_4 is approximately 23 times as efficient a GHG as CO_2; therefore, this release of CH_4 would accelerate and intensify global climate change if current trends continue. Additionally, as the surface area of polar and sea ice continues to diminish, Earth's albedo, or reflectivity, also is anticipated to decrease. More incoming solar radiation likely will be absorbed by the earth rather than be reflected back into space, further intensifying the Greenhouse Effect and associated global climate change. These and other both positive and negative feedback mechanisms are still being studied by the scientific community to better understand their potential effects on global climate change. The specific incremental increase in global average temperature that will result from the interaction of all the pertinent variables has not been pinpointed at this time. Although the amount and rate of increase in global average temperature are uncertain, there is no longer much debate within the scientific community that global climate change is occurring and that human-caused GHG emissions are contributing to this phenomenon.

ATTRIBUTING CLIMATE CHANGE - GREENHOUSE GAS EMISSION SOURCES

Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors (California Energy Commission [CEC] 2006a).

An analysis of data, compiled by the United Nations Framework Convention on Climate Change (UNFCCC), indicates that in 2004, total GHG emissions were 20,135 Tg CO_2 Eq, excluding emissions/removals from land use, land use change, and forestry (UNFCCC 2006). The emissions are estimated in tons per year, which are converted to teragrams of carbon dioxide equivalents (Tg CO_2 Eq) using the formula:

Tg CO_2 Eq = (tons of gas) ÷ 1.12 (metric tons per ton) × (GWP) × (1,000,000). One Tg is equal to one million metric tons, and one metric ton is equal to 2.24.

In 2004, the U.S. contributed the most GHG emissions (35 percent of global emissions). In 2004, in the U.S., total GHG emissions were 7074.4 Tg CO_2 Eq, which is an increase of 15.8 percent from 1990 emissions (EPA 2006d). In 2005, total U.S. GHG emissions were 7,260.4 Tg CO2 Eq (EPA 2007). Overall, total U.S. emissions have risen by 16.3 percent from 1990 to 2005, while the U.S. gross domestic product has increased by 55 percent over the same period (EPA 2007). Emissions rose from 2004 to 2005, increasing by 0.8 percent (56.7 Tg CO2 Eq). The main causes of the increase are (1) strong economic growth in 2005, leading to increased demand for electricity and (2) an increase in the demand for electricity, due to warmer summer conditions (EPA 2007). However, a decrease in demand for fuels that is due to warmer winter conditions and higher fuel prices moderated the increase in emissions (EPA 2007).

California is the 12th to 16th largest emitter of CO_2 in the world (CEC 2006a). California produced 499 million gross metric tons of CO_2 equivalent (CO_2e) in 2004 (ARB 2007a). CO_2e is a measurement used to account for the fact that different GHGs have different potential to retain infrared radiation in the atmosphere and contribute to the Greenhouse Effect. This potential, known as the global warming potential (GWP) of a GHG, is dependent on the lifetime, or persistence, of the gas molecule in the atmosphere. For example, as described in Appendix C, "Calculation References," of the General Reporting Protocol of the California Climate Action Registry (CCAR 2007), 1 ton of CH_4 has the same contribution to the Greenhouse Effect as approximately 23 tons of CO_2. Therefore, CH_4 is a much more potent GHG than CO_2. Expressing emissions in CO_2e takes the contributions of all GHG emissions to the Greenhouse Effect and converts them to a single unit equivalent to the effect that would occur if only CO_2 were being emitted.

During 1990 to 2003, California's gross state product grew 83 percent, while GHG emissions grew 12 percent. While California has a high amount of GHG emissions, it has relatively (to the United States) low emissions per capita. In 2004, California produced 492 Tg CO_2 Eq (CEC 2006a), which is approximately 7 percent of U.S. emissions. In California, the transportation sector is the largest emitter of GHGs, followed by electricity generation (CEC 2006a). Emissions of CO_2 are byproducts of fossil fuel combustion. CH_4, a highly potent GHG, results from off-gassing (the release of chemicals from nonmetallic substances under ambient or greater pressure conditions) is largely associated with agricultural practices and landfills. CO_2 sinks, or reservoirs, include vegetation and the ocean, which absorb CO_2 through sequestration and dissolution, respectively, two of the most common processes of CO_2 sequestration.

Emissions from fuel use in the commercial and residential sectors in California decreased 9.7 percent over the 1990 to 2004 period (CEC 2006a). According to the CEC, the decrease in greenhouse gases demonstrates the efficacy of energy conservation in buildings (Title 24 requirements) and appliances. The new 2005 Title 24 Standards will further reduce greenhouse gas emissions. The decrease in greenhouse gases attributed to these sources is even more substantial when the population increase in California is considered.

ADAPTATION TO CLIMATE CHANGE

According to the IPCC, which was established in 1988 by the World Meteorological Organization and the United Nations Environment Programme, global average temperature is expected to increase by 3–7°F by the end of the century, depending on future GHG emission scenarios (IPCC 2007). Resource areas other than air quality and atmospheric temperature could be indirectly affected by the accumulation of GHG emissions. For example, an increase in the global average temperature is expected to result in a decreased volume of precipitation falling as snow in California and an overall reduction in snowpack in the Sierra Nevada. Snowpack in the Sierra Nevada provides both water supply (runoff) and storage (within the snowpack before melting), which is a major source of supply for the state (including the project site). According to the California Energy Commission (2006b), the snowpack portion of the water supply could potentially decline by 30–90% by the end of the 21st century. A study cited in a report by the California Department of Water Resources (DWR) projects that approximately 50% of the statewide snowpack will be lost by the end of the century (Knowles and Cayan 2002). Although current forecasts are uncertain, it is evident that this phenomenon could lead to significant challenges in securing an adequate water supply for a growing population. An increase in precipitation falling as rain rather than snow also could lead to increased potential for floods because water that would normally be held in the Sierra Nevada until spring could flow into the Central Valley concurrently with winter storm events. This scenario would place more pressure on California's levee/flood control system (DWR 2006).

Another outcome of global climate change is sea level rise. Sea level rose approximately 7 inches during the last century (CEC 2006b), and it is predicted to rise an additional 7–22 inches by 2100, depending on the future levels of GHG emissions (IPCC 2007). If this occurs, resultant effects could include increased coastal flooding, saltwater intrusion (especially a concern in the low-lying Sacramento–San Joaquin River Delta, where pumps delivering potable water could be threatened), and disruption of wetlands (CEC 2006b). As the existing climate throughout California changes over time, the ranges of various plant and wildlife species could shift or be reduced, depending on the favored temperature and moisture regimes of each species. In the worst cases, some species would become extinct or be extirpated from the state if suitable conditions are no longer available.

6.4.2 REGULATORY SETTING

Federal Plans, Policies, Regulations, and Laws

Atmospheric Greenhouse Gases

The U.S. Environmental Protection Agency (EPA) is the federal agency responsible for implementing the Federal Clean Air Act (CAA). The U.S. Supreme Court ruled on April 2, 2007 that CO_2 is an air pollutant as defined under the CAA, and that EPA has the authority to regulate emissions of GHGs. However, there are no federal regulations or policies regarding GHG emissions applicable to the proposed project at the time of writing.

State Plans, Policies, Regulations, and Laws

ARB is the agency responsible for coordination and oversight of state and local air pollution control programs in California and for implementing the California Clean Air Act (CCAA), which was adopted in 1988.

Atmospheric Greenhouse Gases

Various statewide and local initiatives to reduce the state's contribution to GHG emissions have raised awareness that, even though the various contributors to and consequences of global climate change are not yet fully understood, global climate change is under way, and there is a real potential for severe adverse environmental, social, and economic effects in the long term. Because every nation emits GHGs and therefore makes an incremental cumulative contribution to global climate change, cooperation on a global scale will be required to reduce the rate of GHG emissions to a level that can help to slow or stop the human-caused increase in average global temperatures and associated changes in climatic conditions.

Assembly Bill 1493

In 2002, then-Governor Gray Davis signed Assembly Bill (AB) 1493 (Stats. 2002, ch. 200) (amending Health & Safety Code, § 42823 and adding Health & Safety Code, § 43018.5). AB 1493 requires that ARB develop and adopt, by January 1, 2005, regulations that achieve "the maximum feasible reduction of greenhouse gases emitted by passenger vehicles and light-duty trucks and other vehicles determined by ARB to be vehicles whose primary use is noncommercial personal transportation in the state."

To meet the requirements of AB 1493, in 2004 ARB approved amendments to the California Code of Regulations (CCR) adding GHG emissions standards to California's existing standards for motor vehicle emissions. Amendments to CCR Title 13, Sections 1900 and 1961 (13 CCR §§ 1900, 1961), and adoption of Section 1961.1 (13 CCR § 1961.1) require automobile manufacturers to meet fleet-average GHG emissions limits for all passenger cars, light-duty trucks within various weight criteria, and medium-duty passenger vehicle weight classes (i.e., any medium-duty vehicle with a gross vehicle weight rating less than 10,000 pounds that is designed primarily for the transportation of persons), beginning with the 2009 model year. Emissions limits are reduced further in each model year through 2016. Emissions requirements adopted as part of 13 CCR § 1961.1 are shown in Table 6-15. For passenger cars and light-duty trucks with a loaded vehicle weight (LVW) of 3,750 pounds or less, the GHG emission limits for the 2016 model year are approximately 37% lower than the limits for the first year of the regulations, the 2009 model year. For light-duty trucks with LVW of 3,751 pounds to gross vehicle weight (GVW) of 8,500 pounds, as well as medium-duty passenger vehicles, GHG emissions are reduced approximately 24% between 2009 and 2016.

Table 6-15 Fleet-Average Greenhouse Gas Exhaust Emission Limits Included in CCR 13 1961.1		
Vehicle Model Year	Fleet-Average Greenhouse Gas Emissions (CO_2e in grams per mile)	
	Passenger Cars and Light-Duty Trucks 0–3,750 Pounds LVW	Medium-Duty Passenger Vehicles and Light-Duty Trucks 3,751 Pounds LVW to 8,500 Pounds GVW*
2009	323	439
2010	301	420
2011	267	390
2012	233	361
2013	227	355
2014	222	350
2015	213	341
2016	205	332

Notes:
GVW = gross vehicle weight.
LVW = loaded vehicle weight.
* Specific characteristics of passenger cars, light-duty trucks, and medium-duty passenger vehicles are provided in Title 13, Section 1900 of the California Code of Regulations as amended to comply with Assembly Bill 1493.
Source: California Code of Regulations, Title 13, Section 1961.1

In December 2004, a group of car dealerships, automobile manufacturers, and trade groups representing automobile manufacturers filed suit against ARB to prevent enforcement of 13 CCR Sections 1900 and 1961 as amended by AB 1493 and 13 CCR 1961.1 (*Central Valley Chrysler-Jeep et al. v. Catherine E. Witherspoon, in Her Official Capacity as Executive Director of the California Air Resources Board, et al.*). The suit, still in process in the U.S. District Court for the Eastern District of California contends that California's implementation of regulations that, in effect, regulate vehicle fuel economy violates various federal laws, regulations, and policies. To date, the suit has not been settled, and the judge has issued an injunction stating that ARB cannot enforce the regulations in question before receiving appropriate authorization from EPA.

In January 2007, the judge hearing the case accepted a request from the State Attorney General's office that the trial be postponed until a decision is reached by the U.S. Supreme Court on a separate case addressing GHGs. In the Supreme Court case, *Massachusetts, et al., v. Environmental Protection Agency, et al.*, the primary issue in question was whether the CAA provides authority for EPA to regulate CO_2 emissions. EPA contended that the CAA does not authorize regulation of CO_2 emissions, whereas Massachusetts and 10 other states, including California, sued EPA to begin regulating CO_2. As mentioned above, the U.S. Supreme Court ruled on April 2, 2007, that GHGs are "air pollutants" as defined under the CAA and EPA is granted authority to regulate CO_2 (*Massachusetts v. U.S. Environmental Protection Agency* [2007] 549 U.S. 05-1120).

Executive Order S-3-05

Executive Order S-3-05, which was signed by Governor Schwarzenegger in 2005, proclaims that California is vulnerable to the impacts of climate change. It declares that increased temperatures could reduce the Sierra's snowpack, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To combat those concerns, the Executive Order established total greenhouse gas emission targets. Specifically, emissions are to be reduced to the 2000 level by 2010, the 1990 level by 2020, and to 80% below the 1990 level by 2050.

The Executive Order directed the Secretary of the California Environmental Protection Agency (CalEPA) to coordinate a multi-agency effort to reduce greenhouse gas emissions to the target levels. The Secretary will also submit biannual reports to the governor and state legislature describing: progress made toward reaching the emission targets; impacts of global warming on California's resources; and mitigation and adaptation plans to combat these impacts. To comply with the Executive Order, the Secretary of the CalEPA created the California Climate Action Team (CCAT) made up of members from various state agencies and commissions. CCAT released its first report in March 2006. The report proposed to achieve the targets by building on voluntary actions of California businesses, local government and community actions, as well as through state incentive and regulatory programs.

Assembly Bill 32, the California Climate Solutions Act of 2006

In September 2006, Governor Arnold Schwarzenegger signed AB 32, the California Climate Solutions Act of 2006. (See Stats. 2006, ch. 488, enacting Health & Safety Code, §§ 38500–38599.) AB 32 establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and a cap on statewide GHG emissions. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by 2020. This reduction will be accomplished through an enforceable statewide cap on GHG emissions that will be phased in starting in 2012. To effectively implement the cap, AB 32 directs ARB to develop and implement regulations to reduce statewide GHG emissions from stationary sources. AB 32 specifies that regulations adopted in response to AB 1493 should be used to address GHG emissions from vehicles. However, AB 32 also includes language stating that if the AB 1493 regulations cannot be implemented, then ARB should develop new regulations to control vehicle GHG emissions under the authorization of AB 32.

AB 32 requires that ARB adopt a quantified cap on GHG emissions representing 1990 emissions levels and disclose how it arrives at the cap; institute a schedule to meet the emissions cap; and develop tracking, reporting, and enforcement mechanisms to ensure that the state achieves the reductions in GHG emissions necessary to meet the cap. AB 32 also includes guidance to institute emissions reductions in an economically efficient manner and conditions to ensure that businesses and consumers are not unfairly affected by the reductions.

AB 32 does not explicitly apply to emissions from land development, though emissions associated with land development projects are closely connected to the utilities, transportation, and commercial end-use sectors. Further, because AB 32 imposes a statewide emissions cap, land development-related emissions will ultimately factor into considerations of GHG emissions in the state.

California Climate Action Registry

The California Climate Action Registry (CCAR) was established in 2000 by Senate Bill 1771 and modified in 2001 by Senate Bill 527 as a nonprofit voluntary registry for GHG emissions. (See Stats. 2000, ch. 1018 (enacting Health & Safety Code, §§ 42800–42870 and Pub. Resources Code, § 25730) and Stats. 2001, ch. 769 (amending Health and Safety Code, §§ 42810, 42821–42824, 42840–42843, 42860, and 42870.) The purpose of CCAR is to help companies and organizations with operations in the state to establish GHG emissions baselines against which any future GHG emissions reduction requirements may be applied. CCAR has developed a general protocol and additional industry-specific protocols that provide guidance on how to inventory GHG emissions for participation in the registry.

Senate Bill 97

Senate Bill (SB) 97, signed August 2007, acknowledges that climate change is a prominent environmental issue that requires analysis under CEQA. (Stats. 2007, ch. 185 (enacting Pub. Resources Code, §§ 21083.05 and 21097.) This bill directs the State Office of Planning and Research (OPR) to prepare, develop, and transmit to the Resources Agency guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions, as required by CEQA by July 1, 2009. The Resources Agency is required to certify and adopt those guidelines by January 1, 2010. This bill also removes, both retroactively and prospectively, as legitimate litigation causes of

action any claim of inadequate CEQA analysis of effects of GHG emissions associated with environmental review for projects funded by the Highway Safety, Traffic Reduction, Air Quality and Port Security Bond Act of 2006, or the Disaster Preparedness and Flood Protection Bond Act of 2006 (Proposition 1B or 1E). This provision will be repealed by operation of law on January 1, 2010, at which time such projects, if any remain unapproved, will no longer enjoy the protection against litigation claims based on failure to adequately address climate change issues. This bill would only protect a handful of public agencies from CEQA challenges on certain types of projects for a few years time.

REGIONAL AND LOCAL PLANS, POLICIES, REGULATIONS, AND LAWS

Atmospheric Greenhouse Gases

There are no regional or local policies, regulations, or laws specifically pertaining to GHG emissions.

6.4.3 ENVIRONMENTAL IMPACTS

THRESHOLDS OF SIGNIFICANCE

Under CEQA, an environmental impact report must identify and focus on the significant environmental effects of a project. Significant effect on the environment means a substantial, or potentially substantial, adverse change in the environment (Pub. Resources Code, § 21068). CEQA further states that the CEQA Guidelines shall specify certain criteria that require a finding that a project may have a significant effect on the environment. However, as of the writing of the Rocklin Crossings Project EIR, the agencies with jurisdiction over air quality regulation and GHG emissions such as the ARB and the Placer County Air Pollution Control District (PCAPCD) have not established regulations, guidance, methodologies, significance thresholds, standards or analysis protocols for the assessment of greenhouse gas emissions and climate change. Thus, a standardized, California-wide methodology to establish an appropriate baseline, such as a project-level (regional GHG emissions) inventory, to evaluate the significance of GHG emission changes has not yet been established. This places the burden for establishing a methodology, and determining significance standards, on local lead agencies, such as the City of Rocklin. Given the global nature of this impact, local lead agencies are not the most appropriate source for establishing methods and significance standards pertaining to impacts of a Project on global climate change. Further, the State is in the process, and is required by legislation (SB 97) to establish such standards, but they are several years away.

Given the challenges associated with determining a project-specific significance criteria for GHG emissions when the issue must be viewed on a global scale, and the regulatory agencies best suited for developing the methodology to do so have not yet established any criteria, a quantified significance threshold is not proposed by the City for the Rocklin Crossings Project.

To meet GHG emission targets of AB 32, California would need to generate in the future less GHG emissions than current levels. It is recognized, however, that for most projects there is no simple metric available to determine if a single project would substantially increase or decrease overall GHG emission levels or conflict with the goals of AB 32. Moreover, emitting CO into the atmosphere is not itself an adverse environmental effect. It is the increased concentration of CO_2 in the atmosphere resulting in global climate change and the associated consequences of climate change that results in adverse environmental effects (e.g., sea level rise, loss of snowpack, severe weather events). Although it is possible to generally estimate a project's incremental contribution of CO_2 into the atmosphere, it is typically not possible to determine whether or how an individual project's relatively small incremental contribution might translate into physical effects on the environment. Given the complex interactions between various global and regional-scale physical, chemical, atmospheric, terrestrial, and aquatic systems that result in the physical expressions of global climate change, it is impossible to discern whether the presence or absence of CO_2 emitted by the project would result in any altered conditions.

AB 32 requires CARB, the State agency charged with regulating statewide air quality, to adopt rules and regulations that by 2020 would achieve a reduction in greenhouse gas emissions equivalent to the statewide inventory levels of 1990. On or before June 30, 2007, CARB was required to publish a list of discrete greenhouse gas emission reduction measures that can be implemented. On April 20, 2007, CARB published their proposed early actions (CARB 2007a), which include discrete early action measures, additional greenhouse gas reduction strategies, and criteria and toxic control measures.

The California Environmental Protection Agency (CalEPA) Climate Action Team (CAT) developed a report that "proposes a path to achieve the Governor's targets [established in Executive Order S-3-05] that will build on voluntary actions of California businesses, local government and community actions, and State incentive and regulatory programs" (CAT 2006) needed to reduce activities that contribute to global climate change . The report indicates that the strategies will reduce California's emissions to the levels proposed in Executive Order S-3-05.

The basis for these greenhouse gas reduction goals that California has adopted into law is provided in the IPCC climate models that predict the climate stabilizing at approximately 2 degrees Celsius rise in average temperatures long-term. Given this information, AB 32, Executive Order S-3-05, and the CAT report all indicate that development projects need to reduce greenhouse gas emissions to the target levels by adopting the reduction measures in order to find that the project's incremental contribution to global climate change impacts are not significant. If the project is not consistent with those strategies that the Lead Agency deems feasible, then a project could potentially be deemed to have a significant impact on global climate change.

ANALYSIS METHODOLOGY

As described above, there is no available or recommended methodology (at least, not adopted by any air district or state agency) for evaluating GHG emissions from new development. In the case of the proposed project, CO_2 emissions associated with project construction and operation were modeled using URBEMIS 2007 version 9.2.2, a widely-used, ARB-approved model used in regional air quality analysis. CO_2 emissions were used as a proxy for all GHG emissions associated with the project (ARB 2007b). Indirect emissions associated with energy consumption were estimated using methodology recommended in the current CCAR General Reporting Protocol version 2.2. CO_2 emissions associated with vehicle miles traveled (VMT) are the best indicator of GHGs associated with a land development project. However, it is important to note that other GHGs have a higher GWP than CO_2. For example, 1 ton of methane associated with off-site waste disposal or waste water treatment processes from the project has an equivalent GWP of 23 tons of CO_2 (California Climate Action Registry 2007). In other words, as a GHG, methane is 23 times more effective than CO_2. Nonetheless, emissions of high GWP GHGs are typically associated with industrial processes and would be low relative to CO_2 emission levels associated with land use development projects such as the proposed project, even accounting for GWP.

It is important to note that all CO_2 emissions from project operation may not necessarily be considered "new" emissions, given that a project itself does not create "new" emitters (people) of GHGs, at least not in the traditional sense. In other words, the GHG emissions for a commercial project are not necessarily all new GHG emissions; to a large degree, a commercial project, relocates GHG emissions from one part of a market shed to another; similarly, a residential project does not create people (emitters), but accommodates them as they move from one location to another. In this sense, commercial and residential development projects occur in response to increased demand from the growing economy and population, and are not in themselves creators of economic and population growth. Emissions of GHGs are, however, influenced by the location and design of projects, to the extent that they can influence travel to and from the projects, and to the degree the projects are designed to maximize energy efficiency.

No accepted technically sound methodology exists that would allow the City to determine how many vehicle trips, or vehicle miles traveled (VMT), associated with the project, as determined through the traffic models used in Section 4.2 of this Draft EIR, are truly "new" trips, as opposed to trips coming to and from the project site instead of traveling to and from some other site or sites, or "new" VMT. For this reason, the vehicle trips are

segregated as follows: all employment-related and vendor trips and VMT identified in Section 4.2 are considered "new" for purposes of assessing the project's effects on climate change. The GHG emissions associated with shopper trips (i.e., visitors to the project site) are identified separately, and are assumed to be "relocated" from other commercial uses (i.e., the project does not create these shoppers; it relocates them from other commercial uses). The rationale for this methodology is: 1) without the project, the 800 employment trips would not occur. There is no other "originator" for these trips. This is a conservative assumption. In reality, if the employment was not created at the site but overall market demand for goods were the same, some or all of the employment would occur elsewhere in the region; 2) the shopper trips, on the other hand, would be treated as "relocated" and would not be "new". Residential development typically has an associated average daily trip generation rate that assumes work-related, shopping-related, and other types of trips occur on a daily basis originating and ending at the residential unit. It is reasonable to assume that these trips would occur without the proposed project, especially in a region with a well-developed retail mix such as in southern Placer County. It is possible that a handful of the total trip generation from shoppers would represent trips that would not occur without the project, but this potential is more than offset by the conservative assumption for employment trips.

This rationale is further supported by the findings contained in the economic analysis prepared for the project (CBRE 2006; see Appendix B), which concludes that the existing retail market in the area has grown, or is growing primarily from regional population growth and would not result in substantial risk of closure of existing establishments offering retail goods and services similar to the proposed project. It also concludes that some risk of economic impact to the existing primary and secondary market for appliances and furnishings would occur, but that, in general, the market can absorb the proposed project without causing immitigable urban decay. Thus, the approximate 800 jobs supported by the proposed project can be treated as "new" jobs to the region and to the state (and are not seen as a replacement to jobs that were eliminated elsewhere). Similarly, the vendor truck trips that would supply materials and goods to the proposed project would not replace or redistribute truck deliveries to other establishments in the region or state, and can be treated as "new" truck trips. However, the shopping-related trips are assumed to exist in the current market shed, with or without the proposed project. It is possible that the proposed project would have the effect of reducing vehicle trip length for individuals who are currently driving to a more distant shopping center location and would be more conveniently served by the proposed shopping center, or that it could draw some people from more distant locations. However, there is no available data to support that type of analysis, and, thus, it would be considered speculative under CEQA to pursue further.

To treat all shopping-related trips as "new" trips, and associated "new" potential to emit GHGs, would overstate the project's climate change impact, since, as stated above, shopping trips would occur with or without the proposed project. The City believes that the approach taken herein is a reasonably conservative approach and is a reasonable approach to evaluating the project's potential to emit GHGs. In any event, in order to further the goals and objectives of AB 32, the proposed project would need to accommodate its share of a fixed sized market for retail services in a way that allows for a lower rate of GHG generation. The best way to accomplish this is to allow people to meet their daily needs while minimizing reliance on the automobile and minimizing VMT.

The methodology used in this DEIR to analyze the project's potential effect on global warming includes a calculation of GHG emissions. The purpose of calculating the emissions is for informational and comparison purposes, as there is no adopted quantifiable emissions threshold for either a project level or cumulative level of impact. Absent an adopted regulatory standard or other regulatory guidance, the City has determined that the project's potential for creating an impact on global warming should be based on a comparative analysis of the project against the emission reduction strategies contained in the California Climate Action Team's Report to the Governor. If it is determined the proposed project is compatible or consistent with the applicable Climate Action Team (CAT) strategies, the project's cumulative impact on global climate change is considered less than significant.

IMPACT ANALYSIS

IMPACT 6-24 Cumulative Climate Change. *The proposed project would generate greenhouse gas emissions during project construction and operations. Because the proposed project would incrementally contribute to global greenhouse gas emissions, its global climate change impacts would be considered* ***potentially cumulatively significant****.*

Project Specific Impact

An individual project cannot generate enough greenhouse gas emissions to significantly influence global climate change. The project participates in this potential impact by its incremental contribution combined with the cumulative increase of all other sources of greenhouse gases, which when taken together form global climate change impacts.

Cumulative Impacts

The following discussion reviews the project's potential generation of greenhouse gases and its incremental contribution to the cumulative effect resulting from emissions of greenhouse gases. A two-tiered approach is used, as follows: (1) a discussion of project greenhouse gas emissions and (2) project compliance with the emission reduction strategies contained in the California Climate Action Team's Report to the Governor.

Long-term operation of the proposed project would generate associated GHG emissions from area- and mobile-sources, and indirectly from stationary sources associated with energy consumption. Mobile-source emissions of GHGs would include project-generated vehicle trips associated with employee commute, vendor, and shopping (i.e., visitor) trips to the project site. Area-source emissions would be associated with activities such as landscaping and maintenance of proposed land uses, natural gas distribution for space and water heating, and other sources. Increases in stationary-source emissions could occur at off-site utility providers associated with electricity and natural gas consumption by the proposed uses.

GHG emissions generated by the proposed project would predominantly consist of CO2. In comparison to CAPs, such as ozone and PM10, CO2 emissions persist in the atmosphere for a substantially longer period of time. While emissions of other GHGs, such as CH4, are important with respect to global climate change, emission levels of other GHGs are less dependent on the land use and circulation patterns associated with the proposed land use development project than are levels of CO2.

Mobile sources (vehicle trips and associated miles traveled) would be the primary emission source of GHGs associated with the proposed project. Transportation is also the largest source of GHG emissions in California and represents approximately 41% of annual CO2 emissions generated in the state (CEC 2006a). Like most land use development projects, VMT is the most direct indicator of CO2 emissions from the proposed project and associated CO2 emissions function as the best indicator of total GHG emissions. Using standard traffic engineering methodologies that treat all trips to and from a project site as a "net increase" or "new" trips and all VMT associated with the project as "new" VMT, is appropriate for localized and regional air quality or traffic analyses, where the location of CAP emissions within a distinct air basin or impacts to the local roadway network, respectively, are important. However, given the global nature of the global warming phenomenon and the statewide context through legislation for dealing with California's contribution to this global impact, it would be inappropriate to assess GHG emissions in the same manner as for air quality or traffic.

As described above, the GHGs from the proposed project are not necessarily new but are more likely redirected from other establishments serving the same market. Buildout of the proposed project would add approximately 18,788 vehicle trips per day to the project area and these trips would be the primary source of GHG emissions associated with project operation. For the proposed project, a conservative approach is taken which concludes that "new" project-related vehicle trips would be associated with the labor force employed by the project's tenants and with vendor truck trips that would deliver materials and goods to the project site. It is also assumed that all area-

source and off-site stationary-source GHG emissions from heating and electricity consumption would be "new" GHG emissions.

If the total trips (employees and shoppers) as well as area-source and off-site stationary source GHG emissions are considered, operation of the project would generate total GHG emissions of 18,339 metric tons CO2e annually during the lifetime of the project. However, if the shopper trips are removed, only 6,752 metric tons of CO2e would actually be considered "new" emissions. Construction of the proposed project would generate a finite quantity of approximately 723 metric tons of CO2 over the duration of construction activities (see Table 6-16). Construction would contribute GHG emissions to a much lesser extent than operation of the proposed project.

Table 6-16
Summary of Modeled Greenhouse Gas (CO_2e) Emissions

Source	CO_2e Emissions	
Construction Emissions (to occur over 2 year buildout period)	**metric tons[1]**	
Total "New" Direct Emissions	723	
Operational Emissions (to occur over the lifetime of the project)	**metric tons/year[1]**	
"New" Area-Source Emissions	1,044	
Mobile-Source Emissions[2]	13,967	
Employee Commute Mobile-Source "New" Emissions		1,898
Vendor-Related Mobile-Source "New" Emissions		482
Shopper/Visitor-Related Mobile-Source Emissions[3]		11,588
Stationary-Source Emissions (Energy Consumption[4])	3,327	
Total Direct and Indirect "New" Emissions	6,752	
Total Direct and Indirect Emissions	18,339	

[1] Emissions were modeled using the URBEMIS 2007 (v9.2.2) (ARB 2007b) computer model, based on trip generation rates contained in the traffic analysis prepared for the project (LSA 2007), proposed land uses identified in the project description, and default model assumptions where detailed information was not available. URBEMIS accounts for emissions from vehicles and natural gas use. URBEMIS output is in units of tons CO_2e/year, whereas a standard unit for reporting GHG emissions is in metric tons CO_2e/year. Conversions of URBEMIS output to metric units are contained in Appendix G.

[2] It should be noted that model default trip lengths and trip rates were used and are considered reasonably conservative and not necessarily project-specific, and were relied upon in absence of a project-specific trip length.

[3] Mobile-source emissions attributed to shoppers/visitors to the project site were itemized separately because these shopping-related emissions already exist associated with residents of an existing retail market, would continue to exist with or without the proposed project, and are not a direct or indirect result of the proposed project. Thus, shopping-related mobile-source GHG emissions are not considered "new" emissions.

[4] Indirect emissions associated with stationary sources (increased energy consumption) were calculated using the CCAR GRP (v2.2). These emissions are reported here for disclosure purposes and would clearly be anticipated to be regulated under AB 32, subject to mandatory emissions cap and trade programs, and, thus, would be consistent with AB 32 targets.

Notes: The values presented in Table 6-16 do not include the full life-cycle of GHG emissions that may occur over the production/transport of materials used during construction of the project, products sold for purchase and use during operation of the project, solid waste or waste water disposal over the life of the project, end-of-life of the materials and processes that would contribute to GHG emissions that occur as an indirect result of the project, etc. Doing so would be speculative and would require analysis beyond the current state of the art in impact assessment, and would lead to a false and misleading level of precision in reporting of project-related GHG emissions. Further, indirect emissions associated with in-state energy production, solid waste disposal, and waste water treatment would be regulated under AB 32 at the source or facility that would handle these processes. The emissions associated with off-site facilities in California would be closely controlled, reported, capped and traded under AB 32 and ARB programs. Therefore, this category of emissions would be consistent with AB 32 requirements, and are, in effect, double-counted.

Refer to Appendix G for detailed assumptions and modeling output files.

Source: Data modeled by EDAW 2007.

It is important to consider the context for GHG emissions. GHG emissions are dispersed throughout the atmosphere worldwide, and the effects of climate change are borne globally, unlike CAP emissions, which have regional and/or local impacts on air quality. As noted earlier, the extent to which GHG emissions attributable to the project can be treated as "new" is uncertain. For this reason and others discussed above in the section describing methods for analysis, it is more relevant to consider the GHG-efficiency (i.e., energy efficiency) of a project rather than simply the mass of GHG emissions. (See Chapter 4.14 of this DEIR relating to energy impacts.)

An analysis of data, compiled by the United Nations Framework Convention on Climate Change (UNFCCC), indicates that in 2004, total GHG emissions were 20,135 Tg CO_2 Eq, excluding emissions/removals from land use, land use change, and forestry (UNFCCC 2006). The emissions are estimated in tons per year, which are converted to teragrams of carbon dioxide equivalents (Tg CO_2 Eq) using the formula:

Tg CO_2 Eq = (tons of gas) ÷ 1.12 (metric tons per ton) × (GWP) × (1,000,000). One Tg is equal to one million metric tons, and one metric ton is equal to 2.24.

In 2004, the U.S. contributed the most GHG emissions (35 percent of global emissions). In 2004, in the U.S., total GHG emissions were 7074.4 Tg CO_2 Eq, which is an increase of 15.8 percent from 1990 emissions (EPA 2006d). In 2005, total U.S. GHG emissions were 7,260.4 Tg CO2 Eq (EPA 2007). Comparing the project GHG emissions of 18,339 metric tons per year to the global emissions of 20,135 million metric tons per year yields an exceedingly small percentage, about 9 millionths of one percent. It is reasonable to conclude that the project's incremental contribution is miniscule, viewed in the global context.

California Governor Arnold Schwarzenegger announced on June 1, 2005 through Executive Order S- 3-05 (Climate Change) GHG emission reduction targets as follows: by 2010, reduce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; by 2050, reduce GHG emissions to 80 percent below 1990 levels (CA 2005). Some literature equates these reductions to 11 percent by 2010 and 25 percent by 2020.

AB-32 requires that by January 1, 2008, the state board shall determine what the statewide greenhouse gas emissions level was in 1990, and approve a statewide greenhouse gas emissions limit that is equivalent to that level, to be achieved by 2020. While the level of 1990 GHG emissions has not been approved at this time, other publications indicate that levels varied from 425 to 468 Tg CO_2 Eq. (CEC 2006a). In 2004, the emissions were estimated at 492 Tg CO_2 Eq. (CEC 2006a). Using the range of 1990 emissions, a reduction of between 5 and 13 percent would be needed to reduce 2004 levels to 1990 levels.

The California Environmental Protection Agency Climate Action Team developed a report that "proposes a path to achieve the Governor's targets that will build on voluntary actions of California businesses, local government and community actions, and State incentive and regulatory programs" (CAT 2006). The report indicates that the strategies will reduce California's emissions to the levels proposed in Executive Order S-3-05. The strategies that apply to the project are contained in Table 6-17. These strategies are broad in their scope and address a wide range of industries and greenhouse gas emission sources. Therefore, many of the strategies are not applicable to the development and operation of commercial land uses. Also, for those strategies that are applicable, specific regulations or detailed guidance regarding their implementation is typically not available. Thus, the project's compliance with these measures was evaluated by the City qualitatively with the understanding that exact compliance can only be determined once specifically applicable regulations are adopted. The analysis included in this table focuses on the ability of the project to substantially comply with the applicable strategies. As shown in the table, the project substantially complies with the measures to bring California to the emission reduction targets.

Table 6-17 Project Compliance with Greenhouse Gas Emission Reduction Strategies	
Strategy and Description	Project Compliance
California Air Resources Board	
Vehicle Climate Change Standards AB 1493 (Pavley) required the State to develop and adopt regulations that achieve the maximum feasible and cost-effective reduction of climate change emissions emitted by passenger vehicles and light duty trucks. Regulations were adopted by the CARB in September 2004.	Not Applicable. This measure applies to passenger vehicles and light duty trucks. The project does not manufacture, sale or purchase these vehicles. Vehicles that access the site would be required to be in compliance with applicable State and federal regulations.
Other Light Duty Vehicle Technology New standards would be adopted to phase in beginning in the 2017 model year	Not Applicable. The project does not manufacture, sale or purchase light duty vehicles. Light duty trucks that access the site would be required to be in compliance with applicable State and federal regulations.
Diesel Anti-Idling In July 2004, the CARB adopted a measure to limit diesel-fueled commercial motor vehicle idling.	Compliant. The proposed project would be required to comply with CARB limits on diesel-fueled commercial motor vehicle idling.
Hydrofluorocarbon Reduction (1) Ban retail sale of HFC in small cans. (2) Require that only low GWP refrigerants be used in new vehicular systems. (3) Adopt specifications for new commercial refrigeration. (4) Add refrigerant leak-tightness to the pass criteria for vehicular inspection and maintenance programs. (5) Enforce federal ban on releasing HFCs.	Compliant. The proposed project would be required to comply with the specific strategies applicable to retail uses once they are adopted. For example, the retail sale of HFC's in small cans would be prohibited at the retail stores within the project site. However, the majority of these strategies would not be applicable to the proposed project.
Transportation Refrigeration Units (TRUs), Off-Road Electrification, Port Electrification Strategies to reduce emissions from TRUs, increase off-road electrification, and increase use of shore-side/port electrification.	Compliant. The project would be required to comply with the requirements of Mitigation Measure 6-22, identified below, related to the use of TRUs on the project site.
Manure Management Strategies to reduce volatile organic compounds from confined animal facilities.	Not Applicable
Alternative Fuels: Biodiesel Blends CARB would develop regulations to require the use of 1 to 4 percent biodiesel displacement of California diesel fuel.	Not Applicable The proposed project does not include any fuel-dispensing facilities at this time. However, if a fuel-dispensing facility is proposed on the site in the future, it would be required to comply with CARB regulations regarding the inclusion of alternative fuels.
Alternative Fuels: Ethanol Increased use of ethanol fuel.	Not Applicable The proposed project does not include any fuel-dispensing facilities at this time. However, if a fuel-dispensing facility is proposed on the site in the future, it would be required to comply with CARB regulations regarding the inclusion of alternative fuels.

Table 6-17 Project Compliance with Greenhouse Gas Emission Reduction Strategies	
Strategy and Description	Project Compliance
Heavy-Duty Vehicle Emission Reduction Measures Increased efficiency in the design of heavy-duty vehicles and an education program for the heavy-duty vehicle sector.	Not Applicable The proposed project would not include any activities associated with the design of vehicles and would not include heavy-duty vehicle education programs.
Reduced Venting and Leaks in Oil and Gas Systems Rule considered for adoption by the Air Pollution Control Districts for improved management practices.	Not Applicable
Hydrogen Highway The California Hydrogen Highway Network (CA H2 Net) is a State initiative to promote the use of hydrogen as a means of diversifying the sources of transportation energy.	Not Applicable
Achieve 50 Percent Statewide Recycling Goal Achieving the State's 50 percent waste diversion mandate as established by the Integrated Waste Management Act of 1989, (AB 939, Sher, Chapter 1095, Statutes of 1989), will reduce climate change emissions associated with energy-intensive material extraction and production as well as methane emission from landfills. A diversion rate of 48 percent has been achieved on a statewide basis. Therefore, a 2 percent additional reduction is needed.	Compliant. The City of Rocklin diverts over 50% of the solid waste generated within the City from landfill disposal, consistent with the requirements of AB 939. The majority of this diversion takes place at the Western Regional Materials Recovery Facility (MRF) in Placer County. The MRF recovers recyclable materials such as glass, metals, paper, plastics, wood waste and other compostable materials. Solid waste generated from the proposed project would be delivered to the MRF. Therefore the proposed project would be consistent with this strategy. In addition, Wal-Mart in particular includes a number of recycling strategies that would improve waste diversion from the project site. These include the following: ► All Wall-Mart Supercenters collect and recycle all motor oil, tires and automobile batteries from its TLE operation; ► All cardboard generated from delivery packages is segregated and sent to a recycling center; ► Vegetable Oil: Each new super center has an indoor tank used to collect oil from cooking processes for recycling; ► Single-use Cameras: All Wall-Mart photo processing centers recycle single use cameras after photo processing; ► Wal-Mart collects and segregates all recyclable bottles and cans; ► Wal-Mart currently implements a chainwide program for "sandwich bale" recycling of plastics, e.g., bags, garment bags, shrink wrap, bubble pack, etc.; ► Silver: Wal-Mart photo labs capture silver from the photo processing. In addition, Wal-Mart Supercenter Buildings are constructed using recycled materials. ► Steel recycling: New Wal-Mart Supercenters are built of nearly 100% recycled structural steel. ► Recycled Plastic: The plastic baseboards and much of the plastic shelving is manufactured from recycled material.

Table 6-17 Project Compliance with Greenhouse Gas Emission Reduction Strategies	
Strategy and Description	Project Compliance
Landfill Methane Capture Install direct gas use or electricity projects at landfills to capture and use emitted methane.	Not Applicable
Department of Forestry	
Urban Forestry A new statewide goal of planting 5 million trees in urban areas by 2020 would be achieved through the expansion of local urban forestry programs.	Compliant. The site's Landscaping Plan would be required to comply with the City's parking lot shade requirements, which would require extensive tree planting on the site. In addition, the City has adopted an Urban Forest Plan with specific strategies for expanding tree canopy within the City. The City's Urban Forest Plan has shown that development in the City that is consistent with City General Plan policies has resulted in an increase of tree canopy cover from 11% in 1952 to 18% in 2003 (a 63% increase). The Urban Forest Plan provides a framework for the City to maintain its existing tree canopy cover and to increase it to a greater extent as development continues.
Reforestation Projects Reforestation projects focus on restoring native tree cover on lands that were previously forested and are now covered with other vegetative types.	Not Applicable
Department of Water Resources	
Water Use Efficiency Approximately 19 percent of all electricity, 30 percent of all natural gas, and 88 million gallons of diesel are used to convey, treat, distribute and use water and wastewater. Increasing the efficiency of water transport and reducing water use would reduce greenhouse gas emissions.	Compliant. The project's landscape plan will be required by the City to include an automatic irrigation system, and the use of drip system irrigation will be encouraged as applicable. The project's landscape plan is also required by the City to be certified by the landscape architect as meeting the requirements of the Water Conservation in Landscaping Act (Government Code Section 65591, et. seq.). In addition, the project would be required to comply with the requirements of Mitigation Measure 6-22, identified below, related to the use of low-flow faucets within building restrooms.
Energy Commission (CEC)	
Building Energy Efficiency Standards in Place and in Progress Public Resources Code 25402 authorizes the CEC to adopt and periodically update its building energy efficiency standards (that apply to newly constructed buildings and additions to and alterations to existing buildings).	Compliant. Construction and operation of all of the proposed buildings on the site would be required to comply with the energy efficiency standards included in Title 24 of the California Code of Regulations. Title 24 identifies specific energy efficiency requirements for building construction and systems operations that are intended to ensure efficient energy usage over the long-term life of the building. Large retailers have responded to these requirements and the rising cost of energy by increasing the energy efficiency of their retail establishments. Wal-Mart in particular includes a variety of energy efficient design components in its stores including the following: ► Daylighting (skylights/dimming) - This system automatically and continuously dims all of the lights within the store as the

Table 6-17 Project Compliance with Greenhouse Gas Emission Reduction Strategies	
Strategy and Description	Project Compliance
	daylight contribution through skylights increases. ► Night Dimming - Lighting is dimmed to approximately 65% of typical evening illumination during the late night hours. ► Energy Efficient HVAC Units - Super high efficiency packaged heating and air conditioning units with an energy efficiency rating of 10.8 to 13.2. ► Central Energy Management - Stores are equipped with energy management systems, which are monitored and controlled from the Home Office in Bentonville. ► Water Heating - Waste heat is captured from the refrigeration equipment to heat water for the kitchen preparation areas of the store. ► White Roofs - White membrane roofing is used in order to increase solar reflectivity and lower cooling loads. ► Interior Lighting Program - All new stores use efficient T-8 fluorescent lamps and electronic ballasts. ► LED Signage Illumination - LED lighting is used in internally illuminated building signage due to its higher efficiency when compared to fluorescent lighting. ► Water-conserving Fixtures - Restroom sinks use sensor-activated low flow faucets. Home Depot also includes energy efficient design components in its operations. Home Depot has an Energy Management System for all its main overhead building lighting and HVAC equipment. The system includes a dedicated controller that is connected to a central monitoring station in Atlanta that controls the lighting and HVAC systems to ensure they are operating efficiently and are turned off when they are not needed. A component of this system includes an integrated skylight/photo cell system with photo cells mounted to the outside of the building that measure ambient light levels. Based on these measurements, the Energy Management System can automatically adjust internal lighting levels relative to the amount of light coming through rooftop skylights. Part of this system also includes carbon dioxide sensor controls that automatically close rooftop flutes to allow for greater re-circulation of already cooled (or heated) air. The flutes automatically re-open when carbon dioxide sensors indicate that more ventilation is necessary. Energy usage is reduced by maximizing the amount of already cooled (or heated) inside air that can be re-circulated rather than having to cool (or heat) new air from outside. In addition, Home Depot uses highly energy efficient rooftop HVAC units and T-5 Fluorescent lighting systems in their stores. With the implementation of these energy-efficiency measures by the project's major retail tenants and compliance with Title 24 requirements at a minimum by the remaining tenants, the project would be expected to achieve energy efficiency in excess of Title 24 requirements.

Table 6-17 Project Compliance with Greenhouse Gas Emission Reduction Strategies	
Strategy and Description	Project Compliance
Appliance Energy Efficiency Standards in Place and in Progress Public Resources Code 25402 authorizes the Energy Commission to adopt and periodically update its appliance energy efficiency standards (that apply to devices and equipment using energy that are sold or offered for sale in California).	Compliant. The appliances sold at the project site would be required to comply with all applicable Energy Commission requirements related to energy efficiency.
Cement Manufacturing Cost-effective reductions to reduce energy consumption and to lower carbon dioxide emissions in the cement industry.	Not Applicable
Municipal Utility Strategies Includes energy efficiency programs, renewable portfolio standard, combined heat and power, and transitioning away from carbon-intensive generation.	Not Applicable
Alternative Fuels: Non-Petroleum Fuels Increasing the use of non-petroleum fuels in California's transportation sector, as recommended in the CEC's 2003 and 2005 Integrated Energy Policy Reports.	Not Applicable
Business Transportation and Housing	
Smart Land Use and Intelligent Transportation Systems (ITS) Smart land use strategies encourage jobs/housing proximity, promote transit-oriented development, and encourage high-density residential/commercial development along transit corridors. ITS is the application of advanced technology systems and management strategies to improve operational efficiency of transportation systems and movement of people, goods, and services. Governor Schwarzenegger is finalizing a comprehensive 10-year strategic growth plan with the intent of developing ways to promote, through State investments, incentives and technical assistance, land use, and technology strategies that provide for a prosperous economy, social equity, and a quality environment. Smart land use, demand management, ITS, and value pricing are critical elements in this plan for improving mobility and transportation efficiency. Specific strategies include promoting jobs/housing proximity and transit-oriented development; encouraging high-density residential/commercial development along transit/rail corridor; valuing and congestion pricing; implementing intelligent transportation systems, traveler information/traffic control, and incident management; accelerating the development of broadband infrastructure; and comprehensive, integrated, multimodal/intermodal transportation planning.	Compliant. The proposed project would be required to comply with applicable City of Rocklin General Plan policies that encourage smart land use development. These policies include the following: Circulation Element, Policy 3 – "To require bike lanes in the design and construction of major new street and highway improvements, and to establish bike lanes on those City streets wide enough to accommodate bicycles safely." The City of Rocklin Bikeway System Map includes a proposed Class II bikeway on Sierra College Boulevard. The proposed project would not affect the ability to implement this bikeway and would not conflict with this policy. Circulation Element, Policy 6 – "To promote pedestrian convenience through development conditions requiring sidewalks, walking paths, or hiking trails that connect residential areas with commercial, shopping and employment centers." The project includes several features to promote pedestrian convenience, including sidewalks, pedestrian walkways in the parking areas, ADA-compliant paths of travel, and a combined emergency vehicle/pedestrian access that connects the proposed commercial project site with a proposed residential project site to the east. The proximity of the residential uses and the pedestrian connection would encourage walking or bicycling trips between the two developments and creates proximity between jobs and housing. Therefore, the project would be consistent with this policy.

Table 6-17 Project Compliance with Greenhouse Gas Emission Reduction Strategies	
Strategy and Description	Project Compliance
	Circulation Element, Policy 10 – "To promote the use of public transit through development conditions requiring park-and-ride lots, bus turnouts and passenger shelters along major streets." The project would be subject to a mitigation measure that promotes transit enhancing infrastructure that includes transit shelters, benches, street lighting, route signs and displays, and/or bus turnouts/bulbs. Therefore, the project would be consistent with this policy. In addition, the proposed project locates high density retail uses adjacent to a major transportation corridor, which would encourage pass-by trips (drivers accessing the site while in route to another location rather than initiating a new trip to the site). A project with high pass-by trips minimizes the creation of new trips, which reduces GHG emissions from vehicles. Also, the project includes multiple commercial services, including grocery, restaurant, building material and general retail services, provided in a single shopping center. Such variation in commercial services allows for more efficient shopping practices and fewer vehicle trips.
Measures to Improve Transportation Energy Efficiency Builds on current efforts to provide a framework for expanded and new initiatives, including incentives, tools, and information that advance cleaner transportation and reduce climate change emissions.	Compliant. The proposed project would be required to implement fuel conservation measures that would encourage the use of public transportation, bicycle use and pedestrian access. See Mitigation Measure 4.3-2 in Section 4.3, Air Quality.
Department of Food and Agriculture	
Enteric Fermentation Cattle emit methane from digestion processes. Changes in diet could result in a reduction in emissions.	Not Applicable
State and Consumer Services Agency	
Green Buildings Initiative Green Building Executive Order, S-20-04 (CA 2004), sets a goal of reducing energy use in public and private buildings by 20 percent by the year 2015, as compared with 2003 levels. The Executive Order and related action plan spell out specific actions State agencies are to take with State-owned and -leased buildings. The order and plan also discuss various strategies and incentives to encourage private building owners and operators to achieve the 20 percent target.	Compliant. As discussed above, the project is initiating energy efficient building design measures that are intended to minimize building energy demands.
Public Utilities Commission (PUC)	
Accelerated Renewable Portfolio Standard The Governor has set a goal of achieving 33 percent renewables in the State's resource mix by 2020. The joint PUC/Energy Commission September 2005 Energy Action Plan II (EAP II) adopts the 33 percent goal.	Not Applicable

Table 6-17 Project Compliance with Greenhouse Gas Emission Reduction Strategies	
Strategy and Description	Project Compliance
Investor-Owned Utility This strategy includes energy efficiency programs, combined heat and power initiative, and electricity sector carbon policy for investor owned utility.	Not Applicable
Note: As noted in the Project Description chapter, the overall size of the shopping center would be a maximum of 543,500 square feet and the known major tenants for the shopping center include a Wal-Mart Supercenter and a Home Depot. The Wal-Mart Supercenter is anticipated to be approximately 222,000 square feet, and the Home Depot is anticipated to be approximately 141,000 square feet. Collectively, these two tenants account for approximately 363,000 square feet, which represents approximately 67 percent of the shopping center's overall square footage. It should be noted that the specific project features and design items listed in this table are applicable specifically to the Wal-Mart Supercenter and Home Depot tenants, as noted in the table. Some project feature and design items noted in this table are inherent to the overall project design, such as sidewalks and pedestrian walkways in the parking areas, and these features would benefit future tenant spaces. Due to a lack of tenant identity, it is not known at this time what other tenant-specific project features and design items would also be included. Source: Summarized from CAT 2006. MBA 2006.	

Mitigation Measure 6-24 Cumulative Climate Change

The project applicant shall implement the mitigation measures identified in Section 4.3, Air Quality, in order to reduce GHG emissions. These measures are summarized as follows:

Mitigation Measure 4.3-1 identified in Section 4.3, Air Quality of this Draft EIR addresses short-term construction generated emissions and includes a listing of individual measures that are intended to reduce and minimize construction generated emissions. Included in the listing of the individual measures are several measures that would help to reduce greenhouse gas emissions. Such measures include 1) idling time for all diesel-fueled equipment shall be minimized to five minutes or less; 2) ARB diesel fuel shall be used for all diesel-powered equipment, and 3) preparation of a plan for Placer County Air District approval that would demonstrate that heavy-duty off-road vehicles to be used in the construction project will achieve a project-wide fleet average 20 percent NOx reduction and a 45% particulate matter reduction compared to the most recent ARB fleet average.

Mitigation Measure 4.3-2 identified in Section 4.3, Air Quality of this Draft EIR addresses long-term operational generated emissions and includes a listing of individual measures that are intended to reduce and minimize operational generated emissions. Included in the listing of the individual measures are several measures that would help to reduce greenhouse gas emissions. Such measures may include, but are not limited to: 1) providing transit enhancing infrastructure that include transit shelters, benches, street lighting, route signs and displays, and/or bus turnouts/bulbs; 2) providing bicycle enhancing infrastructure that includes secure bicycle parking; 3) providing electric maintenance equipment, using solar, low-emissions or central water heaters, increasing wall and attic insulation beyond Title 24 requirements, orienting of buildings to take advantage of solar heating and natural cooling, using passive solar designs, energy efficient windows (double pane and/or Low-E), highly reflective roofing materials, cool paving (high albedo pavement) and parking lot shading above that required by code, installing photovoltaic cells, programmable thermostats for all heating and cooling systems, awnings or other shade mechanisms for window and walkways, and utilizing day lighting systems such as skylights, light shelves and interior transom windows; 4) including in the parking lot design clearly marked pedestrian pathways between transit facilities and building entrances, and 5) requiring all diesel engines to be shut off when not in use for longer than 5 minutes on the premises to reduce idling emissions.

Furthermore, the City has determined that in addition to the project features identified in Table 6-17, the following mitigation measures would be appropriate for the proposed project and shall be required with project implementation.

1) All dock and delivery areas shall be posted with signs informing truck drivers of the California Air Resources Board regulations including the following:

    - Truck drivers shall turn off engines when not in use.

    - All diesel delivery trucks servicing the project shall not idle more than five minutes, consistent with Mitigation Measure 4.3-2.

    - Restrict idling emissions by using auxiliary power units and electrification in the docking areas if provided by the operator.

2) Auxilary power shall be provided for TRUs, as feasible, at all docking facilities to minimize emissions from these units while on the project site.

3) Implement carpool/vanpool program such as carpool ride matching for employees, assistance with vanpool formation, and provisions of vanpool vehicles.

4) Provide preferential employee parking for carpool and vanpool vehicles.

5) Provide transit incentives (e.g., transit subsidies for employees, implement a parking cash-out program for employees, provide transit route maps, fares, and schedules posted at the worksite in a conspicuous location [e.g., employee breakroom].

6) Restroom sinks within individual buildings on the site shall use sensor-activated, low-flow faucets. The low-flow faucets, because they regulate flow, reduce water usage by 84 percent, while the sensors, which regulate the amount of time the faucets flow, save approximately 20 percent in water usage over similar, manually operated systems.

Level of Significance After Mitigation

Implementation of the project features, City policies and mitigation measures identified above would reduce GHG emissions from construction and operation of the project, as would the energy conservation measures discussed in Section 4.14. As the preceding discussion suggests, the vast majority of GHG emissions associated with the project are attributable to the combustion of fossil fuels, either in motor vehicles or in electricity-generating power plants. It is the City's observation that there is nothing inherent in a retail project, even a regional retail project, that undermines efforts to comply with AB 32 and Executive Order S-3-05. Rather, the project's GHG emissions described above reflect the facts (i) that the human beings who will work and shop there will drive motor vehicles using petroleum-derived fuels, and (ii) that the electricity supplied to the buildings is often generated by power plants using fossil fuels such as natural gas, oil, or coal. As the preceding analysis also demonstrates, land use decisions will have limited beneficial or negative effects on climate change as long as vehicles and power plants continue to consume fossil fuels. The State, it is clear, must make significant strides in changing the make-up of transportation fuels and power plant fuels if it is to achieve compliance with AB 32. Should such strides be made, projects such as Rocklin Crossings – with shoppers and employees driving in clean cars, and electricity generated by clean power plants – may someday contribute few, if any, GHG emissions.

The discussion identifies and qualitatively analyzes various project features and City policies designed to reduce GHG gases to the extent feasible. The implementation of the above stated project features, mitigation measures and compliance with City policies would reduce the emission of greenhouse gases attributable to the project through vehicle emission reductions, vehicular trip reductions, HFC emission reductions, recycling programs,

increases in building and appliance energy efficiencies, and decreased water use. With the implementation of these project features, mitigation measures and compliance with City policies, the proposed project would be substantially consistent with the emission reduction strategies contained in the California Climate Action Team's Report to the Governor and Executive Order S-3-05. Therefore, the project's climate change impacts would be considered less than significant.

7 ALTERNATIVES

7.1 INTRODUCTION

7.1.1 CEQA AUTHORITY FOR CONSIDERATION OF ALTERNATIVES

Section 15126.6(a) of the State CEQA Guidelines requires EIRs to describe "... a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation. An EIR is not required to consider alternatives which are infeasible. The lead agency is responsible for selecting a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives. There is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason." This section of CEQA also provides guidance regarding what the alternatives analysis should consider. Subsection (b) further states the purpose of the alternatives analysis, as follows:

> Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment (Public Resources Code Section 21002.1), the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly.

The State CEQA Guidelines further require that the alternatives be compared to the proposed project's environmental impacts and that the "no project" alternative be considered (CEQA Guidelines Section 15126.6[d][e]). In defining "feasibility" (e.g.," ... feasibly attain most of the basic objectives of the project ..."), State CEQA Guidelines Section 15126.6(f)(1) states, in part:

> Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent). No one of these factors establishes a fixed limit on the scope of reasonable alternatives.

In determining what alternatives should be considered in the EIR, it is important to acknowledge the objectives of the project, the project's significant effects, and unique project considerations. These factors are crucial to the development of alternatives that meet the criteria specified in Section 15126.6(a). Although, as noted above, EIRs must contain a discussion of "potentially feasible" alternatives, the ultimate determination as to whether an alternative is feasible or infeasible is made by the lead agency's decision-making body, here the Rocklin City Council. (See Pub. Resources Code, § 21081[a][3].) At the time of action on the project, the City Council may consider evidence beyond that found in this EIR in addressing such determinations. The Council, for example, may conclude that a particular alternative is infeasible (i.e., undesirable) from a policy standpoint, and may reject an alternative on that ground provided that the Council adopts a finding, supported by substantial evidence, to that effect, and provided that such a finding reflects a "reasonable balancing of the relevant economic, environmental, social, and technological factors." (*City of Del Mar v. City of San Diego* (1982) 133 Cal.App.3d 401, 417; see also *Sequoyah Hills Homeowners Assn. v. City of Oakland* (1993) 23 Cal.App.4th 704, 714-716 (court upholds findings rejecting alternatives for not fully satisfying project objectives).)

7.1.2 FACTORS CONSIDERED IN IDENTIFYING PROJECT ALTERNATIVES

The proposed project is unique due to its large size and in its need to be located near a major transportation corridor due to the type of uses and tenant mix anticipated and its need to avoid being sited in an area (such as the Highway 65 corridor) in which the existence of numerous competing large retailers would adversely affect its chances for success. In identifying potentially feasible alternatives to the proposed project, the following project objectives were considered:

- To develop regional shopping facilities on commercially-designated land within the City consistent with City of Rocklin General Plan policy,
- To create a high-quality commercial development near a major transportation corridor within the City of Rocklin serving western Placer County in order to meet the growing regional demand for commercial retail services,
- To develop a property of sufficient size to accommodate two major anchor tenants and sufficient to support smaller tenants to create a regional shopping destination,
- To provide a shopping facility that maximizes visibility from Interstate 80 for all buildings and tenants,
- To construct a facility near a major freeway interchange in order to minimize traffic generation on local streets,
- To construct a facility with access to adequate existing or anticipated utility infrastructure to support planned operations,
- To create a new net public fiscal benefit for the City of Rocklin,
- To maximize the economic benefit to the City of Rocklin by attracting patronage from both within and outside of the City, and
- To provide new employment opportunities to the residents of the City of Rocklin and the surrounding areas.

Under CEQA Guidelines section 15126.6, as noted earlier, the alternatives to be discussed in detail in an EIR should be able to “feasibly attain most of the basic objectives of the project[.]” For this reason, the objectives described above provided the framework for defining possible offsite alternative project locations. Based on these objectives, potentially feasible offsite locations were limited to undeveloped sites located within the City of Rocklin and of sufficient size to accommodate the proposed project (i.e., a minimum of approximately 40 developable acres). These sites needed to be sufficiently close to Interstate 80 in order to minimize traffic generation on local streets and provide easy access. The sites should also be visible from Highway 80 in order to attract customers. Although sites with a Retail Commercial (RC) land use designation were identified as preferable, the selection process did not preclude sites with other land use designations. Properties along State Route 65 were not considered as feasible alternatives due to the presence of existing large commercial uses along this corridor that already contain all of the same large retailers (e.g., Wal-Mart) as the proposed project.

7.2 PROJECT ALTERNATIVES EVALUATED IN THIS EIR

7.2.1 DESCRIPTION OF ALTERNATIVES

Based on the requirements of State CEQA Guidelines §15126.6 and the project's objectives, the following alternatives to the proposed project were identified:

- No Project Alternative,
- Reduced Size Alternative,
- Building Realignment Alternative,
- Offsite Alternative #1,
- Offsite Alternative #2, and
- Offsite Alternative #3.

Alternatives along Highway 65 were not included because of the existing large number of competing major retailers already located within that corridor. The City also determined not to include Offsite Alternative # 4, an approximately 20-acre site between China Garden Road and Hidden Glen Drive south of the Rocklin Road/ Interstate 80 interchange, because of its small size, its potential access problems, its location near existing residential development, its environmental sensitivity, and the fact that the project applicant does not own or control the property. (See Section 7.4 below for more details.)

7.2.2 NO PROJECT ALTERNATIVE

State CEQA Guidelines Section 15126.6(e)(1) requires that the no project alternative be described and analyzed "to allow decision makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project." The no project analysis is required to discuss "the existing conditions at the time the notice of preparation is published…as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services" (Section 15126.6[e][2]). "If the project is . . . a development project on identifiable property, the 'no project' alternative is the circumstance under which the project does not proceed. Here the discussion would compare the environmental effects of the property remaining in its existing state against environmental effects which would occur if the project is approved. If disapproval of the project under consideration would result in predictable actions by others, such as the proposal of some other project, this 'no project' consequence should be discussed. In certain instances, the no project alternative means 'no build' wherein the existing environmental setting is maintained. However, where failure to proceed with the project will not result in preservation of existing environmental conditions, the analysis should identify the practical result of the project's non-approval and not create and analyze a set of artificial assumptions that would be required to preserve the existing physical environment." (Section 15126.[e][3][B].)

DESCRIPTION

The project site is currently undeveloped. However, based on the high demand for commercial/retail uses and sites with direct freeway access in western Placer County and the availability of adequate infrastructure at the site to support commercial development, the No Project Alternative assumes that development of the site consistent with its existing land use and zoning designations would reasonably be expected to occur in the near term. In light of existing planning and zoning on the property, including a small area planned and zoned for residential uses (which would be modified under the proposed project), the No Project Alternative assumes that the 1.23 acres of the site currently designated for Medium Density Residential uses would develop with residential uses rather than commercial uses. Therefore, this alternative would include a small residential component. Based on the current zoning, approximately 7 to 10 homes could be constructed within this 1.23-acre area. The inability to construct commercial development on this 1.23-acre area, absent general plan and zoning changes, would reduce the total commercial buildings by approximately 13,500 square feet for a total of approximately 530,000 square feet.

IMPACTS OF THE NO PROJECT ALTERNATIVE

With the implementation of the No Project Alternative, the adverse environmental impacts anticipated with the proposed project would continue to occur, although the development plan would be slightly altered. Instead of having a perimeter wall that extends along the entire eastern boundary of the property, within the 1.23-acre area, the wall would extend along the western side of the future residences. Because the commercial uses would be slightly reduced to accommodate for the residential uses, some variation in impacts would be anticipated. For example, for traffic, commercial development on approximately 1.23 acres would generate approximately 50 vehicle trips during the p.m. peak hour while residential development on the same property would generate approximately 10 vehicle trips during the same period. This would represent a reduction in p.m. peak vehicle trips of less than 3 percent when compared to the proposed project. Residential development would also slightly reduce air pollutant emissions and localized noise levels when compared to commercial development due to the reduction in vehicle trips and reduced overall activity level associated with residential uses. However, for air quality, the reduction in air emissions would be less than 3 percent of those generated by the proposed project. Therefore, the implementation of this alternative would represent a relatively negligible change in the proposed land uses on the site and would not be expected to reduce any significant environmental impacts of the proposed project to less-than-significant levels.

CONCLUSION

The No Project Alternative would have impacts that are slightly reduced although substantially equivalent to those of the proposed project. Therefore, it would not be considered the environmentally superior alternative. Because the No Project Alternative is substantially equivalent to the proposed project, it would be consistent with the project objectives.

7.2.3 REDUCED SIZE ALTERNATIVE

DESCRIPTION

This alternative includes a 50% reduction in the project's proposed square footage and the elimination of one of the two primary tenants. Because Wal-Mart stores typically consume more square footage than Home Depot stores, this alternative would likely include a Home Depot but not a Wal-Mart. The total building square footage with this alternative would be approximately 272,000 square feet, spread among the single primary tenant and secondary tenants. The total developed area would be reduced to approximately 35 acres. A 50% reduction in the square footage was assumed in order to reduce the project's significant traffic and biological resource impacts by substantially reducing the project's trip generation and allowing sensitive resources areas (i.e., oak trees and wetlands) to be preserved. With this alternative, no development is assumed within the wetland areas along the property's northeastern boundary or within the south-central portion of the property. The primary site entrance would continue to be provided from the reconfigured Interstate 80/Sierra College Boulevard eastbound exit ramp. However, parking and building pads would not be provided south of the south-central portion of the site. A single secondary vehicle access is assumed to extend from the central portion of the site south to Croftwood Road, which connects with Sierra College Boulevard.

IMPACTS OF THE REDUCED SIZE ALTERNATIVE

Aesthetics/Visual Resources

The visual resource impacts of this alternative would be reduced when compared to the proposed project because the total development footprint would be reduced. The proposed project would result in significant and unavoidable changes in the site's visual character and significant and unavoidable cumulative visual resource impacts. By avoiding the on-site wetlands and the majority of the oak woodlands on the site, the changes in the site's visual character would be reduced when compared to the proposed project. However, as with the proposed

project, this alternative would significantly alter the visual character of the site by converting relatively undeveloped land to urban uses. This alternative would also contribute to the cumulative change in the visual character of the Interstate 80 corridor. Therefore, although this alternative would reduce visual impacts when compared to the proposed project, it would not eliminate the significant and unavoidable visual resource impacts anticipated with project implementation.

Air Quality

The air quality impacts associated with construction activities would be reduced when compared to the proposed project due to a reduction in total area graded and the smaller total building square footage. The two-year construction period assumed for the proposed project would be reduced by six to eight months, limiting the duration construction emissions would be generated. However, similar to the proposed project, the generation of daily emissions would result in a significant air quality impact. Both the proposed project and this alternative would be expected to generate approximately 75 lb/day of ROG, 43 lb/day or NO_X, 127 lb/day of PM_{10}, and 66 lb/day of CO. Daily construction-generated emissions would not exceed PCAPCD's significance thresholds of 82 lb/day for ROG or NO_X or 550 lb/day of CO. However, emissions of PM_{10} would exceed PCAPCD's significance threshold of 82 lb/day. Therefore, although this alternative would reduce the duration of construction emissions, it would not reduce the project's significant construction-emission air quality impacts to a less-than-significant level.

The proposed project operations would result in significant and unavoidable regional air quality impacts. For this alternative, the emissions generated from daily operations would be reduced when compared to the proposed project. This alternative would likely reduce the approximately 18,800 daily vehicle trips anticipated with the proposed project to approximately 10,000 daily trips. Based on the modeling conducted, project operations would result in worst-case maximum daily emissions of approximately 196 lb/day of ROG, 311 lb/day of NO_X, 281 lb/day of PM_{10}, and 2,196 lb/day of CO. These daily operational emissions would exceed PCAPCD's significance thresholds of 82 lb/day for ROG, NO_X, and PM_{10}, or 550 lb/day for CO during both the winter and summer periods. For this alternative, these emission levels would be reduced by approximately 45 percent due to the smaller size of the development and the reduced vehicle trips. This alternative would be expected to generate approximately 108 lb/day of ROG, 171 lb/day of NO_X, 155 lb/day of PM_{10}, and 1,208 lb/day of CO. Daily unmitigated operational emissions would exceed PCAPCD's significance thresholds of 82 lb/day for ROG, NO_X, and PM_{10}, or 550 lb/day for CO during both the winter and summer periods. Implementation of the identified mitigation measures would not reduce these emission levels to a less-than-significant level. Therefore, although this alternative would reduce the total operational emissions generated from the site, it would likely not reduce the significant and unavoidable operational air quality impacts to a less-than-significant level.

This alternative would also reduce the toxic air contaminants generated from diesel trucks accessing the site by reducing the total building square footage. However, the generation of toxic air contaminants is not considered a significant project impact.

Although this alternative would reduce the total operational emissions generated from the site, it would continue to contribute cumulatively to the significant and unavoidable regional emissions generated in the air basin. Therefore, this impact would continue to be cumulatively significant and unavoidable.

Biological Resources

Implementation of this alternative would eliminate significant biological resource impacts anticipated with implementation of the proposed project. The proposed project would result in significant impacts related to the loss of wetlands, the loss of valley elderberry longhorn beetle habitat, disturbance of raptors and migratory birds, and degradation of sensitive fish habitat. The project would also result in the significant and unavoidable short-term loss of mature oak woodlands. The implementation of this alternative would avoid the loss of approximately 0.4 acre of wetlands on the site and would avoid the removal of the majority of the beetle habitat and oak trees on

the site. By maintaining the majority of the oak trees on the site, the project's impacts on oak trees, raptors and migratory birds would be reduced, although not to a less-than-significant level. However, the project's significant impacts on wetlands and beetle habitat would be reduced to a less-than-significant level with this alternative. Because this alternative would include grading and excavation on the site that could contribute sediments to Secret Ravine Creek if not controlled, it would not eliminate the project's significant impact on sensitive fish habitat. However, these impacts would be reduced due to the greater distance between construction activities and Secret Ravine Creek.

The proposed project would contribute cumulatively to the loss of biological resources in the region. This cumulative impact would be considered significant and unavoidable. Although this alternative would disturb less total area than the proposed project, it would also contribute to the cumulative loss of biological resources in the region. Therefore, this impact would not be reduced to a less-than-significant level.

Cultural Resources

The potential impacts on cultural resources anticipated with this alternative would be reduced when compared to the proposed project because of the smaller development footprint. However, because no sensitive cultural resources have been identified on the site, the difference in cultural resource impacts between this alternative and the proposed project would be negligible.

Energy

The reduction in total building square footage associated with this project would directly reduce the anticipated energy usage at the site by approximately 50%. However, neither the proposed project nor this alternative would be expected to result in significant energy impacts.

Geology and Soils

The proposed project would result in significant seismic and erosion hazards with project implementation. These hazards would be reduced with this alternative because a smaller area of the site would be disturbed by grading and excavation activities and fewer buildings would ultimately be exposed to seismic hazards. However, grading and excavation activities associated with this alternative would continue to cause significant erosion potential and would continue to expose structures and people to significant seismic hazards. Therefore, this alternative would not reduce these significant geology and soils impacts to a less-than-significant level.

Hydrology and Water Quality

The project's proposed storm water collection includes a detention basis that has been sized to accommodate the projected peak storm water generated from the proposed development. By capturing peak storm water on the site, the proposed project would not contribute to downstream flooding. Therefore, the storm water impacts of the proposed project are identified as less than significant. Implementation of this alternative would reduce the total amount of new impervious surfaces by approximately 35% when compared to the proposed project. This would decrease the peak storm water volumes generated at the site and would reduce the necessary size of the offsite detention basin, though the reduction could be minimal in light of the fact that the basin is intended to serve not only the project site but also the proposed Rocklin 60 residential development. However, the storm water impacts of the proposed project are not considered significant; therefore, this alternative would not reduce a significant storm water impact.

The proposed project would contribute pollutant loads to storm water runoff from construction and operational activities. These short- and long-term water quality impacts would be considered significant. The reduction in the development footprint associated with this alternative would decrease the area of disturbance during construction activities and would decrease the urban pollutant source areas during site operations. However, because this

alternative would continue to include a substantial development footprint, it would not eliminate the significant short- and long-term water quality impacts of the proposed project.

Land Use

Because this alternative would reduce the total development footprint, it would reduce the anticipated changes in land use. However, the proposed project would not be anticipated to cause significant land use impacts.
The project would not conflict with plans or policies specifically adopted to protect the environment and would not physically divide an established community. Therefore, the land use impacts of this alternative would not differ substantially from the proposed project.

Public Health and Hazards

Excavation and construction activities associated with the proposed project could expose construction workers and the public to hazardous materials if they are encountered on the site. This potential for exposure is considered a significant project impact. By reducing the total size of the project, this alternative would reduce the risk associated with the potential exposure of construction workers and the public to hazardous materials because less total area would be disturbed. However, because exposure to hazardous materials could continue to occur with this alternative, this significant project impact would not be reduced to a less-than-significant level.

Public Services and Utilities

The construction of the water conveyance facilities necessary to serve the proposed project could result in short-term significant environmental impacts including noise generation, construction equipment emissions and traffic delays. The proposed project would not result in any other significant utility or public service impacts. The implementation of this alternative would reduce the demand on utility services such as electricity, natural gas, telecommunications, water, and wastewater services when compared to the proposed project. This alternative would also reduce the demand on police and fire protection services, emergency response services, and solid waste collection and disposal services, though this alternative would also generate for the City less sales tax revenue, which can be used to help to fund police, fire protection, and emergency response services. However, due to peak fire-flow requirements, the reduction in water demand associated with this alternative would not eliminate the need for the extension of the offsite water conveyance facilities anticipated with the proposed project. Therefore, although this alternative would reduce the demand on public services and utilities, it would not eliminate the one potentially significant public utility impact anticipated with the proposed project.

Noise

Similar to the proposed project, development of this alternative would generate construction noise associated with the use of heavy equipment for site grading and excavation, installation of utilities, paving, and building fabrication. However, because less area would be disturbed with this alternative and fewer buildings would be constructed, the duration of the construction-related noise impacts would be reduced. Also, because construction would not occur within the northern portion of the project directly adjacent to the existing rural residences, the construction noise impacts anticipated with the proposed project at these residences and at future residences within the proposed Rocklin 60 residential development would be minimized. Similarly, because development would not occur along the southern perimeter of the site, the construction noise impacts experienced by rural residents to the southwest and future residents directly to the east would be reduced when compared to the proposed project. Although the project's construction noise impacts would be considered less than significant, these impacts would be reduced with this alternative.

Based on a 6 dBA decrease in noise levels for each doubling of distance, the noise levels at the northeastern and southern property boundaries would be reduced by approximately 18 dBA with implementation of this alternative, when compared to the proposed project. However, the projected construction and operational noise levels along the central portion of the eastern site boundary would not change when compared to those of the proposed project.

Therefore, although this alternative would result in fewer existing and future residents experiencing elevated noise levels associated with project operations, it would not reduce the project's significant operational noise impacts to a less-than-significant level.

Traffic

The project as currently proposed is anticipated to generate approximately 18,800 vehicle trips per day. The reduction in total square footage associated with this alternative would correspondingly reduce the anticipated daily vehicle trips generated by the project site as well as the a.m. and p.m. peak hour trips. The proposed project would result in significant traffic impacts at the following three intersections: Rocklin Road/I-80 westbound ramps, Rocklin Road/I-80 eastbound ramps, and Sierra College Boulevard/Rocklin Road. With the implementation of this alternative, the significant traffic impacts at the Rocklin Road/I-80 westbound ramps and Rocklin Road/I-80 eastbound ramps would be reduced to a less-than-significant level because the projected increase in vehicle trips at these intersections would not exceed five percent of the total traffic traveling through these intersections. However, the vehicle trips generated by this alternative at the Sierra College Boulevard/ Rocklin Road intersection would exceed this five percent threshold. Therefore, this significant impact would not be eliminated with this alternative.

Urban Decay

This alternative would include fewer commercial uses than the proposed project. Therefore, its potential to contribute to urban decay by reducing the financial viability of existing commercial establishments would be reduced when compared to the proposed project. However, the proposed project is not anticipated to cause significant urban decay within the site's market area with operation of the proposed commercial uses at the site.

Cumulative Climate Change

Long-term operation of the proposed project would generate associated greenhouse gas (GHG) emissions from area- and mobile-sources, and indirectly from stationary sources associated with energy consumption. This alternative would include fewer commercial uses than the proposed project. Therefore, its potential to generate GHG emissions would be reduced when compared to the proposed project.

CONCLUSION

The Reduced Size Alternative would reduce the severity of impacts anticipated with the proposed project for the following resource areas: aesthetics/visual resources, air quality, biological resources, cultural resources, energy, geology and soils, hydrology and water quality, public health and hazards, public utilities, noise, traffic, urban decay and global climate change. This alternative would specifically reduce the significant project impacts on wetlands and valley elderberry longhorn beetle habitat to less-than-significant levels. This alternative would also reduce the significant traffic impacts at the Sierra College Boulevard/Interstate 80 ramps to a less-than-significant level. For these reasons, this would be considered the environmentally superior alternative. However, by eliminating one of the major tenants and substantially reducing the total proposed building square footage, this alternative would be creating a much smaller shopping center that would be considered less of a regional shopping destination. This would directly conflict with the objectives of developing a property of sufficient size to accommodate two major anchor tenants and sufficient supporting smaller tenants to create a regional shopping destination, and maximizing the economic benefit to the City of Rocklin by attracting patronage from outside of the City.

7.2.4 BUILDING REALIGNMENT ALTERNATIVE

DESCRIPTION

This alternative includes the same total building square footage as the proposed project but includes realigning the buildings on the project site. The purpose of this alternative is to relocate the largest loading dock areas away from the eastern site boundary in order to reduce the significant truck traffic noise for existing and future residents to the east. Instead of being located on the eastern site boundary, the proposed Wal-Mart and Home Depot buildings would be relocated to the western and northern site boundary. The Wal-Mart building would be located directly north of the project entrance and directly east of the eastbound Interstate 80 onramp. The Home Depot building would be located directly northeast of the Wal-Mart building adjacent to Interstate 80. The front facades of these buildings would face to the east and southeast, respectively. The medium-sized buildings identified as D through G would be located adjacent to Interstate 80 in the northern portion of the site and would face toward the southeast. The smaller retail buildings currently located in the western and northern portions of the site would be relocated to the eastern site boundary. Parking would continue to be provided through the center of the site and access would continue to be provided from the west and south. The project's proposed eastern perimeter wall is assumed to be included with this alternative.

IMPACTS OF THE BUILDING REALIGNMENT ALTERNATIVE

Aesthetics/Visual Resources

The proposed project would result in significant and unavoidable changes in the site's visual character and significant and unavoidable cumulative visual resource impacts. As with the proposed project, this alternative would significantly alter the visual character of the site by converting undeveloped land to urban uses. However, the visual resource impacts of this alternative would be more adverse than anticipated with the proposed project due to the realignment of the proposed building configurations. Instead of travelers on Sierra College Boulevard and Interstate 80 viewing several small retail buildings and a landscaped parking lot in the foreground with the front facades of the larger commercial buildings in the background, the views would primarily consist of the back of the larger commercial buildings, which would face toward the freeway. Because the back of the larger commercial buildings would generally not include appealing or extensive architectural treatments and would include the loading dock areas, the waste dumpsters, and other visually unappealing uses, the views from the roadways of the backs of the buildings would be considered less visually pleasing than views of the proposed project. Also, due to the size of the larger commercial buildings, their physical mass would create a visual barrier along Sierra College Boulevard and Interstate 80 that would limit views of the site's internal landscaping and architectural amenities. Therefore, the visual impacts of this alternative would be more adverse than the proposed project.

Air Quality

The air quality impacts associated with construction activities would be similar to those anticipated with the proposed project because the same approximate acreage would be graded to accommodate site development. Both the proposed project and this alternative would be expected to generate approximately 75 lb/day of ROG, 43 lb/day or NO_X, 127 lb/day of PM_{10}, and 66 lb/day of CO during project construction. Daily construction-generated emissions would not exceed PCAPCD's significance thresholds of 82 lb/day for ROG or NO_X or 550 lb/day of CO. However, emissions of PM_{10} would exceed PCAPCD's significance threshold of 82 lb/day. The two-year construction period assumed for the proposed project would also be required on this alternative site. Therefore, the same types and volumes of construction emissions would be generated.

Also, because the site would include the same type of operational activities, the same general operational air quality impacts would be anticipated. Based on the modeling conducted, operations for this alternative would result in worst-case maximum daily emissions of approximately 196 lb/day of ROG, 311 lb/day of NO_X, 281

lb/day of PM_{10}, and 2,196 lb/day of CO. These daily operational emissions would exceed PCAPCD's significance thresholds of 82 lb/day for ROG, NO_X, and PM_{10}, or 550 lb/day for CO during both the winter and summer periods. Similar to the proposed project, these operational emissions would also contribute cumulatively to significant and unavoidable regional emissions.

Biological Resources

The proposed project would result in significant impacts related to the loss of wetlands, the loss of valley elderberry longhorn beetle habitat, disturbance of raptors and migratory birds, and degradation of sensitive fish habitat. The project would also result in the significant and unavoidable short-term loss of mature oak woodlands. Because this alternative would develop the same area as the proposed project, the biological resource impacts associated with this alternative would be the same as those anticipated with implementation of the proposed project.

Cultural Resources

The potential impacts on cultural resources anticipated with this alternative would be the same as those of the proposed project. No sensitive cultural resources were identified on the proposed project site, although there is the potential that as yet undiscovered subsurface cultural resources could be disturbed by site development.
The development of this alternative has the same potential to disturb as yet undiscovered subsurface cultural resources.

Energy

This alternative would include total building square footage equivalent to the proposed project. Therefore, the energy impacts associated with this alternative would be similar to the proposed project. Neither the proposed project nor this alternative would be expected to cause significant energy impacts.

Geology and Soils

The proposed project would result in significant seismic and erosion hazards with project implementation.
This alternative would include total building square footage equivalent to the proposed project and would disturb the same area during site grading and excavation. Therefore, the geology and soils impacts associated with this alternative would be the same as those of the proposed project.

Hydrology and Water Quality

This alternative would have the same total new impervious surface area as the proposed project and would require the same onsite detention facility. Therefore, the effects of this alternative on peak storm water discharge and downstream water quality would be the same as those of the proposed project.

Land Use

The proposed project would not be anticipated to cause significant land use impacts. The project would not conflict with plans or policies specifically adopted to protect the environment and would not physically divide an established community. The land uses associated with this alternative would not differ from the proposed project. The only difference is in the layout of the buildings. Therefore, the land use impacts of this alternative would be the same as those of the proposed project.

Public Health and Hazards

The development of this site would include the same uses as would occur with the proposed project. Therefore, the public health and hazard impacts associated with site operations would not substantially differ.

Public Services and Utilities

The implementation of this alternative would generate the same demands on utility services such as electricity, natural gas, telecommunications, water, and wastewater services as the proposed project. This alternative would also have the same demands on police and fire protection services, emergency response services, and solid waste collection and disposal services. Therefore, the public service and utility impacts of this alternative would not differ from those of the proposed project.

Noise

Similar to the proposed project, development of this alternative would generate construction noise associated with the use of heavy equipment for site grading and excavation, installation of utilities, paving, and building fabrication. By relocating the largest buildings to the western and northern portions of the site, the majority of the construction noise would occur in these areas rather than near the eastern site boundaries. Therefore, existing and future residents to the east would likely be exposed to high construction noise levels for a shorter duration with this alternative. Although the project's construction noise impacts would be considered less than significant, these impacts would be reduced with this alternative.

For project operations, the proposed project would result in a significant (but mitigable) noise impact for future residents within the proposed Rocklin 60 residential development being exposed to significant truck delivery noise. By relocating the large commercial buildings to the western and northern portions of the site, the truck delivery noise would be relocated away from these future residents. In addition, because the truck loading and unloading operations would occur on the western and northern sides of the buildings, the buildings themselves would effectively attenuate the noise experienced by future residents to the east. The building structures would be expected to reduce loading dock noise levels to the east by as much as 15 decibels. Also, based on a 6 dBA decrease in noise levels for each doubling of distance, the noise levels associated with loading dock operations at the eastern property boundaries would be reduced by approximately an additional 18 decibels with implementation of this alternative, when compared to the proposed project. Therefore, this alternative would reduce the project's significant noise impacts on existing and future residences to the east to a less-than-significant level.

Traffic

This alternative would include the same uses as the proposed project and would be expected to generate the same traffic volumes. Therefore, the traffic impacts associated with this alternative would be the same as those of the proposed project.

Urban Decay

The proposed project is not anticipated to cause significant urban decay within the site's market area with operation of the proposed commercial uses at the site. This alternative would include the same commercial square footage as the proposed project. Therefore, its potential to contribute to urban decay by reducing the financial viability of existing commercial establishments would be equivalent to the proposed project.

Cumulative Climate Change

Long-term operation of the proposed project would generate associated greenhouse gas (GHG) emissions from area- and mobile-sources, and indirectly from stationary sources associated with energy consumption.
This alternative would include the same uses as the proposed project. Therefore, its generation of GHG emissions would be the same as those generated by the proposed project.

CONCLUSION

The Building Realignment Alternative would have the same impacts as the proposed project for the following resource areas: air quality, biological resources, cultural resources, energy, geology and soils, hydrology and water quality, land use, public health and hazards, public services/utilities, traffic, and cumulative climate change. For aesthetic/visual resources, the impacts of this alternative would be more adverse than the proposed project due to the backs of the larger commercial buildings facing Sierra College Boulevard and Interstate 80. However, the anticipated significant (but mitigable) operational noise impacts for existing and future residents to the east of the project site would be reduced to a less-than-significant level with the implementation of this alternative.
The development of this alternative would directly conflict with the objective of provide a shopping facility that maximizes visibility from Interstate 80 for all buildings and tenants.

7.2.5 OFFSITE ALTERNATIVE #1

DESCRIPTION

This Offsite Alternative is located on approximately 50 acres directly northwest of the project site and is assumed to include commercial square footage roughly equivalent to the proposed project. This site was selected as a project alternative based on the lack of adjacent residential uses and the ability of this alternative to eliminate the significant noise impacts associated with the proposed project on existing and future residential uses. This site is bordered on the north and west by Granite Drive, on the south by Interstate 80 and on the east by Sierra College Boulevard. The land use designation of the site is Retail Commercial (RC) and direct access to Interstate 80 would be provided from Sierra College Boulevard. The topography of the site is gently rolling with elevations ranging from approximately 315 to 345 feet msl. The site includes a mix of dense oak woodlands, grasslands and the remnants of an old orchard. A channelized drainage parallels Interstate 80 along the site's southeastern boundary. Separate applications have been submitted to develop the different parcels on this property with commercial uses. The parcels on this property are owned by three separate entities, one of which includes the project applicant. However, the environmental review process is just being initiated for these applications and no development approvals have been given for these parcels.

IMPACTS OF THE OFFSITE ALTERNATIVE #1

Aesthetics/Visual Resources

Similar to the proposed project, this site is directly visible from Interstate 80. Following release of the Notice of Preparation for the proposed project, construction of the Interstate 80/Sierra College Interchange Improvement Project, and specifically construction of the mounded westbound on-ramp, has substantially obstructed views of this site from the freeway. Views of the proposed project are similarly obstructed by the mounded eastbound on-ramp.

The proposed project would result in significant and unavoidable changes in the site's visual character and significant and unavoidable cumulative visual resource impacts. As with the proposed project, this alternative would significantly alter the visual character of the site by converting undeveloped land to urban uses. However, the visual resource impacts of this alternative would be more adverse than anticipated with the proposed project due to the dense landscape of native oak trees on this site. The loss of this dense landscape of native oak trees would be considered a significant and unavoidable change in the site's visual character. This alternative would also contribute significantly to the cumulative change in the visual character of the Interstate 80 corridor.

Air Quality

The air quality impacts associated with construction activities would be similar to those anticipated with the proposed project because the same approximate acreage would be graded to accommodate site development.

Both the proposed project and this alternative would be expected to generate approximately 75 lb/day of ROG, 43 lb/day or NO_X, 127 lb/day of PM_{10}, and 66 lb/day of CO during project construction. Daily construction-generated emissions would not exceed PCAPCD's significance thresholds of 82 lb/day for ROG or NO_X or 550 lb/day of CO. However, emissions of PM_{10} would exceed PCAPCD's significance threshold of 82 lb/day. The two-year construction period assumed for the proposed project would also be required on this alternative site. Therefore, the same types and volumes of construction emissions would be generated.

Also, because the site would include the same type of operational activities, the same general operational air quality impacts would be anticipated. Based on the modeling conducted, operations for this alternative would result in worst-case maximum daily emissions of approximately 196 lb/day of ROG, 311 lb/day of NO_X, 281 lb/day of PM_{10}, and 2,196 lb/day of CO. These daily operational emissions would exceed PCAPCD's significance thresholds of 82 lb/day for ROG, NO_X, and PM_{10}, or 550 lb/day for CO during both the winter and summer periods. Similar to the proposed project, these operational emissions would also contribute cumulatively to significant and unavoidable regional emissions.

Biological Resources

The proposed project would result in significant impacts related to the loss of wetlands, the loss of valley elderberry longhorn beetle habitat, disturbance of raptors and migratory birds, and degradation of sensitive fish habitat. The project would also result in the significant and unavoidable short-term loss of mature oak woodlands. This alternative site includes a mix of remnant orchards, grasslands, wetlands and dense oak woodlands. Due to the oak woodland density, development would result in substantially more adverse impacts on oak woodland habitat than anticipated with the proposed project. Due to access constraints on this site, the total acreage of wetlands and whether valley elderberry habitat is present on this site could not be determined. Also, it is unknown whether this alternative is tributary to any drainages containing sensitive fish habitat. On balance, the biological resource impacts associated with this alternative would be more adverse than anticipated with the proposed project due to the substantial number of oak trees and raptor habitat that would be removed with development.

Cultural Resources

The potential impacts on cultural resources anticipated with this alternative are assumed to be similar to those of the proposed project. No sensitive cultural resources were identified on the proposed project site, although there is the potential that as yet undiscovered subsurface cultural resources could be disturbed by site development. The development of this alternative site has the same potential to disturb as yet undiscovered subsurface cultural resources.

Energy

This alternative site would include total building square footage equivalent to the proposed project. Therefore, the energy impacts associated with this alternative would be similar to the proposed project. Neither the proposed project nor this alternative would be expected to cause significant energy impacts.

Geology and Soils

The proposed project would result in significant seismic and erosion hazards with project implementation. This alternative site would include total building square footage equivalent to the proposed project and would include an approximately equivalent area of disturbance due to site grading and excavation. Because the soil characteristics of this alternative site do not substantially differ from the proposed project, the geology and soils impacts associated with this alternative would be generally similar to the proposed project.

Hydrology and Water Quality

This alternative would be expected to generally have the same total new impervious surface area as the proposed project and would likely require some sort of onsite detention facility. Therefore, the effects of this alternative on peak stormwater discharge would be similar to the proposed project. Modifications would be necessary to the channelized drainage on the site. However, changes to this man-made channel would not be expected to substantially alter the local hydrologic cycle or downstream water quality. Therefore, the hydrology and water quality impacts of this alternative would be similar to those anticipated with the proposed project.

Land Use

The project site is surrounded on the southeast by Interstate 80, on the east by Sierra College Boulevard, on the north and west by Granite Drive, and on the southwest by an existing commercial property. Two existing gas stations are located east of the project site and undeveloped land is located to the north. The site is undeveloped. The development of this alternative site would be generally compatible with the surrounding commercial uses. The development would also be compatible with the site's Retail Commercial (RC) land use designation. Therefore, similar to the proposed project, this alternative would not result in any significant land use impacts.

Public Health and Hazards

The development of this site would include the same uses as would occur with the proposed project. Therefore, the public health and hazard impacts associated with site operations would not substantially differ.

Public Services and Utilities

The implementation of this alternative would generate similar demands on utility services such as electricity, natural gas, telecommunications, water, and wastewater services as the proposed project. This alternative would require the extension of offsite water and sewer lines that would be different than anticipated with the proposed project. However, it is difficult to determine whether anticipated impacts associated with necessary water and sewer line extensions would be similar to, greater than, or less than the proposed project. The development of this site would at a minimum require the same water conveyance facilities as the proposed project and would result in the same significant environmental impacts associated with the construction of these facilities as would occur with the proposed project. This alternative would also be expected to have similar demands on police and fire protection services, emergency response services, and solid waste collection and disposal services. Therefore, this alternative is assumed to have generally similar impacts to the proposed project on public services and utilities.

Noise

Similar to the proposed project, development of this alternative would generate construction noise associated with the use of heavy equipment for site grading and excavation, installation of utilities, paving, and building fabrication. However, this construction would not occur adjacent to existing residences. Also, the installation of a noise wall would likely not be necessary to minimize operational noise impacts on the adjacent land uses. Because this alternative would not expose sensitive receptors (i.e., residences) to noise levels in excess of applicable standards, the construction and significant (but mitigable) operational noise impacts anticipated with the proposed project would not be anticipated with this alternative.

Traffic

Due to the site's direct access to Interstate 80 from Sierra College Boulevard, it would be expected to generate traffic volumes generally equivalent to those of the proposed project. However, the traffic impacts would be shifted to the northern portion of the interchange. The Interstate 80 on- and off-ramps and the Sierra College Boulevard/Granite Drive intersection would experience the bulk of traffic impacts. Access to the site would likely be provided from both Sierra College Boulevard and Granite Drive. Because the traffic would be more

concentrated north of the freeway, other intersections on the northern stretch of Sierra College Boulevard, including Brace Road and Taylor Road, may experience greater traffic volumes than with the proposed project. However, the traffic volumes on Sierra College Boulevard intersections south of the freeway (e.g., Rocklin Road) would experience substantially lower traffic volumes when compared to the proposed project. Therefore, although the traffic impacts would shift north with this alternative, they would still likely cause significant impacts at affected intersections. However, without a detailed traffic analysis of this alternative site, it cannot be determined what specific intersections or road segments would exceed the established significance thresholds.

Urban Decay

The proposed project is not anticipated to cause significant urban decay within the site's market area with operation of the proposed commercial uses at the site. This alternative would include the same commercial square footage as the proposed project. Therefore, its potential to contribute to urban decay by reducing the financial viability of existing commercial establishments would be equivalent to the proposed project.

Cumulative Climate Change

Long-term operation of the proposed project would generate associated greenhouse gas (GHG) emissions from area- and mobile-sources, and indirectly from stationary sources associated with energy consumption.
This alternative would include the same commercial square footage as the proposed project. Therefore, its generation of GHG emissions would be equivalent to the proposed project and its cumulative climate change impacts would be the same.

CONCLUSION

The impacts for Alternative Site #1 would be similar to those anticipated with the proposed project for the following resource areas: air quality, cultural resources, energy, geology and soils, hydrology and water quality, public health and hazards, public services and utilities, traffic, urban decay and global climate change.
For aesthetic/visual resources and biological resources, this alternative would cause significant impacts to be more severe than anticipated with the proposed project due to the loss of a substantially greater number of native oak trees. The construction and significant (but mitigable) operational noise impacts on existing and future residents with the proposed project would be eliminated with this alternative. Overall, the impacts of this alternative would be reduced for some resources and increased for others when compared with the proposed project.
The development of this alternative site would meet the objectives of the proposed project. However, the project applicant does not own this property and has no ability to affect its development. Therefore, implementation of Offsite Alternative # 1 is not likely to result in the timely and successful completion of the project or the satisfaction of the project objectives. Notably, the fact that the City has previously imposed a retail commercial designation on the property suggests that the City's intent has been to allow both this site and the project site to develop as complementary retail sites, and that the City never intended an "either/or" choice between the two sites. Thus, consistent with this approach, there appears to be sufficient market demand to develop retail uses on both properties. The City therefore expects Offsite Alternative #1 to proceed independently of the proposed project.

7.2.6 OFFSITE ALTERNATIVE #2

DESCRIPTION

This Offsite Alternative is located on approximately 70 acres northwest of the project site and is assumed to include commercial square footage roughly equivalent to the proposed project. This site was selected as a project alternative based on the lack of adjacent residential uses and the ability of this alternative to eliminate the significant noise impacts associated with the proposed project on existing and future residential uses. This site is bordered on the south by Granite Drive, on the west by Dominguez Road, on the northwest by Taylor Road, on

the north by Brace Road, and on the east by Sierra College Boulevard. This site includes multiple parcels that are designated in the northern portion of the site as Retail Commercial (RC) and in the southern portion as Light Industrial (LI). Two small drainages flow southwest through the length of the site and converge before crossing under Dominguez Road. These drainages are designated as Recreation/Conservation (R-C) on the general plan land use map. The topography of the site is gently rolling with elevations ranging from approximately 290 to 325 feet msl. The site includes a mix of dense oak woodlands, grasslands and riparian corridors along the two drainages. The site includes an existing office development (Horizon West) adjacent to Sierra College Boulevard and small commercial properties (e.g., bars and auto shops) along Taylor Road. The site is identified on signs posted on the site as a future commercial development by Granite Bay Ventures and a portion of it is currently being used as a soil stockpile site. This site does not include the developed Heavy Industrial (HI) designated parcels southeast of the Taylor Road/Dominguez Road intersection that are accessed from Taylor Road by way of Anthony Court. The project applicant does not own this property.

IMPACTS OF OFFSITE ALTERNATIVE #2

Aesthetics/Visual Resources

The proposed project would result in significant and unavoidable changes in the site's visual character and significant and unavoidable cumulative visual resource impacts. As with the proposed project, this alternative would significantly alter the visual character of the site by converting undeveloped land to urban uses. However, the visual resource impacts of this alternative would be more adverse than anticipated with the proposed project due to the dense landscape of native oak trees, riparian vegetation and wetlands on this site. The southern portion of this site is visible from Interstate 80. Thus, this alternative would also contribute to the cumulative change in the visual character of the Interstate 80 corridor. However, the majority of the site would not be visible from the freeway due to intervening vegetation on properties between the site and the freeway. Also, components of the Interstate 80/Sierra College Interchange Improvement Project block views of the site from the freeway. Therefore, although more adverse than the proposed project, fewer people would experience the visual impacts of its development.

Air Quality

The air quality impacts associated with construction activities would be similar to those anticipated with the proposed project because the same approximate acreage would be graded to accommodate site development. Both the proposed project and this alternative would be expected to generate approximately 75 lb/day of ROG, 43 lb/day or NO_X, 127 lb/day of PM_{10}, and 66 lb/day of CO during project construction. Daily construction-generated emissions would not exceed PCAPCD's significance thresholds of 82 lb/day for ROG or NO_X or 550 lb/day of CO. However, emissions of PM_{10} would exceed PCAPCD's significance threshold of 82 lb/day. The two-year construction period assumed for the proposed project would also be required on this alternative site. Therefore, the same types and volumes of construction emissions would be generated.

Also, because the site would include the same type of operational activities, the same general operational air quality impacts would be anticipated. Based on the modeling conducted, operations for this alternative would result in worst-case maximum daily emissions of approximately 196 lb/day of ROG, 311 lb/day of NO_X, 281 lb/day of PM_{10}, and 2,196 lb/day of CO. These daily operational emissions would exceed PCAPCD's significance thresholds of 82 lb/day for ROG, NO_X, and PM_{10}, or 550 lb/day for CO during both the winter and summer periods. Similar to the proposed project, these operational emissions would also contribute cumulatively to significant and unavoidable regional emissions.

Biological Resources

The proposed project would result in significant impacts related to the loss of wetlands, the loss of valley elderberry longhorn beetle habitat, disturbance of raptors and migratory birds, and degradation of sensitive fish

habitat. The project would also result in the significant and unavoidable short-term loss of mature oak woodlands. This alternative site includes a mix of grasslands, dense oak woodlands, riparian vegetation and wetlands. Due to the oak woodland and riparian tree density, and the variety of riparian/wetland habitats on the site, development would result in substantially more adverse biological resource impacts than anticipated with the proposed project. Due to the size of the buildings and the associated parking requirements, in order to accommodate the proposed development, the majority of the two drainages on the site would need to be diverted or put into an underground culvert. Also, the majority of the trees on the site would need to be removed. Therefore, the significant biological resource impacts associated with this alternative would be considered more adverse than anticipated with the proposed project.

Due to access constraints, it could not be determined whether valley elderberry habitat is present on this site. Also, it is unknown whether this alternative site is tributary to any drainages containing sensitive fish habitat.

Cultural Resources

The potential impacts on cultural resources anticipated with this alternative are assumed to be similar to those of the proposed project. No sensitive cultural resources were identified on the proposed project site, although there is the potential that as yet undiscovered subsurface cultural resources could be disturbed by site development. The development of this alternative site has the same potential to disturb as yet undiscovered subsurface cultural resources.

Energy

This alternative site would include total building square footage equivalent to the proposed project. Therefore, the energy impacts associated with this alternative would be similar to those of the proposed project. Neither the proposed project nor this alternative would be expected to cause significant energy impacts.

Geology and Soils

The proposed project would result in significant seismic and erosion hazards with project implementation. This alternative site would include total building square footage equivalent to the proposed project and would include an approximately equivalent area of disturbance due to site grading and excavation. Because the soil characteristics of this alternative site do not substantially differ from the proposed project, the geology and soils impacts associated with this alternative would be generally similar to the proposed project.

Hydrology and Water Quality

This alternative would be expected to generally have the same total new impervious surface area as the proposed project and would likely require some sort of onsite detention facility. Therefore, the effects of this alternative on peak storm water discharge would be similar to those of the proposed project. However, because the two drainages generally flow directly through the center of this site, the development of this alternative would directly alter the local drainage network by diverting or culverting these creeks on the site. By filling the length of these drainages on the project site, the hydrologic cycle and downstream flooding characteristics within these creeks could be substantially altered. These significant storm water discharge impacts would not be anticipated with implementation of the proposed project. Also, due to the substantial modifications of the site's drainage characteristics, the significant downstream water quality impacts of this alternative would likely be more adverse than anticipated with the proposed project. Therefore, the hydrology and water quality impacts of this alternative would be substantially more severe than anticipated with the proposed project.

Land Use

The project site is surrounded on the northwest by Taylor Road and small commercial uses (e.g., bars and auto shops), on the north by Brace Road, on the east by Sierra College Boulevard, on the south by Granite Drive and

on the southwest by Dominguez Road and the Sierra Pine plant. Existing light industrial buildings are located adjacent to the property's southwestern boundary. The site is primarily undeveloped with the exception of an existing office development (Horizon West) adjacent to Sierra College Boulevard. The development of this alternative site would generally be compatible with the surrounding commercial/industrial uses and would not require the relocation of the existing onsite office building. The development would also be compatible with the portion of the site designated Retail Commercial (RC). However, in order to develop this site with commercial uses, the Light Industrial (LI) land use designation on the southern portion of the site would need to be amended to Retail Commercial (RC). However, similar to the proposed project, this alternative would result in less-than-significant land use impacts.

Public Health and Hazards

The development of this site would include the same uses as would occur with the proposed project. Therefore, the public health and hazard impacts associated with site operations would not substantially differ.

Public Services and Utilities

The implementation of this alternative would generate similar demands on utility services such as electricity, natural gas, telecommunications, water, and wastewater services as the proposed project. This alternative would require the extension of offsite water and sewer lines that would be different than anticipated with the proposed project. However, it is difficult to determine whether anticipated impacts associated with necessary water and sewer line extensions would be similar to, greater than, or less than the proposed project. The development of this site would at a minimum require the same water conveyance facilities as the proposed project and would result in the same significant environmental impacts associated with the construction of these facilities as would occur with the proposed project. This alternative would also be expected to have similar demands on police and fire protection services, emergency response services, and solid waste collection and disposal services. Therefore, this alternative is assumed to have generally similar impacts to the proposed project on public services and utilities.

Noise

Similar to the proposed project, development of this alternative would generate construction noise associated with the use of heavy equipment for site grading and excavation, installation of utilities, paving, and building fabrication. However, this construction would not occur adjacent to existing residences. Also, the installation of a noise wall would likely not be necessary to minimize operational noise impacts on the adjacent land uses. However, a wall would likely be installed between the site and adjacent uses to limit access from these properties. Because this alternative would not expose sensitive receptors (i.e., residences) to noise levels in excess of applicable standards, the construction and significant (but mitigable) operational noise impacts anticipated with the proposed project would not be anticipated with this alternative.

Traffic

Due to the site's direct access to Interstate 80 from Sierra College Boulevard, it would be expected to generate traffic volumes generally equivalent to those of the proposed project. However, the traffic impacts would be shifted to the northern portion on the interchange. The Interstate 80 on- and off-ramps and the Sierra College Boulevard/Granite Drive intersection would experience the bulk of traffic impacts. Access to the site would likely be provided from Sierra College Boulevard, Granite Drive and Taylor Road. Because the traffic would be more concentrated north of the freeway, other intersections on the northern stretch of Sierra College Boulevard, including Brace Road and Taylor Road, may experience greater traffic volumes than with the proposed project. However, the traffic volumes on Sierra College Boulevard intersections south of the freeway (e.g., Rocklin Road) would experience substantially lower traffic volumes when compared to the proposed project. Therefore, although the traffic impacts would shift north with this alternative, they would still likely cause significant impacts at affected intersections. However, without a detailed traffic analysis of this alternative site, it cannot be determined what specific intersections or road segments would exceed the established significance thresholds.

Urban Decay

The proposed project is not anticipated to cause significant urban decay within the site's market area with operation of the proposed commercial uses at the site. This alternative would include the same commercial square footage as the proposed project. Therefore, its potential to contribute to urban decay by reducing the financial viability of existing commercial establishments would be equivalent to the proposed project.

Cumulative Climate Change

Long-term operation of the proposed project would generate associated greenhouse gas (GHG) emissions from area- and mobile-sources, and indirectly from stationary sources associated with energy consumption. This alternative would include the same commercial square footage as the proposed project. Therefore, its generation of GHG emissions would be equivalent to the proposed project and its cumulative climate change impacts would be the same.

CONCLUSION

The impacts for Alternative Site #2 would be similar to those anticipated with the proposed project for the following resource areas: air quality, cultural resources, energy, geology and soils, public health and hazards, public services and utilities, traffic, urban decay and global climate change. For aesthetic/visual resources, hydrology and water quality, and biological resources, this alternative would cause significant impacts to be more severe than anticipated with the proposed project. The construction and significant (but mitigable) operational noise impacts on existing and future residents with the proposed project would be eliminated with this alternative. Overall, the impacts of this alternative would be greater than anticipated with the proposed project.
The development of this alternative site would generally meet the objectives of the proposed project, although not as effectively as the proposed project due to the greater distance of this site from the freeway interchange.
Also, the development of this site would conflict with the objective of developing regional shopping facilities on commercially-designated land within the City due to the need to amend the Light Industrial (LI) land use designation for the southern portion of the site. The project applicant does not own this site and has no ability to affect its development, which is a factor the City Council can consider in ultimately determining whether this alternative is feasible. (See CEQA Guidelines Section 15126.6[f][1].).

7.2.7 OFFSITE ALTERNATIVE #3

DESCRIPTION

This Offsite Alternative is located on approximately 65 acres west of the project site and is assumed to include commercial square footage roughly equivalent to the proposed project. This site was selected as a project alternative because it is more remotely located than the proposed project and would not be visible from Interstate 80. Fewer people would experience the visual impacts of its development and it would not contribute to the significant and unavoidable cumulative change in the visual character of the Interstate 80 corridor that would be anticipated with project implementation. This site is bordered on the west by Del Mar Avenue, on the south by Taylor Road, on the west by Americana Way and Lakebreeze Drive, and on the north by rural land within the Town of Loomis. The land use designation of the site is Light Industrial (LI) and access to Interstate 80 would be provided from Sierra College Boulevard by way of Taylor Road. The topography of the site is gently rolling with elevations ranging from approximately 270 to 320 feet msl. The site includes a mix of grasslands, dense oak woodlands, ponds, wetlands, remnants of an old orchard, and a well-established riparian corridor along Antelope Creek, which flows southwest through the center of the site. The project applicant does not own this property.

IMPACTS OF OFFSITE ALTERNATIVE #3

Aesthetics/Visual Resources

The proposed project would result in significant and unavoidable changes in the site's visual character. As with the proposed project, this alternative would significantly alter the visual character of the site by converting undeveloped land to urban uses. However, the visual resource impacts of this alternative would be more adverse than those anticipated with the proposed project due to the dense landscape of native oak and riparian trees on this site. The loss of this dense landscape of native oak and riparian trees would be considered a significant and unavoidable change in the site's visual character. Because this site is more remotely located, fewer people would experience the visual impacts of its development. Also, due to its distance from Interstate 80, it would not be visible from the freeway. Therefore, it would not contribute to the significant and unavoidable cumulative change in the visual character of the Interstate 80 corridor that would be anticipated with project implementation.

Air Quality

The air quality impacts associated with construction activities would be similar to those anticipated with the proposed project because the same approximate acreage would be graded to accommodate site development. Both the proposed project and this alternative would be expected to generate approximately 75 lb/day of ROG, 43 lb/day or NO_X, 127 lb/day of PM_{10}, and 66 lb/day of CO during project construction. Daily construction-generated emissions would not exceed PCAPCD's significance thresholds of 82 lb/day for ROG or NO_X or 550 lb/day of CO. However, emissions of PM_{10} would exceed PCAPCD's significance threshold of 82 lb/day. The two-year construction period assumed for the proposed project would also be required on this alternative site. Therefore, the same types and volumes of construction emissions would be generated.

Also, because the site would include the same type of operational activities, the same general operational air quality impacts would be anticipated. Based on the modeling conducted, operations for this alternative would result in worst-case maximum daily emissions of approximately 196 lb/day of ROG, 311 lb/day of NO_X, 281 lb/day of PM_{10}, and 2,196 lb/day of CO. These daily operational emissions would exceed PCAPCD's significance thresholds of 82 lb/day for ROG, NO_X, and PM_{10}, or 550 lb/day for CO during both the winter and summer periods. Similar to the proposed project, these operational emissions would also contribute cumulatively to significant and unavoidable regional emissions.

Biological Resources

The proposed project would result in significant impacts related to the loss of wetlands, the loss of valley elderberry longhorn beetle habitat, disturbance of raptors and migratory birds, and degradation of sensitive fish habitat. The project would also result in the significant and unavoidable short-term loss of mature oak woodlands. This alternative site includes a mix of old orchards, grasslands, dense oak woodlands, ponds, wetlands, and a well-established riparian corridor along Antelope Creek, which flows southwest through the center of the site. Due to the oak woodland and riparian tree density, and the variety of vegetation communities on the site, development would result in substantially more adverse biological resource impacts than anticipated with the proposed project. Due to the size of the buildings and the associated parking requirements, in order to accommodate the proposed development, the entire length of Antelope Creek on the site would need to be diverted or put into an underground culvert. Also, the majority of the trees on the site would need to be removed. Therefore, the biological resource impacts associated with this alternative would be considered more adverse than anticipated with the proposed project.

Due to access constraints, it could not be determined whether valley elderberry habitat is present on this site. Also, it is unknown whether this alternative site is tributary to any drainages containing sensitive fish habitat.

Cultural Resources

The potential impacts on cultural resources anticipated with this alternative are assumed to be similar to or potentially more severe than those of the proposed project. No sensitive cultural resources were identified on the project site, although there is the potential that as yet undiscovered subsurface cultural resources could be disturbed by site development. The development of this alternative site has the same potential to disturb as yet undiscovered subsurface cultural resources. Also, this site includes historic orchard areas and several residences that would need to be removed to accommodate development. These human-occupied areas could contain historic features, the removal of which could be considered adverse. Therefore, the cultural resource impacts associated with this alternative could be considered more adverse than anticipated with the proposed project.

Energy

This alternative site would include total building square footage equivalent to the proposed project. Therefore, the energy impacts associated with this alternative would be similar to the proposed project. Neither the proposed project nor this alternative would be expected to cause significant energy impacts.

Geology and Soils

The proposed project would result in significant seismic and erosion hazards with project implementation. This alternative site would include total building square footage equivalent to the proposed project and would include an approximately equivalent area of disturbance due to site grading and excavation. Because the soil characteristics of this alternative site do not substantially differ from the proposed project, the geology and soils impacts associated with this alternative would be generally similar to the proposed project.

Hydrology and Water Quality

This alternative would be expected to generally have the same total new impervious surface area as the proposed project and would likely require some sort of onsite detention facility. Therefore, the effects of this alternative on peak storm water discharge would be similar to the proposed project. However, because Antelope Creek is located directly in the center of this site, the development of this alternative would directly alter the local drainage network by diverting or culverting this creek on the site. By filling the length of Antelope Creek on the project site, the hydrologic cycle and downstream flooding characteristics within this creek could be substantially altered. These significant storm water discharge impacts would not be anticipated with implementation of the proposed project. Also, due to the substantial modifications of the site's drainage characteristics, the significant downstream water quality impacts of this alternative would likely be more adverse than anticipated with the proposed project. Therefore, the hydrology and water quality impacts of this alternative would be substantially more severe than anticipated with the proposed project.

Land Use

Several rural residences are located on this alternative site and to the north in the Town of Loomis. Directly to the west is a residential subdivision along Americana Way. Railroad tracks traverse the southern border and a building materials facility and car wash are located directly south of the railroad tracks. To the east is a light industrial area along Del Mar Avenue. The development of this alternative would require removal of the onsite residences, which is not required with implementation of the proposed project. Similar to the proposed project, the installation of a noise wall between the development and the existing residential uses to the west and north would likely be required. The installation of this wall would minimize commercial/residential land use conflicts. Also, the land use designation for this site is Light Industrial (LI). In order to develop this site with commercial uses, the general plan land use designation for the site would need to be amended to Retail Commercial (RC). However, similar to the proposed project, this alternative would result in less-than-significant land use impacts.

Public Health and Hazards

The development of this site would include the same uses as the proposed project. Therefore, the public health and hazard impacts associated with site operations would not substantially differ. However, because of the large volume of traffic generated by the proposed development and the need to cross an active railroad track to access the site, placing the development at this site would substantially increase the potential for train vs. passenger vehicle or train vs. truck accidents. Therefore, the potential for public hazards associated with the development of this site would be greater than anticipated with the proposed project.

Public Services and Utilities

The implementation of this alternative would generate similar demands on utility services such as electricity, natural gas, telecommunications, water, and wastewater services as the proposed project. This alternative would require the extension of offsite water and sewer lines that would be different than anticipated with the proposed project. However, it is difficult to determine whether anticipated impacts associated with necessary water and sewer line extensions would be similar to, greater than, or less than the proposed project. The development of this site would at a minimum require the same water conveyance facilities as the proposed project and would result in the same significant environmental impacts associated with the construction of these facilities as would occur with the proposed project. This alternative would also be expected to have similar demands on police and fire protection services, emergency response services, and solid waste collection and disposal services. Therefore, this alternative is assumed to have generally similar impacts to the proposed project on public services and utilities.

Noise

Similar to the proposed project, development of this alternative would generate construction noise associated with the use of heavy equipment for site grading and excavation, installation of utilities, paving, and building fabrication. Also, similar to the proposed project, this construction would occur adjacent to existing residences. The installation of a noise wall is assumed to be necessary along the western and northern property boundaries to minimize operational noise impacts on the existing residential uses. Because similar noise impacts would be anticipated with this alternative site and similar mitigation measure would be required, the significant noise impacts would not differ substantially from those of the proposed project.

Traffic

The project as currently proposed is anticipated to generate approximately 18,800 vehicle trips per day. This alternative would be expected to generate traffic volumes generally equivalent to those of the proposed project. From Interstate 80, vehicles would be required to travel north on two-lane Sierra College Boulevard and west on two-lane Taylor Road to access the site. Because the traffic would be more concentrated north of the freeway, other intersections on the northern stretch of Sierra College Boulevard, including Brace Road and Taylor Road, may experience greater traffic volumes than with the proposed project. However, the traffic volumes on Sierra College Boulevard intersections south of the freeway (e.g., Rocklin Road) would experience substantially lower traffic volumes when compared to the proposed project. Therefore, although the traffic impacts would shift north with this alternative, they would still likely cause significant impacts at affected intersections. However, without a detailed traffic analysis of this alternative site, it cannot be determined what specific intersections or road segments would exceed the established significance thresholds.

Urban Decay

The proposed project is not anticipated to cause significant urban decay within the site’s market area with operation of the proposed commercial uses at the site. This alternative would include the same commercial square footage as the proposed project. Therefore, its potential to contribute to urban decay by reducing the financial viability of existing commercial establishments would be equivalent to the proposed project.

Cumulative Climate Change

Long-term operation of the proposed project would generate associated greenhouse gas (GHG) emissions from area- and mobile-sources, and indirectly from stationary sources associated with energy consumption. This alternative would include the same commercial square footage as the proposed project. Therefore, its generation of GHG emissions would be equivalent to the proposed project and its cumulative climate change impacts would be the same.

CONCLUSION

The impacts for Alternative Site #3 would be similar to those anticipated with the proposed project for the following resource areas: air quality, energy, geology and soils, land use, noise, public services and utilities, traffic, urban decay and global climate change. For aesthetic/visual resources, biological resources, cultural resources, hydrology and water quality, and public health and hazards, this alternative would cause impacts to be more severe than anticipated with the proposed project. The project's significant and unavoidable cumulative aesthetic/visual resources impact associated with development along the Interstate 80 corridor would not occur with this alternative because it would not be visible from Interstate 80. Overall, the impacts of this alternative would be more adverse than anticipated with the proposed project. Also, this alternative would conflict with the objectives of developing regional shopping facilities on commercially-designated land within the City and constructing a facility near a major freeway interchange in order to minimize traffic generation on local streets. The project applicant does not own this site and has no ability to affect its development, which is a factor the City Council can consider in ultimately determining whether this alternative is feasible. (See CEQA Guidelines Section 15126.6[f][1].).

7.3 SUMMARY OF COMPARATIVE EFFECTS OF THE ALTERNATIVES

Table 7-1 summarizes the environmental analysis provided above for the project alternatives. The environmental impacts of the proposed project are addressed in detail throughout Sections 4 and 6 of this Draft EIR.

Table 7-1
Comparison of Environmental Impacts of Alternatives in Relation to the Proposed Project

Environmental Topic	Proposed Project	No Project Alternative	Reduced Size Alternative	Building Realignment Alternative	Offsite Alternative #1	Offsite Alternative #2	Offsite Alternative #3
Aesthetics - Visual Character	S/U	S/U - Reduced	S/U – Reduced	S/U - Increased	S/U - Increased	S/U - Increased	S/U - Increased
Aesthetics - Cumulative Visual Character	S/U	S/U - Reduced	S/U - Reduced	S/U - Increased	S/U - Increased	S/U - Equivalent	LTS - Reduced
Air Quality - Construction Emissions	S	S - Reduced	S - Reduced	S - Equivalent	S - Equivalent	S - Equivalent	S - Equivalent
Air Quality - Operational Emissions	S/U	S/U - Reduced	S/U - Reduced	S/U - Equivalent	S/U - Equivalent	S/U - Equivalent	S/U - Equivalent
Air Quality - Cumulative Regional Emissions	S/U	S/U - Reduced	S/U - Reduced	S/U - Equivalent	S/U - Equivalent	S/U - Equivalent	S/U - Equivalent
Biological Resources - Wetlands	S	S - Equivalent	LTS - Reduced	S - Equivalent	S - Unknown	S - Increased	S - Increased
Biological Resources - Beetle Habitat	S	S - Equivalent	LTS - Reduced	S - Equivalent	Unknown	Unknown	Unknown
Biological Resources - Raptors	S	S - Equivalent	S - Reduced	S - Equivalent	S - Increased	S - Increased	S - Increased
Biological Resources - Tree Loss	S/U	S/U - Equivalent	S/U - Reduced	S/U - Equivalent	S/U - Increased	S/U - Increased	S/U - Increased

Table 7-1
Comparison of Environmental Impacts of Alternatives in Relation to the Proposed Project

Environmental Topic	Proposed Project	No Project Alternative	Reduced Size Alternative	Building Realignment Alternative	Offsite Alternative #1	Offsite Alternative #2	Offsite Alternative #3
Biological Resources - Fish Habitat	S	S - Equivalent	S - Reduced	S - Equivalent	Unknown	Unknown	Unknown
Biological Resources - Cumulative Loss of Resources	S/U	S/U - Equivalent	S/U - Reduced	S/U - Equivalent	S/U - Increased	S/U - Increased	S/U - Increased
Cultural Resources	LTS	LTS - Equivalent	LTS - Reduced	LTS - Equivalent	LTS - Equivalent	LTS - Equivalent	LTS - Increased
Energy	LTS	LTS - Reduced	LTS - Reduced	LTS - Equivalent	LTS - Equivalent	LTS - Equivalent	LTS - Equivalent
Geology and Soils - Seismic Hazards	S	S - Reduced	S - Reduced	S - Equivalent	S - Equivalent	S - Equivalent	S - Equivalent
Geology and Soils - Erosion Hazards	S	S - Reduced	S - Reduced	S - Equivalent	S - Equivalent	S - Equivalent	S - Equivalent
Hydrology and Water Quality - Storm Water Runoff	LTS	LTS - Equivalent	LTS - Reduced	LTS - Equivalent	LTS - Equivalent	S - Increased	S - Increased
Hydrology and Water Quality - Short- and Long-Term Water Quality Degradation	S	S - Equivalent	S - Reduced	S - Equivalent	S - Equivalent	S - Increased	S – Increased
Land Use	LTS	LTS - Equivalent	LTS - Equivalent	LTS - Equivalent	LTS - Equivalent	LTS - Equivalent	LTS - Equivalent
Public Health and Hazards - Exposure to Hazardous Materials	S	S - Equivalent	S - Reduced	S - Equivalent	S - Equivalent	S - Equivalent	S - Increased
Public Services and Utilities - Water Conveyance	S	S - Reduced	S - Reduced	S - Equivalent	S - Equivalent	S - Equivalent	S - Equivalent
Noise - Construction	LTS	LTS - Equivalent	LTS - Reduced	LTS - Reduced	LTS - Reduced	LTS - Reduced	LTS - Equivalent
Noise - Operations	S	S - Equivalent	S - Reduced	LTS - Reduced	LTS - Reduced	LTS - Reduced	S - Equivalent
Traffic - Sierra College Blvd./I-80 ramps	S	S - Reduced	LTS - Reduced	S - Equivalent	S - Unknown	S - Unknown	S - Unknown
Traffic - Sierra College Blvd./Rocklin Road Intersection	S	S - Reduced	S - Reduced	S - Equivalent	Unknown	Unknown	Unknown
Urban Decay	LTS	LTS - Reduced	LTS - Reduced	LTS - Equivalent	LTS - Equivalent	LTS - Equivalent	LTS - Equivalent
Cumulative Climate Change	S	S - Reduced	S - Reduced	S - Equivalent	S - Equivalent	S - Equivalent	S - Equivalent

Impact Status:
S/U = Significant and Unavoidable Impact
S = Significant Impact
LTS = Less Than Significant Impact
Reduced = Impact reduced when compared to the proposed project
Increased = Impact increased when compared to the proposed project
Equivalent = Impact equivalent to the proposed project
Unknown - If it cannot be determined whether the impact is reduced or increased, it is identified as unknown.

7.4 ALTERNATIVES CONSIDERED BUT REJECTED AS INFEASIBLE

In addition to the alternatives described above, an additional offsite alternative was considered for the proposed project. In order to meet the basic project objectives, the potential offsite alternative locations were limited to relatively undeveloped properties with sufficient size to accommodate the proposed project that were located along the major transportation corridor within the City, Interstate 80. Properties along State Route 65 were not considered as feasible alternatives due to the presence of existing large commercial uses along this corridor that already contain some of the same large retailers (e.g., Wal-Mart) as the proposed project. An additional offsite property within the City was considered as a project alternative, but was eliminated from further analysis because its development would not have been feasible and it would not have attained most of the basic objectives of the proposed project. This offsite alternative is described as follows:

7.3.1 OFFSITE ALTERNATIVE #4

This Offsite Alternative is located on approximately 20 acres between China Garden Road and Hidden Glen Drive directly south of the Rocklin Road/Interstate 80 interchange. The land use designation of the site is Retail Commercial and access to this property from Interstate 80 is provided from Rocklin Road to Aquilar Road to China Garden Road. Due to its relatively small size, this site would not have sufficient space to accommodate all of the project's proposed uses. To access the site, vehicles coming from Interstate 80 would be required to travel through four separate intersections. These intersections are not expected to have adequate capacity to accommodate the propose project's anticipated vehicle trips. Also, the property is located directly adjacent to an existing residential subdivision and includes several dense clusters of oak woodlands. Furthermore, the project applicant does not own this property and has no ability to control its development. For these reasons, this site was considered infeasible as an alternative to the proposed project and was eliminated from further consideration.

8 REPORT PREPARATION

CITY OF ROCKLIN (LEAD AGENCY)

Terry Richardson ..... Community Development Director
Sherri Abbas ..... Development Services Manager
David Mohlenbrok ..... Senior Planner
Ed Courton ..... Contract Planner

EDAW (ENVIRONMENTAL IMPACT REPORT PREPARATION)

Gary Jakobs, AICP ..... Project Director
Douglas Brown ..... Project Manager
Matthew Gerken ..... Assistant Project Manager
Honey Walters ..... Senior Air Quality/Noise Specialist
Heather Phillips ..... Air Quality/Noise Specialist
Anne King ..... Senior Wildlife Biologist
Richard Deis ..... Archaeologist
Jenifer King ..... Environmental Planner
John Hope ..... Environmental Planner
Chris Donohue ..... GIS Specialist
Lorrie Jo Williams ..... Graphic Artist
Amber Martin ..... Senior Word Processing/Publication
Gayiety Lane ..... Word Processing/Publication
Deborah Jew ..... Word Processing/Publication

DKS ASSOCIATES (TRAFFIC)

Dave Tokarski. ..... Project Manager

9 REFERENCES

CHAPTER 3, PROJECT DESCRIPTION

South Placer Municipal Utility District. 2005. Letter from Richard R. Stein to Sherri Abbas. August 4, 2005.

The Planning Center. 1991. *Final Environmental Impact Report for the Proposed Croftwood Subdivision*. Prepared for the City of Rocklin Community Development Department. March 1, 1991,

SECTION 4.1, LAND USE

City of Rocklin. 1991. *City of Rocklin General Plan*.

SECTION 4.2, TRAFFIC AND CIRCULATION

LSA Associates, Inc. 2007. *Traffic Impact Analysis, Rocklin Crossings, Rocklin, California*. March 2007.

Institute of Transportation Engineers. 2004. *Trip Generation Handbook 2nd Edition*.

City of Rocklin. 1991 (April). *City of Rocklin General Plan Circulation Element.*

SECTION 4.3, AIR QUALITY

Ahrens, D. C. 2003. Meteorology Today; an Introduction to Weather, Climate, & the Environment. Brooks Cole, Inc. Pacific Grove, CA.

California Air Resource Board. 1994 (June). *California Surface Wind Climatology*. Sacramento, CA.

California Air Resources Board. 2002. URBEMIS 2002 Version 8.7 Computer Model.

California Air Resource Board. 2003. *HARP User Guide*. Sacramento, CA.

California Air Resource Board. 2006a. *The 2006 California Almanac of Emissions and Air Quality*. Sacramento, CA.

California Air Resources Board. 2005 (March). *Air Quality and Land Use Handbook: A Community Health Perspective*. Sacramento, CA.

California Air Resources Board. 2006b. Climate Change and AB 32 Fact sheet. Available at http://www.arb.ca.gov/cc/cc.htm.

California Air Resources Board. 2006c. Emissions Factors model, Version EMFAC2007. Available at: http://www.arb.ca.gov/msei/onroad/latest_version.htm

California Air Resource Board. 2007a. *Area Designation Maps / State and National*. Available at www.arb.ca.gov/desig/adm/adm.htm#state. Accessed February 2007.

California Air Resource Board. 2007b. *Air Quality Data Statistics.* Available at www.arb.ca.gov/adam/welcome.html. Accessed February 2007.

California Air Resource Board. 2007d *Naturally-Occurring Asbestos: General Information*. Available at: http://www.arb.ca.gov/toxics/asbestos/geninfo.htm Accessed February 2007.

California Climate Action Registry (CCAR). 2006 (June). California Climate Action Registry General Reporting Protocol, Version 2.1. Los Angeles, CA. Available at <http://www.climateregistry.org/docs/PROTOCOLS/GRP%20V2.1.pdf>.

California Department of Water Resources (DWR). 2006 (July). *Progress on Incorporating Climate Change into Management of California's Water Resources* (Technical Memorandum Report). Available: http://baydeltaoffice.water.ca.gov/climatechange/reports.cfm

California Division of Mines and Geology. 2000 (August). *A General Location Guide for Ultramafic Rocks in California – Areas More Likely to Contain Naturally Occurring Asbestos.*

California Energy Commission. 2006a. *Inventory of California Greenhouse Gas Emissions and Sinks:1990 to 2004.* (Staff Final Report). Publication CEC-600-2006-013-SF. Available: http://www.climatechange.ca.gov/policies/greenhouse_gas_inventory/index.html and <http://www.energy.ca.gov/global_climate_change/inventory/documents/index.html>.

———. 2006b (July). *Our Changing Climate: Assessing the Risks to California*. Publication CEC-500-2006-077. Available: http://www.climatechange.ca.gov/biennial_reports/2006report/index.html.

Churchhill, R. and R. Hill. 2000 (August). *A General Location Guide for Ultramafic Rocks in California – Areas More Likely to Contain Naturally Occurring Asbestos.* Sacramento, CA.

City of Rocklin. 1991 (April). *Rocklin General Plan*.

Garza, V., P. Graney, and D. Sperling. 1997. *California Department of Transportation. University of California, Davis (UC Davis) Institute of Transportation Studies (ITS) Transportation Project-Level Carbon Monoxide Protocol*. Davis, CA.

Godish, T. 1991. *Air Quality*. Lewis Publishers. Chelsea, MI.

Higgins, C. and J. Clinkenbeard. 2006. Relative Likelihood for the Presence of Naturally Occurring Asbestos in Placer County, CA. Sacramento, CA.

Intergovernmental on Climate Change (IPCC). 2007 (February). Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the IPCC. Geneva, Switzerland

Knowles, N., and D.R. Cayan. 2002. Potential effects of global warming on the Sacramento/San Joaquin watershed and the San Francisco estuary. Geophysics Research Letter 29(18), 1891, doi:10.1029/2001GL014339.

LSA Traffic Consultants. 2007. Traffic Report Prepared for the Rocklin Crossings Project. Irvine, CA.

Michael Brandman Associates. July 25, 2007. *Health Risk Assessment of the Rocklin Crossings, Rocklin, California.* Prepared for HalBear Enterprises.

National Oceanic and Atmospheric Administration. 1992. *Monthly Station Normals of Temperature, Precipitation, and Heating and Cooling Degree Days 1961–1990*. Asheville, NC.

Office of Environmental Health Hazard Assessment (OEHHA). 2003. Air Toxics Hot Spots Program Risk Assessment Guidelines: The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments. August, 2003. Available at <www.oehha.ca.gov/air/hot_spots/HRAguidefinal.html>.

Placer County Air Pollution Control District. 2007. *Rules and Regulations*. http://www.placer.ca.gov/Air/Rules.aspx. Accessed: February 2007.

Sacramento Metropolitan Air Quality Management District. 2004 (July). Guide to Air Quality Assessment in Sacramento County. Sacramento, CA.

Sacramento Metropolitan Air Quality Management District. 2007. CEQA Planning Information. Available < http://www.airquality.org/cleanairplan/index.shtml>. Accessed February 2007.

U.S. Environmental Protection Agency (EPA). 2007a. *Criteria Air Pollutant Information*. Available <http://www.epa.gov/air/urbanair/6poll.html>. Accessed January 2007.

U.S. Environmental Protection Agency (EPA). 2007b. *National Ambient Air Quality Standards* (NAAQS). Available at www.epa.gov/air/criteria.html. Accessed: January 2007.

U.S. Environmental Protection Agency (EPA). 2007c. *Monitor Value Report* (NAAQS). Available at: www.epa.gov/air/data/geosel.html. Accessed: January 2007.

U.S. Environmental Protection Agency (EPA). 2007d. *Toxics Release Inventory Program*. Available at www.epa.gov/tri/. Accessed: January 2007.

United States Environmental Protection Agency. 1995. Industrial Source Complex (ISC) Model. Available at: http://www.epa.gov/scram001/dispersion_alt.htm

Zhu, Yifang, W. C. Hinds, S. Kim, and S. Shen. 2002. Study of Ultrafine Particles Near a Major Highway with Heavy-duty Diesel Traffic. *Atmospheric Environment* 36:4323-4335.

PERSONAL COMMUNICATIONS

Backus, B. Staff. 2006a. Associate Planner. Placer County Air Pollution Control District, Auburn, CA. June 8, 2006—e-mail from Brent Backus to Gina Langford of the Placer County Community Development/Resource Agency regarding the assessment of toxic air emissions from the nearby freeway.

Backus, B. Staff. 2006b. Associate Planner. Placer County Air Pollution Control District, Auburn, CA. June 26, 2006—e-mail from Brent Backus to Honey Walters of EDAW regarding the most recent recommended mitigation measures.

Salinas, Julio. Staff Toxicologist. Office of Health Hazard Assessment, Sacramento, CA. August 3, 2004—telephone conversation with Kurt Legleiter of EDAW regarding exposure period for determining health risk.

SECTION 4.4, NOISE

Bollard Acoustical Consultants, Inc. 2007 (August). *Environmental Noise Assessment Prepared for the Rocklin Crossings Commercial Project*. Auburn, Ca.

California Department of Transportation. 1998 (October). *Traffic Noise Analysis Protocol: Technical Noise Supplement*. Sacramento, CA.

California Department of Transportation (Caltrans). 2002. *Transportation Related Earthborne Vibrations*. Sacramento, CA.

City of Rocklin. 1991. *City of Rocklin General Plan Noise Element*.

Egan, M. David. 1988. *Architectural Acoustics*. McGraw-Hill, Inc. New York, NY.

Federal Highway Administration (FHWA). 1988. *Traffic Noise Prediction Computer Model*.

Federal Highway Administration (FHWA), Office of Environment and Planning, Noise and Air Quality Branch. 1995 (June). *Highway Traffic Noise Analysis and Abatement Policy and Guidance*, Washington, D.C. Available at < http://www.nonoise.org/library/highway/policy.htm>.

Federal Transit Administration (FTA). 2006 (May). *Transit Noise and Vibration Impact Assessment*. Washington, D.C.

Lipscomb, D.M., and A.C. Taylor, Jr. (eds.). 1978. *Noise Control: Handbook of Principles and Practices*. Van Nostrand Rheinhold Company. New York, NY.

LSA Transportation Engineers. 2007 (February). *Traffic Study Prepared for the Rocklin Crossings Commercial Project*. Irvine, Ca.

State of California Governor's Office of Planning and Research. 2003. *General Plan Guidelines*. Sacramento, CA.

U.S. Environmental Protection Agency. 1971 (December). *Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances*. Washington, DC.

Veneklasen, Paul S., & Associates. 1973. *Noise Insulation Problems in Buildings*. As Cited in State of California Department of Transportation, Division of Aeronautics. 2002 (January). California Airport Land Use Handbook. Available at <www.dot.ca.gov/hq/planning/aeronaut/htmlfile/landuse.html> Accessed: July 2005.

SECTION 4.5, POPULATION AND HOUSING

California Department of Finance. 2006 (May). E-1: City/County Population Estimates with Annual Percent Change. Available: < http://www.dof.ca.gov/HTML/DEMOGRAP/ReportsPapers/Estimates/E1/E-1text.asp >.

California Department of Housing and Community Development (HCD). 2000 (May 22). Raising the Roof—California Housing Development Projections and Constraints 1997–2020. Sacramento, CA.

City of Rocklin. 1991 (April). City of Rocklin General Plan.

City of Rocklin. 2004 (May). City of Rocklin General Plan Housing Element 2002-2007. Available: <http://www.ci.rocklin.ca.us/government/development/planning/publications_n_maps/rocklin_general_plan.asp>.

City of Rocklin. 2007. City of Rocklin Homepage. At a Glance. Available: <http://www.rocklin.ca.gov/>.

Sacramento Bee. 2006. Recent Home Sales Charts. Available: < http://dwb.sacbee.com/content/homes/re_news/story/13112695p-13957141c.html>.

U.S. Census Bureau. 2000. American FactFinder. Stockton, California. Census 2000 Demographic Profile. Available: < http://factfinder.census.gov/home/saff/main.html?_lang=en>. Accessed: November 2006.

SECTION 4.6, PUBLIC SERVICES AND UTILITIES

California Department of Education. 2006. California Public Schools District Reports. Available: < http://data1.cde.ca.gov/dataquest/DistEnr2.asp?cChoice=DistEnrGr2&cYear=2005-06&cLevel=District&ctopic=Enrollment&myTimeFrame=S&TheName=Loomis&cSelect=3166894--PLACERUNIONHIGH&submit1=Submit>.

CIWMB. 2007. Estimated Solid Waste Generation Rates for Commercial Establishments. Available: http://www.ciwmb.ca.gov/WasteChar/WasteGenRates/Commercial.htm. Accessed March 2007.

CIWMB. 2005. *Solid Waste Information System. Facility/Site Summary Details.* Available: <http://www.ciwmb.ca.gov/swis/detail.asp?PG=DET&SITESCH=31-AA-0210&OUT=HTML>. Accessed October 2006.

City of Rocklin. 1991 (April). City of Rocklin General Plan.

City of Rocklin. 2005 (March). City of Rocklin Draft General Plan Update. Available: http://www.ci.rocklin.ca.us/government/development/planning/publications_n_maps/rocklin_general_plan.asp.

City of Rocklin Parks and Recreation. 2006. Parks. Available: <http://www.ci.rocklin.ca.us/government/service_n_facility/parks/default.asp>. Accessed October 2006.

Education Data Partnership. 2006. District Reports. Available: < http://www.ed-data.k12.ca.us/Navigation/fsTwoPanel.asp?bottom=%2Fprofile%2Easp%3Flevel%3D06%26reportNumber%3D16>.

Loomis Union School District. 2006. LUSD Schools. Available: http://www.loomis-usd.k12.ca.us/index.htm. Accessed October 2006.

Nottoli, Michael. Police Community Programs Coordinator, Rocklin Police Department. E mail regarding police staffing and needs. October 3, 2006.

Petitclerc, Bart. Battalion Chief/Deputy Fire Marshal, Rocklin Fire Department. August 4, 2005 - letter regarding fire services for the Rocklin Crossings Project.

Placer County Office of Education. 2006. About the PCOE. Available: http://www.placercoe.k12.ca.us/index.aspx. Accessed October 2006.

Placer County Library. 2006. Home Page. Available: < http://www.placer.ca.gov/Library.aspx >. Accessed October 2006.

Placer Union High School District. 2006. District Home Page. Available: <http://www.puhsd.k12.ca.us/>. Accessed October 2006.

Placer County Water Agency. 2006 (September). SB221 and SB610 Analysis for Rocklin Crossings. Auburn, CA.

Placer County. 2007. Placer Vineyards Specific Plan Second Partially Recirculated Revised Draft Environmental Impact Report. March 2007.

Rocklin Fire Department. 2006. Rocklin Fire Department. Available: <http://www.ci.rocklin.ca.us/government/fire/default.asp>.

Rocklin Police Department. 2006 (June). City of Rocklin Police Department. Available: <http://www.ci.rocklin.ca.us/government/police/default.asp>.

South Placer Municipal Utility District. 2005. Letter from Richard R. Stein to Sherri Abbas. August 4, 2005.

The Planning Center. 1991. *Final Environmental Impact Report for the Proposed Croftwood Subdivision*. Prepared for the City of Rocklin Community Development Department. March 1, 1991.

Western Placer Waste Management Authority. 2007. About WPWMA. Available: < http://www.wpwma.com/>. Accessed: August 2007.

SECTION 4.7, AESTHETICS

California Department of Transportation. 2006. *California Scenic Highway Program*. Available: http://www.dot.ca.gov/hq/LandArch/scenic_highways/scenic_hwy.htm. Accessed: August 2007.

City of Rocklin. 1991 (April). *City of Rocklin General Plan*.

SECTION 4.8, PUBLIC HEALTH AND HAZARDS

California Department of Forestry and Fire Protection. Fire Resource Assessment Program. 1998. Fire Hazard Severity Zones. Available at: http://frap.cdf.ca.gov/data/frapgismaps/select.asp. Accessed: June 2006.

California Department of Toxic Substances Control. 2006. DTSC's Hazardous Waste and Substances Site list (Cortese List): Sacramento County. Available at: http://www.dtsc.ca.gov/database/Calsites/Cortese_List.cfm. Accessed April 2006.

California Office of Emergency Services. 2004. State of California Multi-Hazard Mitigation Plan (Multi-Hazard Mitigation Plan). September 2004.

California Resources Agency. 2003. Natural Hazard Disclosure Statement. Wildfire Hazards. Available at: http://ceres.ca.gov/planning/nhd/wildfirehazards.html. Last updated: November 17, 2003. Accessed: June 2006.

City of Rocklin. 1991 (April). *City of Rocklin General Plan Community Safety Element*.

Petitclerc, Bart. Battalion Chief/Deputy Fire Marshal, Rocklin Fire Department. August 4, 2005 - letter regarding fire services for the Rocklin Crossings Project.

Placer County. 2005. Placer Mosquito Abatement District. Available at: http://www.placermosquito.org/what_we_do.html.

Rocklin Fire Department. 2006. Available at: http://www.ci.rocklin.ca.us/government/fire/default.asp.

State Water Resources Control Board. 2006. GeoTracker. http://www.geotracker.waterboards.ca.gov/

U.S. Army Corps of Engineers, San Francisco District. 1998. Hamilton Wetland Restoration Plan Final EIR/EIS.

U.S. Environmental Protection Agency. 2004. Polychlorinated Biphenyls (PCBs): Health Effects of PCBs. Available: http://www.epa.gov/opptintr/pcb/effects.html. Last updated September 8, 2004. Accessed April 2006.

_____. 2006. Envirofacts. http://www.epa.gov/enviro/index.html

Wallace-Kuhl & Associates. 2005. *Environmental Site Assessment Rocklin 105 - Wymore Parcels.* WKA No. 5616.03. January 5, 2005.

SECTION 4.9, GEOLOGY, SOILS AND PALEONTOLOGY

California Geological Survey. 2005a. *Seismic Shaking Hazards in California, Based on the USGS/CGS Probabilistic Seismic Hazards Assessment (PSHA) Model, 2002* (revised April 2003). Available: < http://www.consrv.ca.gov/CGS/rghm/pshamap/pshamap.asp>. Last revised March 20, 2006. Accessed March 23, 2006.

———. 2005b. *Seismic Shaking Hazard Maps of California*. Available: <http://www.consrv.ca.gov/ cgs/rghm/psha/pga.htm>.

———. 2005c. *Seismic Hazard Mapping Program—Affected Cities in Northern California*. Available: <http://gmw.consrv.ca.gov/shmp/affected.htm>.

California Office of Emergency Services. 2005. *The Modified Mercalli Scale*. Available: <http://www.oes.ca.gov/ Operational/OESHome.nsf/Content/13602677456F960C88256C2C0074272B?OpenDocument>. Accessed June 13, 2005.

City of Rocklin. 1991 (April). *City of Rocklin General Plan*.

City of Rocklin. 2005 (March). *City of Rocklin Draft General Plan Update*. Available: http://www.ci.rocklin.ca.us/government/development/planning/publications_n_maps/rocklin_general_plan.asp.

Galloway, D., D.R. Jones, and S.E. Ingebritsen. 1999. Land Subsidence in the United States. USGS Circular 1182. Reston, Virginia.

Petersen, M.D., W.A. Bryant, C.H. Cramer, T. Chao, M.S. Reichle, A.D. Frankel, J.J. Lienkaemper, P.A. McCory, and D.P. Schwartz. 1996. *Probabilistic Seismic Hazard Assessment for the State of California*. California Division of Mines and Geology Open-File Report 96-08 and USGS Open-File Report 96-706. Accessed: August 2004. Available online: http://www.consrv.ca.gov/CGS/rghm/psha/ofr9608/index.htm

Wagner, D.L., C.W. Jennings, T.L. Bedrossian, E.J. Bortugno. 1987. *Geologic Map of the Sacramento Quadrangl*e. California Division of Mines and Geology, Regional Geological Map Series, Map No. 1A.

Wallace-Kuhl & Associates. 2006 (February). *Geotechnical Engineering Report*. Rocklin Crossings Retail Center. Sierra College Boulevard and Interstate 80. Rocklin, California. May 25, 2005, reissued February 8, 2006.

Wesnouski, S. G. 1986. *Earthquakes, Quaternary Faults, and Seismic Hazard in California*. Journal of Geophysical Research, Vol. 91, No. B12.

U.S. Department of Agriculture, Soil Conservation Service. (1980). *Soil Survey of Placer County, California, Western Part, Sheet No. 14 (Rocklin Quadrangle).*

SECTION 4.10, HYDROLOGY AND WATER QUALITY

American Public Works Association. 1993. *Storm Water Quality Task Force's California Storm Water Best Management Practices Handbook*

Bay Area Stormwater Management Agencies Association. 1999. *Start at the Source: Design Guidance Manual for Stormwater Quality Protection*.

California Department of Water Resources (DWR). 2003. *California's Groundwater. Bulletin 118 – Update 2003, Sacramento, CA.*

California Department of Water Resources (DWR). 2006 (January). California's Groundwater. Bulletin 118. Individual Basin Descriptions. Sacramento Valley Hydrologic Region. Sacramento Valley Groundwater Basin, North American Subbasin. Sacramento, CA.

City of Rocklin. 1991 (April). *City of Rocklin General Plan.*

Civil Engineering Solutions, Inc. 2005 (September 23). *Rocklin Crossings Preliminary Drainage Report*. Sacramento, CA.

Civil Engineering Solutions, Inc. 2006 (October 30). *Rocklin Crossings Preliminary Drainage Report*. Sacramento, CA.

Central Valley Regional Water Quality Control Board. 2004. *Water Quality Control Plan for the Sacramento and San Joaquin River Basins.* Sacramento, CA.

Dry Creek Conservancy. 2001 (December). *Secret Ravine Adaptive Management Plan*. A Placer County Tributary to the Dry Creek Watershed. Available: < http://www.drycreekconservancy.org/data/Secret%20Ravine%20Adaptive%20Management%20Plan.pdf >.

Placer County. 1990 (September). *Stormwater Management Manual*. Auburn, CA.

Placer County Flood Control and Water Conservation District and Sacramento County Water Agency. 1992 (April). *Final Report Dry Creek Watershed Flood Control Plan*.

Restoration Resources. 2003 (July). *Dry Creek Bank Erosion Management Plan. Roseville, California*. Available: < http://www.drycreekconservancy.org/data/DryCreekBankErosionMangementPlan.pdf>.

Wallace-Kuhl & Associates. 2005 (January). *Environmental Site Assessment. Rocklin 105 – Wymore Parcels. Rocklin, CA.*

SECTION 4.11, AGRICULTURE

California Department of Conservation, Important Farmland Maps of the Farmland Mapping and Monitoring Program. 2006. Available: <http://www.consrv.ca.gov/DLRP/fmmp/ index.htm>.

CDC. *See* California Department of Conservation.

ECORP, Inc. 2005b (November). *Test Program Results and Evaluation for Archaeological Sites in the Rocklin Crossings Project APE, Placer County, California*. Cultural resources report prepared by ECORP Inc, Roseville, CA. for Sierra Holdings, LLC, Sacramento, CA.

Wallace-Kuhl & Associates Inc. 2005 (January). *Environmental Site Assessment, Rocklin 105 - Wymore Parcels*. WKA No. 5616.03.

SECTION 4.12, BIOLOGICAL RESOURCES

California Native Plant Society (CNPS). 2006. *Electronic Inventory of Rare and Endangered Vascular Plants of California.* Available: http://northcoast.com/~cnps/cgi-bin/cnps/sensinv.cgi. Last updated April 18, 2006. Accessed September 12, 2006.

California Natural Diversity Data Base (CNDDB). 2006 [July 1]. Results of electronic record search. California Department of Fish and Game, Wildlife and Habitat Data Analysis Branch. Sacramento, CA. Accessed September 12, 2006.

City of Rocklin. 2007 (June). *Clover Valley Large and Small Lot Tentative Subdivisions Maps Final Environmental Impact Report Volume I.*

City of Rocklin. 1991. *City of Rocklin General Plan*.

City of Rocklin. 2006. *Oak Tree Preservation Guidelines*. Updated April, 2006.

Dry Creek Conservancy. 2001. *Secret Ravine Adaptive Management Plan*. Roseville, CA. December 2001.

ECORP Consulting, Inc., 2002. *Rocklin 105 Property, City of Rocklin, Placer County, CA - Wetland Assessment, Special Species Assessment, and Elderberry Survey*. Memo to Sierra Holdings, LLC. March 8, 2002.

ECORP Consulting, Inc., 2003. *Wetland Delineation for the Rocklin 105 Property, Placer County, CA*. Prepared for Sierra Holdings, LLC. April 15, 2003.

ECORP Consulting, Inc., 2005a. *Report of Findings Regarding Federally Listed Branchiopods for Rocklin 105, Placer County, CA*. Prepared for Sierra Holdings, LLC; Rocklin Crossings, LLC; and Rocklin Holdings, LLC.. September 12, 2005.

ECORP Consulting, Inc., 2005b. *Special-Status Plant Survey for Rocklin Crossings, Placer County, CA*. Prepared for Rocklin Crossings, LLC and Rocklin Holdings, LLC. November 18, 2005.

ECORP Consulting, Inc., 2005c. *Pre-Construction Notification for Authorization Under Nationwide Permit (NWP) No. 39 for Rocklin Crossings Commercial Development (Placer County, California)*. Prepared for Rocklin Crossings, LLC. July 22, 2005.

ECORP Consulting, Inc., 2005d. *Dry Season Report of Findings Regarding Federally Listed Branchiopods for Rocklin 105, Placer County, CA*. Prepared for Sierra Holdings, LLC; Rocklin Crossings, LLC; and Rocklin Holdings, LLC. December 18, 2005.

ECORP Consulting, Inc., 2006a. *Wet and Dry Season Report of Findings Regarding Federally Listed Branchiopods for Rocklin Crossings, Placer County, CA*. Prepared for Sierra Holdings, LLC. April 3, 2006.

ECORP Consulting, Inc., 2006b. *Elderberry Survey for Rocklin Crossings, Placer County, CA*. Prepared for Rocklin Crossings, LLC and Rocklin Holdings, LLC. February 17, 2006.

ECORP Consulting, Inc., 2007. *Rocklin Crossings, Placer County, California - Special-Status Plant Survey Addendum*. Prepared for HalBear Enterprises. July 11, 2007.

Foothill Associates. 2002. *Rocklin 105 Tree Survey*. Prepared for Sierra Holdings, LLC. March 12, 2002.

Foothill Associates. 2007. *Updated Arborist Report, Rocklin Crossings, City of Rocklin, California.* Prepared for Donahue Schriber Realty Group, September 6, 2007.

Hickman, J.C. (ed). 1993. *The Jepson Manual: Higher Plants of California*. University of California Press, Berkeley and Los Angeles California.

Jones & Stokes. 2005. *Assessment of Habitat Conditions for Chinook Salmon and Steelhead in Western Placer County, California*. Prepared for Placer County Planning Department. May 2005.

LSA Associates. 2003a. *Draft Environmental Impact Report/Environmental Assessment Sierra College Boulevard/Interstate 80 Interchange Improvement Project*. Volume I. Prepared for City of Rocklin. August 2003.

LSA Associates. 2003b. *Final Environmental Impact Report for Sierra College Boulevard/Interstate 80 Interchange Reconstruction Project*. Prepared for City of Rocklin. November 13, 2003.

The Planning Center. 1991. *Final Environmental Impact Report for the Proposed Croftwood Subdivision*. Prepared for the City of Rocklin. March 1, 1991.

SECTION 4.13, CULTURAL RESOURCES

Anderson, M. Kat. 1990. California Indian Horticulture, *Fremontia* pp 7-14.

———. 1991. California Indian Horticulture: Management and Use of Redbud by the Southern Sierra Miwok. *Journal of Ethnobiology* (11:1) pp 145-157.

———. 1993. The Mountains Smell Like Fire. *Fremontia* 21(4), pp. 15-20.

California Department of Transportation. 1989. *Caltrans Local Bridge Survey*.

City of Rocklin. 1991. *City of Rocklin General Plan.* Adopted by Rocklin City Council on April 3, 1991 by Resolution No. 91-116.

Davis, L.M. 1990. Rocklin. Rocklin Friends of the Library. Rocklin, CA.

Deal, Krista, and Carrie Alblinger. 1998. *Archaeological Investigations at Forest Service Site 05-03-55-90, El Dorado County, California*. USDA Forest Service.

Deal, Krista, and Karen Bennett. 1996. *Archaeological Surveys in the Union Valley Area for SMUD Exhibit R Developments, El Dorado County, California*. USDA Forest Service.

ECORP. (November) 2005a. Cultural Resources Assessment Rocklin 60, Placer County, California. Cultural resources report prepared by ECORP Inc, Roseville, CA. for Sierra Holdings, LLC, Sacramento, CA.

ECORP (November) 2005b. Test Program Results and Evaluation for Archaeological Sites in the Rocklin Crossings Project APE, Placer County, California. Cultural resources report prepared by ECORP Inc, Roseville, CA. for Sierra Holdings, LLC, Sacramento, CA.

Egan, Ferol. 1977. *Fremont: Explorer for a Restless Nation.* Garden City, New Jersey: Doubleday.

Fredrickson, D.A. 1973. Early Cultures of the Northwest Coast Ranges. Ph.D. dissertation. University of California, Davis, Department of Anthropology.

Gudde, Edwin. 1975. *California Gold Camps: A Geographical and Historical Dictionary of Camps, Towns, and Localities where Gold was Found and Mined; Wayside Stations and Trading Centers.* University of California Press, Berkeley, CA.

Kaptain, Neal. 2002. *Archaeological Survey Report (Positive) for the Sierra College Boulevard/Interstate 80 Interchange Improvements, Rocklin, Placer County, California*. Submitted to City of Rocklin Engineering Services, Rocklin. Prepared by LSA Associates, Inc., Pt. Richmond.

Kelley. John et al. 2002. *Historic Property Survey Report (Positive) for the Sierra College Boulevard/Interstate 80 Interchange Improvements, Rocklin, Placer County, California*. Submitted to City of Rocklin Engineering Services, Rocklin. Prepared by LSA Associates, Inc., Pt. Richmond.

Kelley, John. 2003. *Supplemental Historic Resources Evaluation Report for the Sierra College Boulevard/Interstate 80 Interchange Reconstruction Project, Rocklin, Placer County, California*. In: *Supplemental Historic Property Survey Report (Positive) for the Sierra College Boulevard/Interstate 80 Interchange Reconstruction Project, Rocklin, Placer County, California* by Andrew Pulcheon, 2003. Submitted to Caltrans, Office of Environmental Management, Marysville. Prepared by LSA Associates, Inc., Pt. Richmond.

Kroeber, Alfred L. 1925. *Handbook of the Indians of California*. Bureau of American Ethnology Bulletin 78. Washington.

LSA. 2002. Historic Property Survey Report (positive) for the Sierra College Boulevard/Interstate80 Interchange Improvements. Cultural resources report on file at the North Central Information Center, California State University, Sacramento.

LSA. 2003. Supplemental Historic Property Survey Report (positive) for the Sierra College Boulevard/Interstate 80 Interchange Improvements. Cultural resources report on file at the North Central Information Center, California State University, Sacramento.

Moratto, M.J. 1984. California Archeology. Academic Press, San Francisco. Pages 167–216.

Motz, L. 1980. A Cultural Resource Assessment of the Proposed DiGiorgio Development, Placer County, California. Foundation of California State University, Sacramento

National Park Service. 1996 and updates. *National Register of Historic Places.*

Peak and Associates. 1988. Cultural Resource Assessment of the Rocklin Regional Mall Project, Placer County, California.

Pulcheon, Andrew. 2003. *Supplemental Historic Property Survey Report (Positive) for the Sierra College Boulevard/Interstate 80 Interchange Reconstruction Project, Rocklin, Placer County, California.* Prepared for Associates, Inc., Pt. Richmond, CA Project No. OMN131.

Rukhala, Roy. 1975. History of Rocklin, California. <www.roclin.ca.gov/history/history_full.pdf>

State of California. 1976 and updates. *California Register of Historical Resources*.

State of California. 1990. *California Historic Landmarks*.

State of California. 1992. *California Points of Historical Interest.*

Wilson, Norman. 1972. Notes on Traditional Foothill Nisenan Food Technology, in Papers on Nisenan Environment and Subsistence. *Center for Archaeological Research at Davis, Publication Number 3*. University of California, Davis.

Wilson, Norman L., and Arlean H. Towne. 1978. Nisenan. In *Handbook of North American Indians*, Volume 8. Smithsonian Institution, Washington.

CHAPTER 5, ECONOMIC IMPACT AND URBAN DECAY ANALYSIS

CBRE Consulting. 2006. *Draft Rocklin Crossings Economic Impact Analysis, Rocklin, California.* December 2006

CHAPTER 6, CUMULATIVE AND GROWTH INDUCING IMPACTS

Ahrens, D. C. 2003. *Meteorology Today; an Introduction to Weather, Climate, & the Environment*. Brooks Cole, Inc. Pacific Grove, CA.

ARB. *See* California Air Resources Board.

Brekke, L.D., N.L. Miller, K. E. Bashford, N. W. T. Quinn, and J.A. Dracup 2004. Climate Change Impacts Uncertainty for Water Resources in the San Joaquin River Basin, California. *Journal of the American Water Resources* 40(1):149-164.

CA 2004. State of California, Executive Order S-20-04. March 30, 2004. http://www.energy.ca.gov/2005publications/CEC-400-2005-010/CEC-400-2005-010.PDF

CA 2005. State of California, Executive Order S-3-05. June 1, 2005. http://www.dot.ca.gov/hq/energy/ExecOrderS-3-05.htm

California Air Resources Board. 1994 (June). *California Surface Wind Climatology*. Sacramento, CA.

California Air Resources Board. 2007a (August). Draft Updated Greenhouse Gas Emissions Inventory Estimates. Available: <http://www.arb.ca.gov/cc/ccei/emsinv/emsinv.htm>. Accessed September 2007.

———. 2007b. URBEMIS 2007 Computer Model. Sacramento, CA.

California Climate Action Registry. 2007 (March). General Reporting Protocol, Version 2.2. Los Angeles, CA. Available: <http://www.climateregistry.org/docs/PROTOCOLS/GRP%20V2-March2007.pdf>. Accessed September 2007.

California Department of Finance. 2007a (August). E-4 Historical Population Estimates for City, County and the State, 1991–2000, with 1990 and 2000 Census Counts. Sacramento, CA.

———. 2007b (July). Population Projections for California and Its Counties 2000–2050. Sacramento, CA

———. 2007c. *E-5 Population and Housing Estimates for Cities, Counties and the State, 2001-2007, with 2000 Benchmark. Sacramento, California, May 2007*

———. 2007d (April). Economic Forecasts, U.S. and California. Economic Research Unit. Sacramento, CA.

California Department of Finance. 2007e. E-1: City/County Population Estimates with Annual Percent Change. January 1, 2006 and 2007.

California Department of Water Resources. 2006 (July). *Progress on Incorporating Climate Change into Management of California's Water Resources* (Technical Memorandum Report). Available: <http://baydeltaoffice.water.ca.gov/climatechange/reports.cfm>.

California Energy Commission. 2006a. *Inventory of California Greenhouse Gas Emissions and Sinks:1990 to 2004.* (Staff Final Report). Publication CEC-600-2006-013-SF. Available: <http://www.climatechange.ca.gov/policies/greenhouse_gas_inventory/index.html> and <http://www.energy.ca.gov/global_climate_change/inventory/documents/index.html>.

———. 2006b (July). *Our Changing Climate: Assessing the Risks to California*. Publication CEC-500-2006-077. Available: <http://www.climatechange.ca.gov/biennial_reports/2006report/index.html>.

———. 2003. Climate Change and California Staff Report. Prepared in Support of the 2003 Integrated Energy Policy Report Proceeding (Docket # 02—IEO-01).

———. 2000. California Energy Demand Staff Report P200-00-002. Sacramento, CA.

CAT 2006. March 2006. State of California, Environmental Protection Agency, Climate Action Team. Climate Action Team Report to Governor Schwarzenegger and the California Legislature. http://www.climatechange.ca.gov/climate_action_team/reports/index.html

Cayan, D., A.L. Luers, M. Hanemann, G. Granco, and B. Croes. 2006a. Scenarios of Climate Change in California: An Overview. California Climate Change Center, State of California. White Paper, CEC-500-2005-203-SF, March.

CEC. *See* California Energy Commission.

City of Rocklin. 2007. City of Rocklin Homepage. At a Glance. Available: <http://www.rocklin.ca.gov/>.

DOF. *See* California Department of Finance.

DWR. *See* California Department of Water Resources.

EDAW/SWRI. 1999. Final Environmental Impact Report for the Water Forum Agreement. Prepared for the City-County Office of Metropolitan Water Planning. October 1999.

EPA 2006d. U.S. Environmental Protection Agency, Office of Atmospheric Programs. The U.S. Inventory of Greenhouse Gas Emissions and Sinks: Fast Facts. April 2006. http://epa.gov/climatechange/emissions/downloads06/06FastFacts.pdf

EPA 2007. April 2007. U.S. Environmental Protection Agency. Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2005. Executive Summary. USEPA #430-R-07-002 http://www.epa.gov/climatechange/emissions/usinventoryreport.html

Intergovernmental Panel on Climate Change. 2007 (February). *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the IPCC.* Geneva, Switzerland.

IPCC. *See* Intergovernmental Panel on Climate Change.

Kiparsky, M. and P.H. Gleick. 2003. Climate Change and California Resources: A Survey and Summary of the Literature. The California Water Plan, Volume 4 – Reference Guide. Oakland, CA: Pacific Institute for Studies in Development, Environment, and Security.

Knowles, N., and D. R. Cayan. 2002. Potential Effects of Global Warming on the Sacramento/San Joaquin Watershed and the San Francisco Estuary. *Geophysics Research Letter* 29(18), 1891, doi:10.1029/2001GL014339.

LSA Traffic Consultants. 2007. Traffic Report Prepared for the Rocklin Crossings Project. Irvine, CA.

Medellin et al., *Climate Warming and Water Supply Management in California*. California Climate Change Center, State of California. White Paper CEC-500-2005-195-SF, March.

National Oceanic and Atmospheric Administration. 1992. *Monthly Station Normals of Temperature, Precipitation, and Heating and Cooling Degree Days 1961–1990.* Asheville, NC.

Placer County, *Second Partially Recirculated Revised Draft EIR*, Placer Vineyards Specific Plan (2007).

Sacramento Area Council of Governments (SACOG). 2001. Sacramento Metropolitan Traffic Model (SACMET-2001).

Seinfeld, J. H., and S. N. Pandis. 1998. *Atmospheric Chemistry and Physics*. John Wiley & Sons, Inc. New York, NY.

Transportation Research Board. 1982. National Cooperative Highway Research Program Report (NCHRP) 255: *Highway Traffic Data for Urbanized Area Project Planning and Design.* (December 1982).

UNFCCC 2006. 2006. United Nations Framework Convention on Climate Change. Greenhouse Gas Emissions Data, Predefined Queries, Annex I Parties - GHG total without LULUCF (land use, land-use change and forestry). http://unfccc.int/ghg_emissions_data/predefined_queries/items/3841.php

U.S. Census Bureau. 2000. American FactFinder. Stockton, California. Census 2000 Demographic Profile. Available: < http://factfinder.census.gov/home/saff/main.html?_lang=en>. Accessed: November 2006.

PERSONAL COMMUNICATIONS

Backus, B. Staff. 2006b. Associate Planner. Placer County Air Pollution Control District, Auburn, CA. June 26, 2006—e-mail from Brent Backus to Honey Walters of EDAW regarding the most recent recommended mitigation measures.

APPENDIX A

NOP and Comment Letters

Notice of Preparation
Rocklin Crossings Project
Draft Environmental Impact Report

Date: November 16, 2006

To: Responsible Agencies, Trustee Agencies, Transportation Planning Agencies, Public Agencies with potentially affected transportation facilities, and other Organizations and Interested Persons

Lead Agency

City of Rocklin
Community Development Department
3970 Rocklin Road
Rocklin, CA, 95677
Contact: David Mohlenbrok
Telephone: (916) 625.5160
Fax: (916) 625.5195
E-Mail: David.Mohlenbrok@rocklin.ca.us

The City of Rocklin ("the City") will serve as Lead Agency in the preparation of an environmental impact report ("EIR") addressing the project identified below. Because the project is of statewide, regional or areawide significance, in that it proposes more than 500,000 square feet of retail space, the City is not only required to consult with traditional responsible agencies and trustee agencies (e.g., the Department of Fish and Game), but it is also required to consult with "transportation planning agencies and public agencies which have transportation facilities within their jurisdiction that could be affected by the project." (Pub. Resources Code, Section 21092.4; see also Cal Code Regs., tit. 14, div. 6, ch.3 ("CEQA Guidelines"), Sections 15082. subd. (a), 15206. subd. (b)(2)(B).) The City is also required to hold a scoping meeting to which it must invite the following: any county or city that borders on the City of Rocklin; all responsible agencies; any "public agency that has jurisdiction by law with respect to the project"; and any "organization or individual who has filed a written request for the notice." (Pub. Resources Code, Section 21083.9. subdds. (a)(2), (b).)

We need to know the views of your agency as to the scope and content of the environmental information relevant to your agency's interests with respect to the proposed project. If your agency is a "responsible agency" as defined in CEQA Guidelines section 15381, you may need to use the EIR prepared by the City when considering your permit or other approval for the project. If your agency is a "trustee agency" as defined in the CEQA Guidelines Section 15386, or is a transportation planning agency or a public agency with transportation facilities that could be affected by the project, your agency may want to provide the City with input regarding impacts of interest to your agency, despite the fact that your agency will not be granting any formal permit or approval required for the project.

The project description, location, and the potential environmental effects are contained in the attached materials. An Initial Study will not be prepared. Instead, this document, has been prepared to provide important information about the project and its probable environmental impacts.

Submitting Comments

In accordance with 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, no later than **5:00 p.m. on December 19, 2006**.

Please send your response via U.S. Mail, FAX, or e-mail to David Mohlenbrok, at the address displayed above. We will need the name for a contact person in your agency should the City require clarification of the comments provided.

Scoping Meeting

An agency scoping meeting will be held regarding the EIR for the Rocklin Crossings Project at the City of Rocklin City Council Chambers, 3970 Rocklin Road, Rocklin, California on Thursday, December 7, 2006 from 4:00 p.m. to 6:00 p.m.

I. Project Title:

Rocklin Crossings Project

II. Project Location

The project site is located in the City of Rocklin, south of Interstate 80 and east of Sierra College Boulevard (**Exhibit 1, Regional Location Map**). Rocklin is approximately 25 miles northeast of Sacramento, and is located within Placer County. The project site is comprised of the following Assessor's Parcel Numbers: 045-043-022, 024, 049, 051 and 053 (portions of); 045-053-031, 032, 033 and 034, and a portion of 045-043-050.

The project site is currently designated as Retail Commercial (RC) and Medium Density Residential (MDR) under the City of Rocklin General Plan. The site is zoned UN (Unclassified), C-2 (Retail Business), and PD-C (Planned Development – Commercial).

The site is currently vacant and undeveloped. The topography is gently sloping to flat terrain, and is situated at an elevation of approximately 300 to 360 feet above mean sea level. The predominant soil type is a moderately deep, gently rolling, well-drained soil underlain by weathered granitic bedrock.

The site is primarily annual grassland dotted with rock outcroppings, boulders, several seasonal wetland features, and scattered trees and shrubs. Herbaceous species include soft chess (*Bromus hordeaceus*), ripgut brome (*Bromus diandrus*), Italian ryegrass (*Lolium multiflorum*), Mediterranean barley (*Hordeum marinum*), Medusahead grass (*Taeniatherum caput-medusae*), filaree (*Erodium botrys*), and yellowstar thistle (*Centaurea solstitialis*). Several scattered live oaks (*Quercus wislizenii*), blue oaks

(*Quercus douglasii*), and elderberry shrubs (*Sambucus mexicana*) are located throughout the site.

Potential jurisdictional waters of the U.S. that have been mapped on the project site include two seasonal wetlands (0.014 acre), a seasonal wetland swale (0.087 acre), and two seeps (0.325 acre). The vegetative composition of the seasonal wetlands on the site is primarily comprised of non-native wetland generalist plants. These include ryegrass, Mediterranean barley (*Hordeum marinum*), vulpia (*Vulpia bromoides*), and curly dock (*Rumex crispus*).

Secret Ravine, which is a perennial tributary to Miner's Ravine, Dry Creek, and ultimately to the Sacramento River via Steelhead Creek, is located approximately 500 feet at its closest point northeast of the project site.

III. Project Entitlements

The proposed project requires discretionary actions by the City of Rocklin and review and approval by other public agencies, as described below.

Environmental Impact Report

The City of Rocklin is requiring the preparation of an EIR in compliance with the California Environmental Quality Act ("CEQA") (Public Resources Code section 21000 et seq.) The EIR will analyze project-related potentially significant impacts to resources in and around the project area. Pursuant to section 15063, subdivision (a), of the CEQA Guidelines, no "Initial Study" has been prepared for the proposed project. Rather it is anticipated that the EIR will evaluate the full range of environmental issues contemplated for consideration under CEQA and the CEQA Guidelines, including:

- Land Use (including the potential for "Urban Decay")
- Transportation and Circulation[1]
- Air Quality
- Noise
- Utilities
- Public Services
- Aesthetics
- Public Health and Hazards
- Geology and Soils
- Hydrology, Drainage and Water Quality
- Agriculture
- Biological Resources
- Cultural Resources
- Population and Housing

[1] The analysis of transportation and circulation analysis will include information generated by Caltrans in connection with the environmental impact report/environmental assessment prepared for the Sierra College Boulevard/Interstate 80 Interchange project, completed in late 2003.

Required Permits and Approvals

- General Plan Amendment of approximately 1.23 acres from RC/MDR to RC
- Rezone from UN/C-2/PD-C to PD-C
- General Development Plan
- Tentative Parcel Map
- Development Agreement
- Design Review
- Conditional Use Permit
- Oak Tree Preservation Plan Permit
- Final Environmental Impact Report Certification
- Adoption of Mitigation Monitoring and Reporting Program

In addition to the approvals required from the City of Rocklin, development of the proposed project would require entitlements, approvals, and permits from other local, State and federal agencies. Such other project approvals may include, but are not limited to, a Section 401 Certification from the Regional Water Quality Control Board (RWQCB); a construction activity stormwater permit from the RWQCB, a National Pollutant Discharge Elimination System permit from the RWQCB, and approval from the Town of Loomis of a grading permit or similar approval as may be required for off-site water line extensions to be constructed. The applicants have already obtained from the U.S. Army Corps of Engineers a Nationwide Permit allowing them to fill the small amount of wetlands found on site, subject to approval of a grading permit by the City of Rocklin and a Section 401 certification from the Regional Water Quality Control Board.

IV. Project Description

The project applicant proposes a regional shopping center on 49.53 (net) acres near the interchange of Interstate 80 and Sierra College Boulevard (south of Interstate 80 and east of Sierra College Boulevard). The project proposes to subdivide the property into 18 parcels. A variety of retail uses are proposed for the center, including major tenants (potentially including a Wal-Mart Supercenter and a Home Depot), smaller retail, and restaurants. Other traveler-serving uses could also be developed within the project site, such as gas stations. Preliminary plans call for approximately 23 buildings totaling a maximum of 543,500 square feet.

Some of the project tenants would require vehicular drive-through lanes, outdoor storage, outdoor display, outdoor vendor sales, and/or outside seasonal sales. Signage is proposed as a part of the project in multiple locations adjacent to Interstate 80 and Sierra College Boulevard.

Water, gas, electrical and phone utilities would be provided to the site via existing nearby connections and, in the case of water, through off-site water pipe extensions. The project is not expected to require extensive additional off-site utility construction other than a detention basin to serve this project and an adjacent proposed residential project (currently known as Rocklin 60). The detention basin would be located off-site just southeast of the project site. The basin would be sized according to drainage volume

requirements, currently anticipated to be between three and five acres. At present, the precise locations of off-site water pipe extensions have not yet been determined.

Three primary access points are proposed from Sierra College Boulevard, as identified in Exhibit 2. The Sierra College Boulevard overcrossing project plans to widen the bridge over Interstate 80, reconstruct the on- and off ramps, and widen Sierra College Boulevard across the northerly portion of the project's frontage. The main access into the project would be constructed as part of this project and dedicated as a City right-of-way.

The following descriptions provide more specific details of the proposed Wal-Mart Supercenter and Home Depot components of the proposed project:

Wal-Mart Supercenter Description

As currently proposed, the Wal-Mart Supercenter would include both groceries and general merchandise within an approximately 206,000 square feet building with an additional 25,353 square-foot outdoor garden center (Exhibit 2, Project Site Plan). Wal-Mart Supercenters typically have specialty shops such as vision centers, auto service centers, fast food, portrait studios and one-hour photo centers, hair salons, banks, and employment agencies. The Supercenter would require approximately 400 employees and would operate 24 hours a day, seven days a week.

The building would include two below-grade truck loading docks, each with three individual side-by-side loading bays. All loading/unloading activities would occur within the building area. A screen wall is proposed at the property line so that the entire rear area of the store is shielded from proposed adjacent residential development.

Home Depot Description

Home Depot is a retailer of building materials, home improvement supplies, and lawn and garden products. Products for sale include lumber, hardware, and associated items, such as appliances, barbeques, pool accessories, home furnishings, patio furniture and materials associated with home improvement, maintenance, and repair.

The project proposes an area for sales of plant and nursery items, as well as seasonal sales items. The proposed use would also include rental of tools and equipment for construction, gardening and home improvement projects, propane sales, the sale of trailers and sheds, on-site truck rentals, and independent food service vendors.

The proposed Home Depot would be approximately 141,038 square feet in size (inclusive of the building, plant and nursery sales area, and vestibules). There are also proposed outdoor areas for customer pick-up and loading, outdoor lumber off-loading, sales/display, and staging and storage. The plant and nursery sales area includes a house plant enclosure for the sale of indoor plants and related accessories. Home Depot would operate 24 hours a day, 7 days a week.

Exhibit 1 – Regional Location Map

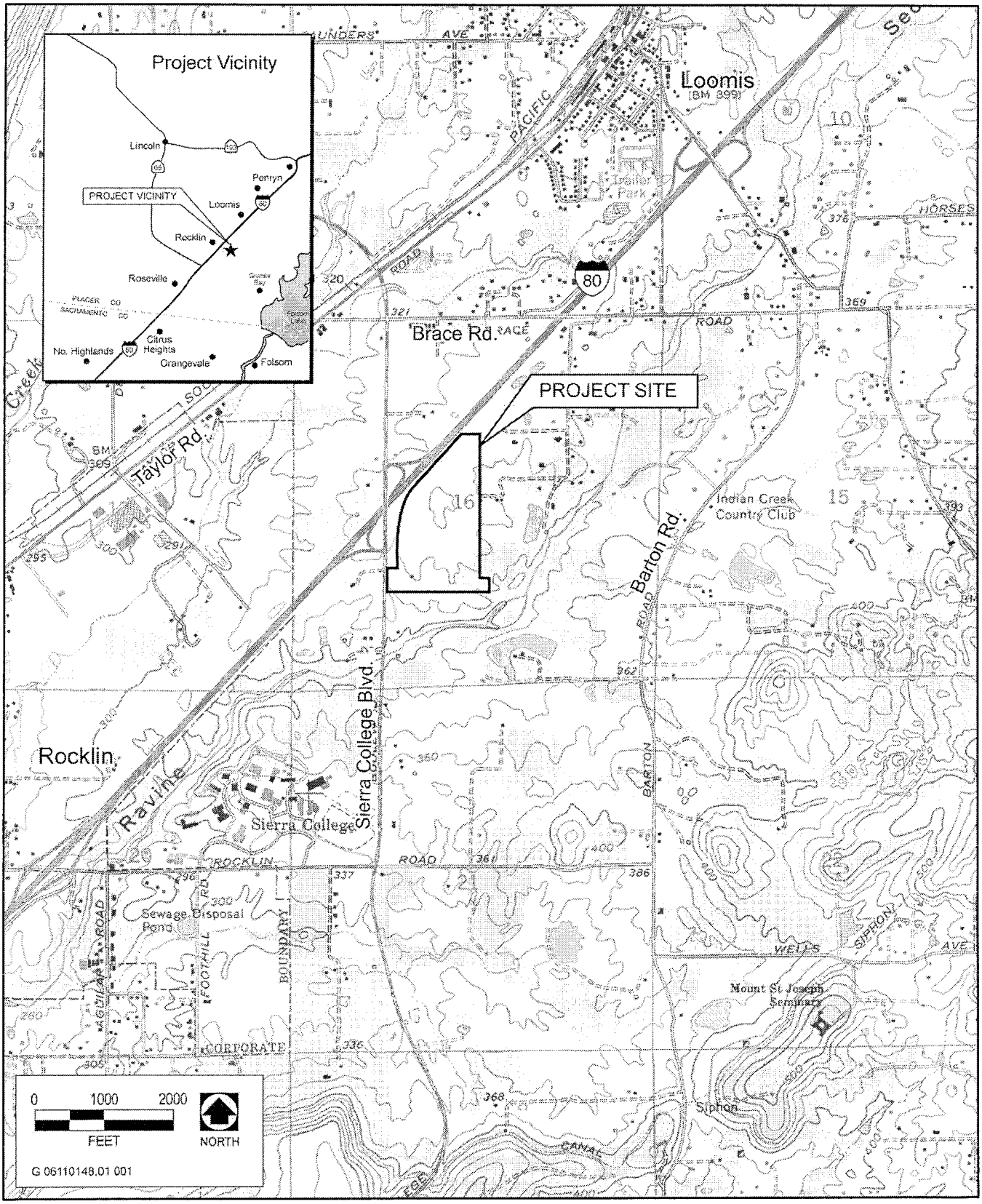
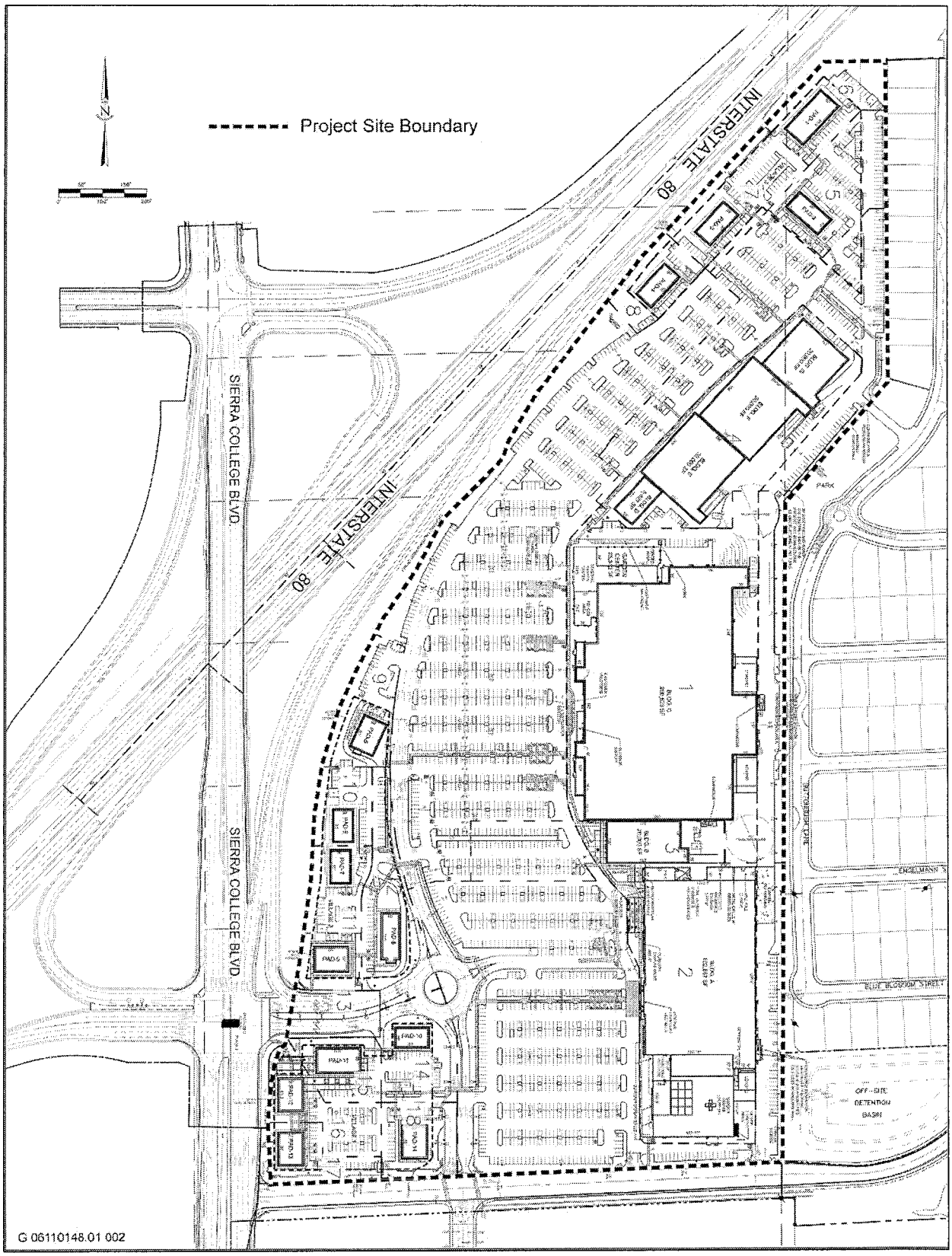


Exhibit 2 – Project Site Plan



V. Probable Environmental Impacts of the Proposed Project

Except as described below, it is not clear at present how many of the impacts described below will be less than significant, significant but subject to mitigation measures that will render them less than significant, or significant and unavoidable. These details will be worked out during the process of preparing the draft EIR.

A. LAND USE AND PLANNING

The proposed project would alter the existing undeveloped land uses on the project site through the introduction of commercial development. The Land Use chapter will evaluate the consistency of the proposed project with adopted City plans and policies and will identify potential land use impacts. The analysis will also evaluate whether the project has the potential to contribute to urban decay in the primary and secondary market areas for the project due to alterations in regional economic conditions in these areas.

B. AESTHETICS

The proposed project would change the project site's aesthetic character through the removal of site vegetation and the addition of new structures and lighting sources. The Aesthetics chapter will describe the existing visual character of the site and surrounding environment and assess the anticipated visual resource changes from project development.

C. TRANSPORTATION AND CIRCULATION

The project would add vehicular traffic to adjoining and nearby roadways, potentially reducing roadway and intersection levels of service. The Transportation and Circulation chapter will evaluate the changes in level of service, any potential roadway design hazards, and the adequacy of emergency vehicle access. The internal pedestrian, bicycle, and vehicle travel patterns will be analyzed, as will the project's parking capacity and parking and roadway configurations.

D. AIR QUALITY

This proposed project is located in the Sacramento Valley Air Basin portion of Placer County. This area is designated as non-attainment for the federal and State ozone standard and non-attainment for the State particulate matter standard. The proposed project has the potential to degrade regional air quality through the generation of construction and operational emissions, and to generate greenhouse gas emissions that could contribute to global climate change. The Air Quality chapter will include a comprehensive analysis of the proposed project's air quality impacts.

E. NOISE

The proposed project has the potential to generate short-term increases in ambient noise levels associated with site development and building construction activities and long-term increases in ambient noise associated with site operations. The Project site is adjacent to Interstate 80, a source of transportation noise. The project will likely propose soundwalls

and/or earthen berms around the edges of the site either to attenuate noise for project visitors or attenuate noise of the project for the benefit of adjoining properties. The Noise chapter will comprehensively assess noise impacts upon the project and noise impacts of the project on any other nearby existing or planned land uses.

F. BIOLOGICAL RESOURCES

The proposed project would remove sensitive biological resources and could affect sensitive habitat on adjacent parcels including Secret Ravine Creek. The Biological Resources chapter will assess the project's impacts on sensitive habitats and special-status species.

G. CULTURAL RESOURCES

Project development may disturb known or undiscovered cultural resources during site grading activities. The Cultural Resources chapter will discuss and analyze any cultural resources on the project site and will include information from record searches and site reconnaissance studies.

H. GEOLOGY AND SOILS

The proposed project would result in the exposure of soil to erosion from wind and water and would change the site's topography. The Geology chapter will describe the potential soil and geology impacts associated with project implementation.

I. HYDROLOGY AND WATER QUALITY

The proposed project would change drainage patterns including the rate and amount of surface runoff, would alter the quality of storm water runoff, and could alter floodplain/flooding conditions. The Hydrology and Water Quality chapter will evaluate the project's hydrology and water quality effects including the project's effects on groundwater recharge, surface flows, flooding, and water quality.

J. PUBLIC SERVICES

The proposed project would increase the demand for fire, police, and other public services. The Public Services chapter will include an analysis of the project's potential impacts on public services.

K. UTILITIES

The proposed project would increase the demand on public utilities including water supply, wastewater services, stormwater collection and conveyance, electrical service, and communications. The Utilities chapter will analyze the project's impacts on these services.

L. PUBLIC HEALTH AND HAZARDS

The proposed project includes large-scale construction activities and a variety of commercial uses that could expose the public to health hazards. The Public Health and

Hazards chapter will discuss the potential public health hazards associated with project construction and operation.

M. POPULATION AND HOUSING

The project would require employees, which could indirectly encourage additional population in the vicinity. The Population and Housing chapter will discuss the project's direct and reasonably foreseeable indirect impacts related to increasing the demand for housing in the local area.

N. AGRICULTURAL RESOURCES

The proposed project has the potential to directly and indirectly affect agricultural resources. The Agricultural Resources chapter will assess the impact of the project on designated farmland resources.

Date: 11/15/06 Signature: David Mohlenbrok

Name/Title: David Mohlenbrok, Senior Planner
Telephone: (916) 625.5000

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

FILE COPY

City of Rocklin

3970 Rocklin Road
Rocklin, CA 95677-2720
916-625-5000
TDD 916-632-4187
www.ci.rocklin.ca.us

November 29, 2006

To: Interested Agencies, Organizations and Persons

Subject: Revision to Scoping Meeting Date Identified in Rocklin Crossings Notice of Preparation

To Whom It May Concern:

It has been brought to our attention that there is an error on page 2 of the Rocklin Crossings Notice of Preparation with respect to the identified scoping meeting date. The day and date of Thursday, December 7, 2006 are incorrect; the day and date should have been identified as Monday, December 4, 2006.

The Scoping Meeting portion on page 2 of the Notice of Preparation is hereby amended as follows:

An agency scoping meeting will be held regarding the EIR for the Rocklin Crossings Project at the City of Rocklin City Council Chambers, 3970 Rocklin Road, Rocklin California on Monday, December 4, 2006 from 4:00 p.m. to 6:00 p.m.

We apologize for any inconvenience this may have caused. If there are any questions, you may contact David Mohlenbrok at (916) 625-5160.

Sincerely,

David Mohlenbrok

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David Mohlenbrok

From: Matthews [csmatthews@sbcglobal.net]
Sent: Friday, December 15, 2006 8:18 AM
To: David Mohlenbrok
Cc: Stephen Matthews; my; chris dykstra
Subject: Protect our quality of life in Rocklin

Dear David,

I live in Rocklin's El Don neighborhood (Southside Ranch Rd. and Sierra College Blvd.) close to the proposed Rocklin 60 Subdivision. I enjoy living in Rocklin and all that it has to offer my family, including it's close proximity to Roseville and its abundance of stores and large mall. That said, I feel strongly that we do not need the same stores within minutes of each other in what is currently the quiet side of Rocklin. My family was attracted to this area because of the peaceful surroundings, wildlife and beautiful mature oak trees. With the newly proposed Rocklin 60 Subdivision I feel that we loose much of what we were attracted to in this area 5 1/2 years ago.

Myself, my family and my neighbors are all against building the proposed Rocklin 60 Residential Subdivision project for the following reasons:
1) we are against Walmart's policy on allowing overnight camping for any campers/trailers,
2) the increase in daily traffic (which in turn includes an increase in negative air quality),
3) we do not agree with the clearing of mature oak trees including wildlife habitats
and
4) finally the lack of projection by the committee to consider such a subdivision without also considering the education of the minors who will be living there - presumably these same children will be forced to overcrowd already existing schools.

Please consider the opposition of the people who live in the surrounding neighborhoods as we are the people who will have to live with your decision years after the project is over and you are gone.

My husband, I and our two toddler daughters thank you for your time in considering our thoughts and feelings on this subject.

Happy Holidays to you and your family,
Cindy Matthews
Sierra Estates II Subdivision

State of California—Business, Transportation and Housing Agency ARNOLD SCHWARZENEGGER, Governor

DEPARTMENT OF CALIFORNIA HIGHWAY PATROL
California Highway Patrol
9440 Indian Hill Road
Newcastle, CA 95658
(916) 735-3344
(800) 735-2929 (TT/TDD)
(800) 735-2922 (Voice)

December 9, 2006

File No.: 220.10284.13332.SCH#2006112097

RECEIVED
DEC 14 2006
By

Mr. David Mohlenbrok
Community Development Department
3970 Rocklin Road
Rocklin, CA 95677

Dear Mr. Mohlenbrok:

Recently, the California Highway Patrol (CHP) Auburn Area had the opportunity to review the Notice of Preparation Rocklin Crossings Project Draft Environmental Impact Report SCH#2006112097. We believe the growth discussed will impact the mission of the CHP of providing safety and service of the public as they use the highway transportation system within Placer County. The project as outlined will substantially increase traffic volume and impact the State highways and roadways within the county, primarily Interstate 80 (I-80) and Sierra College Blvd.

The effect this project will have over the Auburn CHP Area could be significant in the sheer magnitude of citizens it will attract. The plan proposes a regional shopping center on approximately 49.53 acres currently in the unincorporated area of Placer County. The plan calls for approximately 23 buildings totaling a maximum of 543,500 square feet.

The Auburn CHP Area office is responsible for more than 800 square miles of area in west Placer County, which includes I-80, S.R. 49, S.R. 193, S.R. 65, and over 1,100 miles of county roadways. We currently have 30 Road Patrol Officers assigned to the Auburn CHP Area office to patrol these roadways 24 hours a day, 365 days a year. We are committed to providing the maximum amount of service and traffic enforcement allowable with our current staffing levels. However, this project will significantly impact our ability to provide traffic law enforcement services, unless additional staffing is allocated to patrol this project.

There are no immediate plans to augment the workforce in the Auburn CHP Area Office nor are there any major roadway projects to significantly increase the traffic capacity of I-80 or SR-65. This is an area that should be discussed as this project, along with several other major developments within the immediate vicinity, will have a major impact on traffic.

I-80, which bisects the City of Roseville, is currently operating at near maximum capacity. During certain times of the day, I-80 is beyond capacity resulting in gridlock or near gridlock as traffic flows at a seriously reduced speed in both directions. Furthermore, SR-65, which is located on the north edge of Roseville, has already experienced a major increase in usage due to the growth from the cities of Lincoln, Roseville and Rocklin. The opening of the Thunder Valley Casino in June 2003 has further impacted

traffic along this major route. Any significant increase in growth will further adversely affect these major routes of travel.

We thank you for allowing our comments regarding the Notice of Preparation Rocklin Crossings Project Draft Environmental Impact Report. Through cooperative partnerships with local, county and State entities the CHP will continue to monitor the growth within western Placer County and the surrounding cities for its impact on the CHP's mission.

Sincerely,

RICK WARD, Captain
Commander
Auburn Area

cc: Assistant Chief Sal Segura, Valley Division
Captain Joe Whiteford, Special Projects Section

David Mohlenbrok

From: Neil Davis [ronna_and_neil@hotmail.com]
Sent: Monday, December 11, 2006 1:29 PM
To: David Mohlenbrok
Subject: Future development in Rocklin

David,

I am a Rocklin resident and an investor in Rocklin Real Estate.

And I would appreciate a long term building and development moratorium in this entire area.

I feel that the best interests of our community, would be served if a development "time out" was called.

We need a significant evaluation of the total impact of the past decade of rapid development. Quality of life and sustainability of the environment should be our most important considerations.

If "the rest of the story" were truly known, have economic pressures (greed) and developer influence distorted the past planning and approval process?

Possibly it's time to stop and think:

- Should future development be approved by a citizen vote on each large development?
- Should we have mandates regarding air quality standards being met prior to allowing any more development?
- Should we have mandates regarding public transportation and traffic flow standards being met prior to allowing any more development?

Neil Davis 616-0923

David Mohlenbrok

From: Mat and Estela Gonzales [estelaandmat@surewest.net]

Sent: Friday, December 08, 2006 11:26 PM

To: David Mohlenbrok

Subject: Developing the I80/Sierra College BLVD area.

I am a Rocklin resident who lives near the I80/Sierra College BLVD. area. I am writing to voice my concerns and ask questions regarding the planned development of the I80/Sierra College BLVD. area.

My concerns are these: cutting down large numbers of healthy oak trees, increased traffic in an area that already has traffic issues(during school times), loss of rural appeal of the area, the threat to Secret Ravine, conjestion do to a Wal Mart.

My questions are these: why is it allowed to cut down trees that take a long time to mature and make up the landscape of Rocklin, why are they putting in a massive Wal Mart when the area already has 2, what is going to be done with the roads, are there any schools being added, are there any fire houses being added, are there any green belts and or parks being added(something we need more of), why are the lot sizes so small, what will be done to protect Secret Ravine?

What I want as a citizen of Rocklin: no more growth and improve the roadways. Because this is happening whether people in this town want it or not I would like to see some responsible growth. Does a massive Wal Mart belong in the middle of Loomis Basin? That thing is going to stick out like a sore thumb. Protect Secret Ravine with green belts and parks. Build homes around oak trees. This increases the value and appeal of the nieghborhood. If the City doesn't force a developer to do it we will end up with a sea of rooftops and no trees just like the west part of town.

Sincerely,
M Gonzales

Arnold Schwarzenegger
Governor

STATE OF CALIFORNIA
Governor's Office of Planning and Research
State Clearinghouse and Planning Unit

Sean Walsh
Director

Memorandum

Date: December 5, 2006

To: All Reviewing Agencies

From: Scott Morgan, Senior Planner

Re: SCH # 2006112097
Rocklin Crossings Project

The State Clearinghouse is forwarding the attached material from the Lead Agency regarding some additional information for the above-mentioned document. All other project information remains the same.

cc: David Mohlenbrok
City of Rocklin
3970 Rocklin Road
Rocklin, CA 95677

RECEIVED
DEC 11 2006
By

1400 TENTH STREET P.O. BOX 3044 SACRAMENTO, CALIFORNIA 95812-3044
TEL (916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

City of Rocklin

3970 Rocklin Road
Rocklin, CA 95677-2720
916-625-5000
TDD 916-632-4187
www.ci.rocklin.ca.us

2006112097

RECEIVED
DEC 01 2006
STATE CLEARING HOUSE

November 29, 2006

To: Interested Agencies, Organizations and Persons

Subject: Revision to Scoping Meeting Date Identified in Rocklin Crossings Notice of Preparation

To Whom It May Concern:

It has been brought to our attention that there is an error on page 2 of the Rocklin Crossings Notice of Preparation with respect to the identified scoping meeting date. The day and date of Thursday, December 7, 2006 are incorrect; the day and date should have been identified as Monday, December 4, 2006.

The Scoping Meeting portion on page 2 of the Notice of Preparation is hereby amended as follows:

An agency scoping meeting will be held regarding the EIR for the Rocklin Crossings Project at the City of Rocklin City Council Chambers, 3970 Rocklin Road, Rocklin California on Monday, December 4, 2006 from 4:00 p.m. to 6:00 p.m.

We apologize for any inconvenience this may have caused. If there are any questions, you may contact David Mohlenbrok at (916) 625-5160.

Sincerely,

David Mohlenbrok

P:\PERMANENT PLANNING FILES\corresp\2006-2\Rocklin Crossings NOP Revision.doc

NOP Distribution List

County: Placer

SCH# [illegible]

Resources Agency

- [x] **Resources Agency**
  Nadell Gayou
- [ ] **Dept. of Boating & Waterways**
  David Johnson
- [ ] **California Coastal Commission**
  Elizabeth A. Fuchs
- [ ] **Colorado River Board**
  Gerald R. Zimmerman
- [x] **Dept. of Conservation**
  Roseanne Taylor
- [ ] **California Energy Commission**
  Paul Richins
- [ ] **Dept. of Forestry & Fire Protection**
  Allen Robertson
- [x] **Office of Historic Preservation**
  Wayne Donaldson
- [x] **Dept of Parks & Recreation**
  Environmental Stewardship Section
- [ ] **Reclamation Board**
  DeeDee Jones
- [ ] **S.F. Bay Conservation & Dev't. Comm.**
  Steve McAdam
- [x] **Dept. of Water Resources**
  Resources Agency
  Nadell Gayou
- [ ] _____
  Conservancy

Fish and Game

- [ ] **Depart. of Fish & Game**
  Scott Flint
  Environmental Services Division
- [ ] **Fish & Game Region 1**
  Donald Koch
- [ ] **Fish & Game Region 2**
  Banky Curtis
- [x] **Fish & Game Region 3**
  Robert Floerke
- [ ] **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**
  Gabrina Getchel
  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**
  Robert Sleppy
  Environmental Services Section
- [ ] **Dept. of Health Services**
  Veronica Malloy
  Dept. of Health/Drinking Water

Independent Commissions,Boards

- [ ] **Delta Protection Commission**
  Debby Eddy
- [ ] **Office of Emergency Services**
  Dennis Castrillo
- [ ] **Governor's Office of Planning & Research**
  State Clearinghouse
- [x] **Native American Heritage Comm.**
  Debbie Treadway
- [x] **Public Utilities Commission**
  Ken Lewis
- [ ] **State Lands Commission**
  Jean Sarino
- [ ] **Tahoe Regional Planning Agency (TRPA)**
  Cherry Jacques

Business, Trans & Housing

- [ ] **Caltrans - Division of Aeronautics**
  Sandy Hesnard
- [ ] **Caltrans - Planning**
  Terri Pencovic
- [x] **California Highway Patrol**
  Shirley Kelly
  Office of Special Projects
- [ ] **Housing & Community Development**
  Lisa Nichols
  Housing Policy Division

Dept. of Transportation

- [ ] **Caltrans, District 1**
  Rex Jackman
- [x] **Caltrans, District 2**
  Marcelino Gonzalez
- [ ] **Caltrans, District 3**
  Jeff Pulverman
- [ ] **Caltrans, District 4**
  Tim Sable
- [ ] **Caltrans, District 5**
  David Murray
- [ ] **Caltrans, District 6**
  Marc Birnbaum
- [ ] **Caltrans, District 7**
  Cheryl J. Powell
- [ ] **Caltrans, District 8**
  Dan Kopulsky
- [ ] **Caltrans, District 9**
  Gayle Rosander
- [ ] **Caltrans, District 10**
  Tom Dumas
- [ ] **Caltrans, District 11**
  Mario Orso
- [ ] **Caltrans, District 12**
  Bob Joseph

Cal EPA

Air Resources Board

- [ ] Airport Projects
  Jim Lerner
  - [ ] Transportation Projects
    Ravi Ramalingam
  - [ ] Industrial Projects
    Mike Tollstrup
- [ ] **California Integrated Waste Management Board**
  Sue O'Leary
- [ ] **State Water Resources Control Board**
  Jim Hockenberry
  Division of Financial Assistance
- [ ] **State Water Resources Control Board**
  Student Intern, 401 Water Quality Certification Unit
  Division of Water Quality
- [ ] **State Water Resouces Control Board**
  Steven Herrera
  Division of Water Rights
- [x] **Dept. of Toxic Substances Control**
  CEQA Tracking Center
- [ ] **Department of Pesticide Regulation**

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)
- [x] **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 09/10/06

David Mohlenbrok

From: Elsa Cisar [ettamia@sbcglobal.net]

Sent: Thursday, December 07, 2006 8:45 PM

To: David Mohlenbrok

Cc: Rocklin4ResponsibleGrowth@yahoo.com

Subject: I oppose the Rocklin 60 Subdivision + WalMart Supercenter

TO: ROCKLIN COMMUNITY DEVELOPMENT DEPARTMENT
ATT: DAVID MOHLENBROK

I live at 4732 Corona Circle in Rocklin, and I am writing to let you know that I strongly oppose the proposed Rocklin 60 Subdivision and Walmart Supercenter. As a resident of Rocklin for over 10 years, I am alarmed at the excessive over-development that is taking place.

The proximity of these new developments to Sierra College raises great concern for me. These streets and intersections, as well as I-80 entrance/exit ramps are already overly congested, especially with cars from the college and the many new housing developments along Sierra College Boulevard. They cannot absorb additional traffic.

Additionally, the loss of many oak trees and other sensitive habitat for wildlife is not acceptable. It will severely damage the environment and quality of life for both humans and wildlife.

Many areas of Rocklin are already overly-developed. PLEASE do not ruin this little corner as well.

Elsa Cisar
4732 Corona Circle
Rocklin CA 95677

12/06/06

Rocklin Community Development Dept.

I oppose:

1. Rocklin 60 Subdivision
2. Rocklin Crossings Shopping Center
3. 24-Hour Wal-Mart Supercenter.

I am a homeowner in the area.

Shirley Brinkley
4860 El Verde Ct
Rocklin, CA. 95677

RECEIVED
DEC 07 2006
By

David Mohlenbrok

From: fiberfun@sbcglobal.net
Sent: Tuesday, December 05, 2006 6:11 PM
To: David Mohlenbrok
Subject: Development

I drive Sierra College Blvd. everyday on the Highway 80 overpass. It is already so congested. Four lanes combined with additional development requires more lanes than four because of the extra cars the development will generate. Add in a large shopping center to the mix and traffic will be horrible.

Give us the four lanes. Forget the sho pping center and home development.

Carolyn Bennett
spinwool@gmail.com

David Mohlenbrok

From: connelynn@sbcglobal.net

Sent: Thursday, December 07, 2006 9:17 AM

To: David Mohlenbrok

Subject: coments

We are opposed to the Rocklin 60 subdivision, we do not neen another Wal-Mart.
We must think of the environmert, and the quality of air, also the traffic in Rocklin is becoming a nightmare.Please take a better look at what our city is becoming.
Linda and Conrad Spadaro

SOUTH PLACER MUNICIPAL UTILITY DISTRICT

November 21, 2006

RECEIVED
NOV 22 2006

City of Rocklin
Community Development Department
3970 Rocklin Road
Rocklin, CA 95677

Attention: David Mohlenbrok

Subject: Rocklin Crossings Project
Draft Environmental Impact Report

Dear Mr. Mohlenbrok:

The above property is within the service area of the South Placer Municipal Utility District, and is eligible for sewer service.

All sewer service which the District may hereafter provide to said lands or any portion thereof will be subject to all ordinances, resolutions, rules and regulations, taxes, charges, fees, and assessments of the SPMUD which may now or hereafter be in effect.

The design and construction of all on-site and off-site facilities which may be required as a result of this project, including the acquisition and granting of any necessary sewer easements, will be the responsibility of the developer/owner. All work shall conform to the Standard Specifications of SPMUD. Improvement plans shall be submitted to SPMUD for review and approval.

It should be noted that substantial sewer construction may be required to serve the project in the following event: This project is anticipated to connect to and be served by those certain District trunk sewer facilities currently being built by the developer of and under the project commonly known as Croftwood. In the event Croftwood does not develop and construct to completion those facilities, it will become the responsibility of the Rocklin Crossings project to construct and/or complete said facilities in order to be sewered. Any required sewer trunk extension in this regard shall generally be in conformance with the District's Master Plan.

This letter does not constitute a reservation of capacity in the District's sewage treatment facilities, nor does it constitute the assumption of a utility obligation to said lands or any portion thereof by the District.

P.O. BOX 45 - 3671 TAYLOR RD. • LOOMIS, CALIFORNIA 95650 • PHONE (916) 652-5877

The District may be rendered unable to provide sewer service to said lands due to prohibitions or restrictions which may be imposed upon it by federal, state, county or local regulatory agencies having jurisdiction or due to conditions caused by an Act of God. Prohibitions and/or restrictions may be imposed at the Regional Wastewater Treatment Plant on the plant's capacity in accordance with existing agreements; this may also impact the District's ability to accept new applications for sewer service for the project. No restrictions currently exist.

Sewer connection permits will not be issued by the District until such time as all required sewer facilities have been constructed, and the sewers accepted by SPMUD. In addition to normal payment of the District's sewer participation fees for connections to the sewer, this project will be subject to payment of reimbursement fees to SPMUD under the terms of a refund agreement.

This letter shall be of no force or effect after the expiration of 365 calendar days from the date hereof, but may at the discretion of the District, be renewed or extended upon application of the developer/owner of the land referred to herein or their agent.

All non residential development within SPMUD is subject to the requirements of the City of Roseville Industrial Waste Pretreatment Program in accordance with Ordinance 14.26 of the Roseville Municipal Code.

Sincerely,

Richard R. Stein
Project Administrator

RRS:bms

APPENDIX B

Economic Impact Analysis

DRAFT

ROCKLIN CROSSINGS
ECONOMIC IMPACT ANALYSIS
ROCKLIN, CALIFORNIA

Prepared for:

ROCKLIN CROSSINGS LLC

DECEMBER 2006

CBRE CONSULTING, INC.
Sedway Group

CBRE
CB RICHARD ELLIS

505 Montgomery Street, Suite 600
San Francisco, CA 94111

T 415 781 8900
F 415 733 5530

www.cbre.com/consulting

December 29, 2006

Mr. Mark Perlberger
2100 Northrup Avenue, #500
Sacramento, CA 95825

Re: Rocklin Crossings Shopping Center Economic Impact and Urban Decay Analysis - DRAFT

Dear Mr. Perlberger:

CBRE Consulting, Inc./Sedway Group ("CBRE Consulting") is pleased to submit this report regarding the economic impact analysis for the planned Rocklin Crossings Shopping Center in the City of Rocklin, California. The report discusses the proposed Rocklin Crossings Shopping Center's anticipated sales, the likely impact of these sales on existing retailers, cumulative impacts of other selected planned developments in the market area, and the extent to which the Center may or may not contribute to urban decay in the market area.

It has been a pleasure working with you on this project. Please let us know if you have any questions or additional needs.

Sincerely,

Elliot R. Stein
Senior Managing Director

Pipi Ray Diamond
Consultant

TABLE OF CONTENTS

I. EXECUTIVE SUMMARY 1

Introduction 1
Summary of Findings 1

II. INTRODUCTION 5

Study Background 5
Study Tasks 5
Study Resources 6
Report Organization 6

III. PROJECTED SALES AND MARKET AREA DEFINITIONS 7

Rocklin Crossings Description 7
Projected Rocklin Crossings Sales 7
New Sales to the Market Area 9

IV. RETAIL SALES LEAKAGE ANALYSIS 12

Methodology 12
Findings 14

V. SALES IMPACTS 18

Approach 18
Sales Impacts on Existing Primary Market Area Retailers 18
Mitigating Effects of Population Growth 20
Identification of At Risk Retail Categories 21
Store Impacts for At Risk Retail Categories 22

VI. CUMULATIVE IMPACTS 28

Identified Projects 28
Sales Estimates for Planned Retail Developments 29
Cumulative Sales Impacts 30

VII. URBAN DECAY DETERMINATION 33

Study Definition of Urban Decay 33
Approach to Determining Urban Decay Potential 33
Retailer Demand in the Primary Market Area 34
Urban Decay Conclusion 36

ASSUMPTIONS AND GENERAL LIMITING CONDITIONS 37

APPENDIX : EXHIBITS

LIST OF EXHIBITS
(LOCATED IN APPENDIX)

Exhibit 1: Development Program Summary, Rocklin Crossings

Exhibit 2: Estimate of Rocklin Crossings Shopping Center Sales, 2009

Exhibit 3: Estimated Distribution of Wal-Mart Store Sales by Board of Equalization (BOE) Category, 2006

Exhibit 4: Estimated Sales by Retail Category, Rocklin Crossings, 2009

Exhibit 5: Primary and Secondary Market Areas, Competitive Centers and Retailers

Exhibit 6: Population Assumptions, Primary and Secondary Market Areas, 2000 – 2015

Exhibit 7: Derivation of Population in Unincorporated Areas of Placer County, 2000 - 2010

Exhibit 8: Population of Primary and Secondary Market Area, Placer County, 2000 – 2010

Exhibit 9: Derivation of Sales in Unincorporated Areas of Placer County, 2004

Exhibit 10: Sales of Unincorporated Areas in the Secondary Market Area, Placer County, 2004

Exhibit 11: Retail Sales Leakage Analysis, Primary Market Area, 2004

Exhibit 12: Projected Retail Sales Leakage, Primary Market Area, 2009

Exhibit 13: Retail Sales Leakage Analysis, Secondary Market Area, 2004

Exhibit 14: Projected Retail Sales Leakage, Secondary Market Area, 2009

Exhibit 15: Retail Sales Leakage Analysis, Primary and Secondary Market Areas, 2004

Exhibit 16: Projected Retail Sales Leakage, Primary and Secondary Market Areas, 2009

Exhibit 17: Adjusted Sales for Newly Opened and Recently Closed Stores, Estimated 2009 Sales Adjustment

Exhibit 18: Estimated Distribution of New/Closed Store Sales by Category, Estimated 2009 Sales Adjustment

Exhibit 19: Adjusted Sales and Attraction (Leakage) Results, 2009

Exhibit 20: Maximum Center Sales Impacts on Primary Market Area Retail Sales, 2009

Exhibit 21: Maximum Diverted Sales as a Percent of Estimated Primary Market Area Sales, 2009

Exhibit 22: New Population Retail Demand (Annual), Primary Market Area and Combined Primary and Secondary Market Area, 2009 - 2014

Exhibit 23: New Population Retail Demand (Cumulative), Primary Market Area and Combined Primary and Secondary Market Area, 2009 – 2014

Exhibit 24: Competitive Centers and Retailers in the Primary Market Area

Exhibit 25: Survey of Other Potential Major Retail Development Activity, Primary Market Area and Secondary Market Area

Exhibit 26: Sales Estimates for Major Planned Retail Developments, Primary Market Area, 2009 Dollars

Exhibit 27: Categorization of Major Planned Retail Development Sales, Primary Market Area, 2009 Dollars

Exhibit 28: Retail Sales Base Adjustment for Cumulative Sales Impacts, PMA and P&SMA, 2009

Exhibit 29: Cumulative Impacts of Major Retail Developments on Primary Market Area Retailers, 2009

Exhibit 30: Cumulative Impacts of Major Retail Developments, Maximum Diverted Sales as a Percent of Total Estimated Sales in the Primary Market Area, 2009

Exhibit 31: Maximum Diverted Sales Impacts, Rocklin Crossings, Cumulative Primary Market Area Projects, 2009

I. EXECUTIVE SUMMARY

INTRODUCTION

The purpose of this study is to assess the economic impact of the proposed Rocklin Crossings Shopping Center ("the Center") located in the City of Rocklin, California. The proposed Center is planned to include 543,500 square feet of retail.

The Center is planned to include two anchors: a Supercenter and a Home Improvement store. Wal-Mart and Home Depot are under consideration for the anchor spaces. Other large tenants are planned in the apparel, electronics, and home furnishings categories. There are some pad spaces that are intended for restaurants and banks, but as of the date of this analysis not all tenants or tenant categories have been identified for the Center.

The completion of the Center's construction is expected in late 2008 with full operations assumed in 2009. This study probes the potential impacts of the Center on existing primary market area retailers, especially those offering goods similar to those expected to be sold at the Center. This study also estimates the extent to which the Center may or may not contribute to urban decay in the primary market area.

SUMMARY OF FINDINGS

Center Sales

CBRE Consulting estimates that stabilized Center sales will total $230.4 million in 2009 dollars, comprised of:

- $55.3 million in home furnishings and appliances;
- $37.6 million in building materials;
- $32.9 million in food store sales;
- $30.9 million in general merchandise sales;
- $14.2 million in apparel sales;
- $5.1 million in eating and drinking places;
- $54.5 million in "other retail stores" sales.

Of these Rocklin Crossings Center sales, approximately 95 percent, or $219.0 million, is estimated to be generated by primary (Rocklin and Loomis) and secondary market area (Auburn and portions of unincorporated Placer County) residents. The remaining 5 percent of sales generated at the Center are expected to comprise tertiary demand, originating from unspecified locations outside the primary and secondary market area. Stabilized sales are not expected to occur the first year of store operations, but rather the second or third year, which is typical of new retail operations. In order to be conservative, the analysis assumes stabilized sales are achieved in 2009. Accordingly, all dollar figures unless otherwise noted are presented in 2009 dollars.

Impacts on Existing Primary Market Area Retailers

For the purposes of this analysis, the City of Rocklin and the Town of Loomis were identified as the Center's primary market area. A secondary market area was defined as the City of Auburn, and unincorporated parts of Placer County along the Interstate 80 corridor and in the neighborhood of Granite Bay. The City of Roseville was excluded from the market area because it is already served by two Wal-Mart stores, two Home Depots, and a Lowe's store. Therefore, it is unlikely that residents of Roseville will travel to Rocklin Crossings when they have the same or similar stores nearby. CBRE Consulting conducted analysis to determine the extent to which the Center's retail sales would impact existing retailers in the primary market area.

Assuming that the new primary and secondary market area sales of Rocklin Crossings occurred at the proportional expense of existing primary market area retailers, then existing retailers would experience a maximum annual impact of $33.9 million in sales upon stabilization of the Rocklin Crossings in 2009 dollars. Table 1, following, details the potential sales diversion, which includes $26.9 million in home furnishings and appliances sales and $7.0 million in "other retail stores" sales. Because there is currently significant leakage in the apparel, general merchandise, food stores, eating and drinking places, and building materials categories, (i.e., residents of the primary market area spend money in those categories outside of Rocklin and Loomis), those categories will have no diverted sales. The total diverted impact, 5.0 percent of total sales, supportable square feet, and number of years for new retail demand to mitigate the diverted sales are broken down by retail category as follows:

Table 1
Rocklin Crossings
Summary of Impacts on Primary Market Area Retailers[1]

Retail Category	Diverted Sales (Mil)	Percent of Sales	Supportable Square Feet	Years to Mitigate
Apparel	$0.0	0.0%	0	N/A
General Merchandise	$0.0	0.0%	0	N/A
Food Stores	$0.0	0.0%	0	N/A
Eating and Drinking Places	$0.0	0.0%	0	N/A
Home Furnishings and Appliances	$26.9	52.0%	97,700	20+ years
Building Materials	$0.0	0.0%	0	N/A
"Other Retail Stores"	$7.0	4.4%	19,500	1 to 2 years
Total	**$33.9**	**5.0%**	**117,200**	

(1) Refer to Exhibits 20, 21, and 31.
Source: CBRE Consulting.

For "other retail stores" there is 19,500 square feet of retail space at risk. However, some future demand for retail is likely to come from population growth. In fact, population growth is estimated to mitigate sales impacts on "other retail stores" sales within two years after the Center is built.

CBRE Consulting concludes that the only retail sector at risk of sales diversion, and ultimate store closure, is home furnishings and appliances. For home furnishings and appliances, the amount of retail space at risk is 97,700 square feet. Theoretically it could take more than 20 years for population growth to mitigate sales impacts on home furnishings and appliances stores. One reason why the Home Furnishings and Appliances category shows this amount of

diversion is because of the new RC Willey store. However, given RC Willey's location along the Highway 65 corridor, the primary market area for that store likely extends past Rocklin and Loomis to Roseville and Lincoln. A significant proportion of RC Willey's sales are likely to originate with persons living outside of Rocklin and Loomis. Therefore, sales diversions are likely to be shared with Roseville and Lincoln.

Cumulative Impacts

CBRE Consulting identified five other major planned retail projects in the primary market area: Stanford Plaza, Blue Oaks Town Center, Rocklin Pavilions, the Granite Drive project and Rocklin Marketplace. These five projects have the potential to generate retail sales totaling $497.2 million, in addition to the $230.4 million projected for the Center.

Assuming all the projects are built, including Rocklin Crossings, the maximum annual impact to primary market area retailers is estimated at $212.0 million in diverted sales, with the apparel category representing $38.5 million, the home furnishings and appliances representing $68.7 million, and "other retail stores" representing $104.9 million in diverted sales. Assuming the five cumulative projects are built there is a significant increase in diverted sales from primary market area retailers in the home furnishings and appliances and "other retail stores" categories. Without the cumulative projects, there are no impacts on the apparel category, but including the five projects creates a significant impact on apparel stores sales. Because of significant retail leakage in the general merchandise, food stores, eating and drinking places and building materials categories, there are no diverted sales impacts estimated.

Based upon analysis of the market area's retail base, and expectations regarding sales diversions, CBRE Consulting concludes that the following retail square footage in the market area is most at risk due to the cumulative projects (i.e., the Center and the five planned projects):

- Apparel stores totaling 151,500 square feet;
- Home furnishings and appliances stores totaling 249,700 square feet; and
- "Other retail stores" totaling 292,200 square feet.

These figures are highly conservative, as they do not take into account factors such as prospective market corrections or enhancements following the introduction of the cumulative projects into the marketplace or the potential increase in consumer spending pursuant to real income growth. Also, given the large amount of potential retail development that is planned for Rocklin, it is possible that Rocklin could transition to a retail hub serving the secondary market area. In this case, Rocklin would become a city which attracts sales from non-residents, similar to the City of Roseville.

Urban Decay Determination

In recent years, the California Courts of Appeal have addressed the need to address the potential for "urban decay" in environmental documents for large retail projects. The leading case is Bakersfield Citizens for Local Control v. City of Bakersfield (2004) 124 Cal.App.4th 1184, in which the court set aside two environmental impact reports for two proposed Wal-Mart projects that would have been located less than five miles from each other. This was the first court decision to use the new term "urban decay," as opposed to the similar term "blight," which is a concept from redevelopment law. The court quoted "experts [who] are now warning about land use decisions that cause a chain reaction of store closures and long-term vacancies,

ultimately destroying existing neighborhoods and leaving decaying shells in their wake." (Id. at p. 1204.) The court also discussed prior case law that addressed the potential for large retail projects to cause "physical deterioration of [a] downtown area" or "a general deterioration of [a] downtown area." (Id. at pp. 1206, 1207.) The Bakersfield court also described the circumstances in which the duty to address urban decay issues arise.

It is apparent from the case law discussed above that proposed new shopping centers do not trigger a conclusive presumption of urban decay. However, when there is evidence suggesting that the economic and social effects caused by the proposed shopping center ultimately could result in urban decay or deterioration, then the lead agency is obligated to assess this indirect impact. Many factors are relevant, including the size of the project, the type of retailers and their market areas and the proximity of other retail shopping opportunities. The lead agency cannot divest itself of its analytical and informational obligations by summarily dismissing the possibility of urban decay or deterioration as a "social or economic effect" of the project.

Against this background, CBRE Consulting assessed the probability of urban decay ensuing from development of the Center and the additional planned projects, with urban decay defined as physical deterioration that is so prevalent and substantial it impairs the proper utilization of affected real estate or the health, safety, and welfare of the surrounding community. If, for example, any market area stores close due to the Center, the analysis considers if they are likely to remain vacant for a prolonged period of time or be leased to other retailers within a reasonable marketing period.

CBRE Consulting's retail market research indicated that the retail market in Rocklin/Loomis has been strong, with low vacancy rates. This low vacancy is an indication of the market's stable performance and the ability to re-tenant vacancies as they occur. Brokers indicate that local grocery stores are likely to experience negative sales impacts from the proposed Wal-Mart Supercenter at Rocklin Crossings, but none of the brokers expected that impacts would lead to store closures. Brokers also indicated that if stores close, vacancies will eventually be filled, although it might take up to a year in some cases, and the new stores may not be traditional retailers (e.g. an automotive repair/supply use replacing a former supermarket). The closest grocery stores to Rocklin Crossings are the Safeway in the Rocklin Square Shopping Center and the Raley's Supermarket in the Loomis Town Center. These stores are the most likely to experience some sales impacts from the proposed Wal-Mart Supercenter at Rocklin Crossings. However, the opinions of brokers that no grocery store is likely to close is supported by the retail leakage analysis which shows that two recent grocery store closures in the City of Rocklin leave more than enough demand to support the currently operating grocery stores and the projected grocery sales of a Supercenter at Rocklin Crossings.

In conclusion, while it is expected that the Rocklin Crossings project will result in some diverted sales and that some closures of primary market area stores may occur, these events are not expected to lead to physical deterioration so prevalent and substantial that it impairs the proper utilization of affected real estate or the health, safety, and welfare of the surrounding community. Therefore, CBRE Consulting concludes that although development of the Rocklin Crossings center may contribute to further retail vacancies in the primary market area, those vacancies are unlikely to result in urban decay.

II. INTRODUCTION

STUDY BACKGROUND

Rocklin Crossings, LLC is seeking to develop Rocklin Crossings, a planned 543,500-square-foot retail shopping center in Rocklin, California, potentially anchored by a Supercenter and a Home Improvement store. Other, as yet unidentified, retailers are also planned for Rocklin Crossings. The proposed Rocklin Crossings Center ("the Center") is located at the southeast corner of Sierra College Boulevard and Interstate 80.

The Center is anticipated to complete construction in late 2008, with the first full year of operations in 2009. As of the date of this analysis, Rocklin Crossings, LLC has not identified all of the tenants for the Center. The Center is planned to contain a 231,353-square-foot Supercenter (including a 25,353 square foot garden center) and a 141,038-square-foot Home Improvement store (including a 34,760 square foot garden center) as the anchor tenants. Wal-Mart is under consideration for the Supercenter space and Home Depot is under consideration for the Home Improvement space. Other large tenant spaces available are 30,000 square feet anticipated for an apparel retailer, 30,000 square feet anticipated for an electronics retailer, and 25,000 square foot anticipated for a home furnishings retailer. There are 15,000 square feet of pad sites anticipated for restaurants and 6,600 square feet of pad space anticipated for two banks. Many additional tenant spaces are anticipated for the Center including 64,509 square feet where specific tenants have not yet been identified.

Rocklin Crossings, LLC commissioned this economic impact study as a part of the environmental impact report for the Center. The purpose of the study is as follows:

1) to probe potential impacts of the Center on existing market area retailers;
2) to estimate cumulative impacts of other retail projects in the primary market area; and
3) to develop an estimate of the extent to which the opening of the Center may or may not contribute to urban decay in the primary market area.

This report documents CBRE Consulting's research and analysis of the aforementioned issues.

STUDY TASKS

CBRE Consulting performed several steps during the course of this assignment. In brief, these steps included the following:

- Defined the primary and secondary market areas;
- Identified major competitive retailers in the market area;
- Conducted fieldwork to evaluate existing market conditions;
- Estimated the planned Center's sales;
- Collected and analyzed market area taxable retail sales;
- Conducted retail sales leakage analysis for the primary market area and the secondary market area;
- Estimated the share of the Center's sales to be generated by the primary and secondary market areas versus tertiary demand;
- Estimated the maximum Center impacts on existing primary market area retailers;
- Estimated the share of the Center's sales likely to be new to the primary market area;
- Assessed the competitiveness of existing primary market area stores and likely Center impacts;

- Identified planned retail projects in the primary market area;
- Assessed the cumulative impacts of planned retail projects in the primary market area; and
- Assessed the extent to which opening of the Center may or may not contribute to urban decay in the primary market area.

STUDY RESOURCES

Many resources were relied upon for this study, including the cities of Rocklin and Auburn as well as Placer County. Additional study resources included the Sacramento Area Council of Governments for population estimates and projections for the primary market area, and taxable sales data generated by the State of California Board of Equalization. Demographic resources prepared by Claritas, Inc., a national provider of demographic and economic data, were relied upon for mean household income trend data. Claritas also provided population estimates and projections for the unincorporated parts of the secondary market area.

Business-specific data identifying retailers in the market area and beyond were obtained from the Shopping Center Directory for the Western United States, Claritas, Inc., and other sources. Inflationary adjustments were made based upon the Consumer Price Index for all urban consumers in the State of California. Retailer 10-K's on file with the Securities and Exchange Commission were also relied upon for individual retailer performance indicators. Retail Maxim's ***Perspectives on Retail Real Estate and Finance*** was also used to determine appropriate sales per square foot data for specific retail categories. Finally, local commercial real estate brokers provided insight and information.

REPORT ORGANIZATION

This report includes seven chapters, as follows:

I. Executive Summary
II. Introduction
III. Projected Sales and Market Area Definitions
IV. Retail Sales Leakage Analysis
V. Sales Impacts
VI. Cumulative Impacts
VII. Urban Decay Determination

All the exhibits referenced in the report are included in the Appendix. This report is subject to the appended Assumptions and General Limiting Conditions.

III. PROJECTED SALES AND MARKET AREA DEFINITIONS

CBRE Consulting's findings relative to the anticipated retail sales for the proposed Center are presented below. These include estimates of the total sales generated by the Center by type of retail. In addition, this chapter identifies the anticipated primary market area for the Center, i.e., the area from which the majority of retail demand is likely to originate. Also included are definitions of secondary and tertiary market demand.

ROCKLIN CROSSINGS DESCRIPTION

The Center comprises 543,500 square feet of retail space. This new space will be developed on a 49.5 acre site. While the project developer Rocklin Crossings, LLC has not identified all of the specific retail tenants, it has identified a Supercenter and Home Improvement store as the proposed anchor tenants. A Wal-Mart and a Home Depot are under consideration for the anchor spaces. Targeted retail sales categories have been identified for much of the remaining shopping center space. The prospective tenants or tenant types are identified in Exhibit 1 in the Appendix and in Table 2, below.

Table 2
Proposed Rocklin Crossings
Type of Retail and Associated Square Feet

Retailer	Retail Space (Sq. Ft.)	Percent Distribution
Supercenter	231,353	42.6
Home Improvement	141,038	25.9
Apparel Store	30,000	5.5
Electronics Store	30,000	5.5
Home Furnishings Store	25,000	4.6
Restaurants	15,000	2.8
Unknown Retail	64,509	11.9
Banks	6,600	1.2
Total	**543,500**	**100.0%**

Sources: Rocklin Crossings, LLC, and CBRE Consulting.

The majority of the retail space, approximately 68.5 percent, will be dedicated to the two anchor tenants, a Supercenter and a Home Improvement store. Mini-anchor tenants with around 25,000 to 30,000 square feet each are anticipated to include an apparel store, an electronics store, and a home furnishings store. Restaurants are expected to make up 15,000 square feet of the total space. The balance of the space, 11.9 percent of the total, will include many additional unknown retailers.

PROJECTED ROCKLIN CROSSINGS SALES

Approach

In order to determine the annual sales performance of the proposed Center, CBRE Consulting developed assumptions based on information available in either individual store 10-K reports filed with the Securities and Exchange Commission or Retail MAXIM's *Perspectives on Retail Real Estate and Finance, July 2004*. The 10-K reports typically include total store square footage and total sales; spreading the sales across the square footage results in national average sales per

square foot performance. The Retail MAXIM publication provides average sales per square foot figures for many national retailers and aggregates the data by specific retail categories. While not all retailers for the Center have been identified, targeted retail categories for most of the spaces are proposed. For these, CBRE Consulting prepared sales estimates based on representative retailer information provided by the Retail MAXIM publication. In most cases, this includes the average reported for the retail category. For the unknown retail space a generally accepted industry standard average sales per square foot was assumed.

Rocklin Crossings, LLC anticipates that the Center will be completed in late 2008, with the first full year of sales in 2009. Stabilized sales are not expected to occur the first year of store operations, but rather the second or third year, which is typical of new retail operations. However, for the sake of simplicity, this analysis conservatively assumes stabilized sales are achieved in 2009. Thus, all sales estimates were projected to 2009 using actual inflation rates where relevant or a projected annual inflation rate of 3.0 percent, as appropriate. CBRE Consulting used the resulting sales per square foot figures to estimate annual sales based on the total square feet for each retailer or targeted retail category.

Projected Sales

CBRE Consulting's estimate of store and Center sales are documented in Exhibit 2. Since Wal-Mart and Home Depot are under consideration for the anchor spaces, sales per square foot estimates were taken from those companies' actual average sales results. The results presented indicate a Supercenter store sales estimate in 2009, the first year of store operations, of $474 per square foot. As presented in Exhibit 2, this results in a total Supercenter sales estimate of $109.7 million. The Home Improvement store sales estimate in 2009 is $444 per square foot resulting in $62.7 million in total sales. The sales at the balance of the Center are anticipated to bring total Center sales to $230.4 million in 2009.

Projected Sales by Category

The new sales generated by the Center will be spread across many store merchandising categories due to the range of retailers anticipated. It is necessary to allocate the Center's sales into appropriate retail categories to determine the potential impact on those specific categories. The sales data source for this study is the State of California Board of Equalization ("BOE"), which reports taxable sales by retail category for cities and counties. To maximize the use of these data it is important to use the BOE's defined retail sales categories for analytical purposes. Accordingly, CBRE Consulting's analysis is benchmarked to these categories and the sales reported by the BOE (with some adjustments, as noted in the following chapter). These categories, as typically reported for cities, include the following:[1]

- Apparel Stores
- General Merchandise Stores
- Food Stores
- Eating and Drinking Places
- Home Furnishings and Appliances
- Building Materials
- Auto Dealers and Auto Supplies

[1] More refined categories are reported for counties and are available upon special request for cities. For the purpose of this study the more refined categories were not deemed necessary.

- Service Stations
- Other Retail Stores[2]

In general, the BOE records a retailer's sales in only one sales category. However, a more detailed breakdown of sales is optimal for the potential Wal-Mart Supercenter for analytical purposes. The BOE will record the potential Wal-Mart Supercenter's sales in the general merchandise category. However, the Wal-Mart Supercenter's sales will also impact the apparel, food stores, home furnishings and appliances, and other retail stores categories as well. As a result, CBRE Consulting allocated the potential Wal-Mart Supercenter's sales to those categories based on assumptions detailed in Exhibit 3.[3] The additional detail provided by this level of analysis enables better understanding of the types of retail sales to be generated by the Center, and their potential impact on specific retail categories.

Exhibit 4 attributes sales to the appropriate categories and sums the total sales of the Center by BOE retail category. The results are summarized in Table 3, below.

Table 3
Estimated Rocklin Crossings Sales by Retail Category [1]
2009 Dollars, in millions

Retail Category	Estimated Retail Sales
Apparel	$14.2
General Merchandise	$30.9
Food Stores	$32.9
Eating and Drinking Places	$5.1
Home Furnishings and Appliances	$55.3
Building Materials	$37.6
Other Retail Stores	$54.5
Total[2]	**$230.4**

(1) Based on California Board of Equalization retail categories.
(2) Figures may not total due to rounding.
Source: Exhibit 4.

The following section discusses the anticipated origin of these sales relative to a defined primary market area for the Center. This is a prelude to subsequent analysis examining the potential for any of these sales to occur to the detriment of existing retailers in the primary market area and the potential, if any, to result in urban decay pursuant to any resulting vacated retail spaces.

NEW SALES TO THE MARKET AREA

To assess the prospective minimum share of the Center's sales that would be new to the primary market area and the potential impacts on existing Rocklin retailers, CBRE Consulting defined and estimated the following:

- Primary market area;

[2] Other retail stores include a wide range of retailers, such as pet supplies, office supplies, garden stores, sporting goods, jewelry, florists, and gifts.
[3] CBRE Consulting matched Wal-Mart sales categories with BOE retail categories based upon published data generated by Wal-Mart, Inc. and the application of select assumptions based upon CBRE Consulting's knowledge of Wal-Mart merchandise categories.

- Secondary market area;
- Tertiary demand;
- Maximum share of the Center's sales likely to be initially diverted from existing primary market area retailers on a worst case basis; and,
- Impact of population growth and other factors on sales impacts.

Market Area Definitions

Primary Market Area Definition. CBRE Consulting conducted research to develop an estimate of the primary market area for the Center, i.e., the area from which the majority of shoppers will originate. This was primarily accomplished by mapping existing Wal-Mart, Home Depot, and Lowe's stores, as well as other major general merchandise and home improvement warehouse stores, under the assumption that the Supercenter and Home Improvement stores as the anchors will be the primary draw to the Center.

The map results are presented in Exhibit 5. The map indicates there are many existing Wal-Mart, Lowe's and Home Depot stores within the immediate region surrounding Rocklin, though none in Rocklin or the adjacent town of Loomis. The Wal-Mart stores closest to Rocklin are both in Roseville; one, a Supercenter, is located along Highway 65 and the other, a discount store, is located east of Interstate 80. There are also two Home Depot stores and one Lowe's store in Roseville. One Home Depot is east of Interstate 80. The other Home Depot and the Lowe's store are along Highway 65. Because of the prevalence of retail in Roseville, Rocklin Crossings is not expected to generate significant sales from residents of Roseville. Therefore, Roseville was excluded from the primary market area.

Loomis is located adjacent to Rocklin to the northeast. The Center's site is located near the border of Rocklin and Loomis and therefore will be convenient for Loomis and Rocklin residents. Loomis currently does not have any major home improvement or Supercenter stores. The only major home improvement or general merchandise store in Rocklin is K-Mart. Lincoln, although it is adjacent to Rocklin on the north, is 10 miles away from the Center. Lincoln has a Home Depot, but no Wal-Mart. However, most residents of Lincoln are unlikely to drive past the large concentration of retail located in Roseville on the Highway 65 corridor to shop at the Center.[4] These findings lead CBRE Consulting to conclude that the primary market area for the planned Supercenter and associated Center retailers will comprise the City of Rocklin and the Town of Loomis. CBRE Consulting's retail leakage analysis documented in the next chapter (see Retail Leakage Analysis) indicates that resident spending represents the equivalent of 63.6 percent of sales in the primary market area.

Secondary Market Area Definition. CBRE Consulting conducted research to develop an estimate of the secondary market area for the Center, i.e., the area from which the largest balance of shoppers outside the primary market area will originate. While Rocklin and Loomis comprise the primary market area, some sales will still originate from outside this area, especially from areas nearby which lack major retail such as the Interstate 80 corridor to the northeast of Loomis, the City of Auburn, and the neighborhood of Granite Bay. Consequently, the analysis assumes there will be demand originating from a secondary market area.

[4] Although residents of Lincoln's east side could take Sierra College Boulevard South to Interstate 80 to reach Rocklin Crossings, the majority of that city's residents are more likely to use Highway 65 to access the retail centers in that corridor.

CBRE Consulting identified a secondary market area for the proposed Rocklin Crossings center defined as the City of Auburn and a portion of the unincorporated areas of Placer County to the east and southeast of Rocklin and to the northeast of Loomis along the Interstate 80 corridor. This secondary market area definition reflects the existing nature and mix of retailing in the primary market area and the location of other major general merchandise and home improvement retailers in the region. CBRE Consulting identified all major general merchandise and home improvement retailers in Placer and Sacramento Counties. The boundaries of the secondary market area, as depicted in Exhibit 5, are reflective of the area from which the proposed Rocklin Crossings will most likely draw the largest balance of its customers.

CBRE Consulting assumed that residents of Lincoln, in addition to shopping in Lincoln, are likely to patronize retail centers along the Highway 65 corridor which provides numerous opportunities for shopping. Therefore, Lincoln was excluded from the secondary market area. Given the dearth of retail in Auburn, and the Center's location as the first large retail center on Interstate 80 south of Auburn, Rocklin Crossings is likely to attract residents from Auburn and the Interstate 80 corridor northeast of Loomis. Roseville was excluded from the secondary market area because it is already very well served by retail along the Highway 65 corridor.

There are very few major competitive general merchandise and home improvement retailers in the secondary market area. The only such stores are a K-Mart and a Target in Auburn. In addition, there is a proposed Home Depot store near the City of Auburn that has been approved. The location of other major general merchandise and home improvement retailers may change as new development occurs within the secondary market area. These issues will be addressed in the cumulative impacts section.

CBRE Consulting estimates that primary and secondary market area residents will generate 95 percent of the Center's sales. Thus, residents coming from tertiary markets will generate the remaining 5 percent of sales or $11.5 million of the total $230.4 million in Center sales. This tertiary market is likely to come from travelers passing through Rocklin on Interstate 80.

The concept of a percentage share allocation of demand from a market area is consistent with general real estate market analysis principles, which recognize that regional retailers have primary, secondary, and often even tertiary market areas. It is also consistent with discussions CBRE Consulting had with retail brokerage professionals.

IV. RETAIL SALES LEAKAGE ANALYSIS

This chapter analyzes the retail sales leakage and attraction profile of the primary market area and the combined primary and secondary market areas. It measures the extent to which these areas capture resident spending on retail goods as well as sales generated by residents from outside the respective areas. This provides a characterization of the sales performance of the local retail base. CBRE Consulting conducts this analysis as a building block in its analysis identifying the extent to which the Center may or may not divert sales away from existing market area retailers.

METHODOLOGY

Approach

CBRE Consulting operates a statistical regression-based model that estimates retail spending potential for a market area based upon population, income, and consumer spending patterns. For the purpose of this study, the market area is the geographic area from which the majority of Center demand is anticipated to originate.

Generally referred to as a "Retail Sales Leakage Analysis," or similar nomenclature by real estate-based economic consulting firms comparable to CBRE Consulting, the model determines the extent to which a market area is or is not capturing its sales potential based upon reported taxable sales data. In California, these data are generally published by BOE or provided by municipal tax consultants. Retail categories in which spending is not fully captured are called "leakage" categories, while categories in which more sales are captured than are generated by market area residents are called "attraction" categories. Generally, attraction categories signal particular strengths of a retail market, while leakage categories signal particular weaknesses.

Several data points are included in CBRE Consulting's Retail Sales Leakage Analysis. These include per capita figures and aggregate figures. Per capita figures are presented for the sales achieved by retail category for a study control area and the primary market area under study, as well as an estimate of spending by retail category generated from within the primary market area. Only the per capita spending figures (as a proxy for all area spending) in the Retail Sales Leakage Analysis are the result of detailed methodological calculations. All other per capita figures simply reflect actual area sales divided by estimated population, with some disclosed adjustments for taxable versus nontaxable sales.

The purpose of including a control area is to compare the market area to a geographic area with similar characteristics, so as to be representative of, or "control," the spending patterns of the study area.[5] The use of the control area accounts for characteristics unique to individual markets that might artificially inflate or deflate the calculated area spending pattern. Therefore, a control area is chosen carefully, with the goal being the selection of an area within which there is a relative balance between the inflow and outflow of retail spending. The CBRE Consulting Retail Sales Leakage Analysis uses the control area sales by retail category as a dominant variable in the regression analysis, to impute the study area spending potential by category.

[5] For the purposes of this study, the control area has been defined as the area covered by the Sacramento Area Council of Governments: the counties of El Dorado, Placer, Sacramento, Sutter, Yolo, and Yuba.

In addition to being benchmarked to a control area, the market area per capita spending figures are benchmarked to the Consumer Expenditures Survey, a publicly available data resource published periodically by the United States Department of Labor, Bureau of Labor Statistics. This resource provides regional- and income-based estimates regarding spending patterns of households throughout the United States. The data presented in the Consumer Expenditures Survey are for different income brackets, reflecting different expenditure patterns by household income. The regression basis of CBRE Consulting's Retail Sales Leakage Analysis takes these varying household income expenditure patterns into account, especially when there are income disparities between the control area and the study area. CBRE Consulting's Retail Sales Leakage Analysis is conducted for all retail sales in an area, including taxable and nontaxable.

Population Estimates

CBRE Consulting relied on the Sacramento Area Council of Governments (SACOG) population estimates and projections through 2015 for the primary market area leakage analysis. Figures reported by the SACOG are presented in Exhibit 6. The SACOG population figures were provided for 2000, 2005, 2010, and 2015. To generate estimates for the study years of 2004 and 2009 CBRE Consulting interpolated by using the appropriate interim year compound annual growth rates.[6] The results indicate population estimates in the primary market area of 54,571 in 2004, growing to 62,678 in 2009, when the Center is fully operational. The primary market area population is projected to grow to 69,467 by 2015, six years after full operations of the Center begin.

While CBRE Consulting relied on SACOG population estimates and projections for Auburn, the one major city located in the secondary market area, the secondary market area contains unincorporated areas for which population is not specifically tracked by SACOG. For estimation of the population of unincorporated areas that were included in the secondary market area definition, CBRE Consulting relied on data obtained from Claritas Inc., a national provider of demographic and economic data. The unincorporated population estimate was projected forward using the compound average population growth rate as calculated from Claritas projected population data. Exhibits 7 and 8 show the population estimates of the total unincorporated areas in Placer County, the unincorporated areas in the secondary market area, and the primary and secondary market areas combined.

Income Estimates

The primary market area average household income in 2004 was estimated as $89,966, pursuant to Claritas. The secondary market area had an average household income in 2004 estimated at $92,914. This compares to the control area's (counties of El Dorado, Placer, Sacramento, Sutter, Yolo, and Yuba) average of $65,310 in 2004, also estimated by Claritas.

Sales Estimates

BOE publishes taxable sales numbers for counties and major cities; its most recent full-year taxable sales numbers are from 2004. CBRE Consulting used BOE's numbers for cities located in the secondary market area as published in its publication, Taxable Sales in California – 2004. However, CBRE Consulting also included in its secondary market area portions of Placer

[6] Population estimates for 2004 were used in order to match the year of the California Board of Equalization's latest annual sales data.

County that contain small cities and unincorporated areas for which BOE does not publish data.[7] To that end, sales in these unincorporated portions of Placer county were estimated as part of the retail leakage analysis.

CBRE Consulting believes that the best approach to estimate sales in the unincorporated areas is to estimate unincorporated per capita sales figures in Placer county and multiply them by the secondary market area's unincorporated population. To derive an unincorporated per capita sales estimate, CBRE Consulting took the total sales of Placer county and deducted sales from major cities in the county, as presented in Exhibit 9. Exhibit 10 then takes 2004 unincorporated sales and divides by 2004 unincorporated population estimates (refer to Exhibits 7 and 8). The result represents a countywide unincorporated sales per capita estimate. Applying the countywide unincorporated sales per capita estimate to the 2004 secondary market area's unincorporated population yields an estimate for the unincorporated portions of Placer county that are included in the secondary market area.

Adjustment Required Due to Confidentiality

When BOE publicly reports data, it will not report data for a sales category if it does not meet certain disclosure requirements. For example, if there are only one or two stores in a category or if one retailer dominates the category sales in a single city, then the sales in that category will not be released. Instead, BOE generally combines those sales with the sales in the "Other Retail Sales" category. This is more prone to occur in retail markets where the number of retailers is small or one large retailer makes up most of the sales in a category. This issue arose for some categories in the cities of Auburn, Loomis, and Rocklin. Exhibit 9 details how CBRE Consulting made adjustments to avoid understating the non-disclosed retail categories and overstating the "other retail stores" category.

FINDINGS

Three leakage analyses were conducted to assess the state of the primary market area and secondary market area's retail climate. The first leakage analysis examines the primary market area's sales performance relative to its own population base in order to assess the degree to which the primary market area is serving the retail needs of its resident population. A second leakage analysis examines the sales performance of Rocklin Crossings' secondary market area. Finally, the primary and secondary market area leakage analyses are combined to reflect the combined primary and secondary market area. The combined primary and secondary market area is defined in Chapter III and shown on a map in Exhibit 5.

The leakage analyses were conducted using 2004 sales data and extrapolated to 2009, reflecting the sales estimates for Rocklin Crossings assuming the first full year of store operations in that year. The per capita expenditure trends from 2004 were assumed to be equivalent to the per capita expenditure trends for 2009, with adjustments for interim population growth and inflation. The purpose of this adjustment was to maximize comparison

[7] Major cities are defined as those that appear in Table 5 in BOE's *Taxable Sales in California – 2004*. Table 5 presents the 272 largest California cities by taxable retail sales. For the purpose of this analysis, "unincorporated area" comprises all areas not listed in this BOE publication. In order to calculate sales in unincorporated areas, CBRE Consulting took total Placer County sales and deducted the reported cities' sales. If an incorporated city was not reported, it is not deducted and treated instead as an unincorporated area. As an exception, CBRE Consulting obtained from BOE taxable sales numbers for the Town of Loomis, which was not listed in BOE's Table 5. Loomis was added due to its location in the primary market area. CBRE Consulting requested this information as part of its background research in determining the primary market area.

with Rocklin Crossings' anticipated net additional primary market area sales during its first full year of operations in 2009.

The leakage results for the primary market area, the secondary market area, and the combined primary and secondary market area are located in the Appendix (see Exhibits 11 and 12 for primary market area results, Exhibits 13 and 14 for secondary market area results, and Exhibits 15 and 16 for combined primary and secondary market area results). For benchmark purposes, detailed results for all retail categories are presented in each market area.

The primary market area has overall leakage in retail sales of 36.4 percent or $305.1 million in 2004. Nearly all of the retail categories, with the exception of food stores and "other retail stores," experienced leakage in sales. The categories with the most leakage, as a percent of sales, were as follows:

- auto dealers and auto supplies with 81.5 percent leakage;
- general merchandise with 76.8 percent leakage;
- building materials with 48.8 percent leakage;
- apparel stores with 38.2 percent; and
- eating and drinking places with 36.9 percent leakage.

These leakage categories identify opportunities for new retailing to meet the needs of market area residents. This pattern of retail weakness is partially offset by demonstrated strength in other categories, categorized by attraction. These attraction categories, and their respective shares of gained non-resident sales dollars, include the following:

- food stores with 10.4 percent attraction; and
- other retail stores (which includes a wide array of retailers) with 0.9 percent attraction.

In addition, CBRE Consulting estimated the leakage/attraction of the secondary market area, in Exhibits 13 and 14. Consistent with the results of the primary market area leakage analysis discussed above, the secondary market area has overall sales leakage of 45.6 percent. Unlike the primary market area, however, there is sales leakage in every category. The combined sales leakage of those categories totals an estimated $423.8 million in 2004 dollars.

Finally, the results of the first two analyses are combined to reflect the total primary and secondary market area (see Exhibits 15 and 16). The combined primary and secondary market area has leakage in every category, overall sales leakage of 41.2 percent, and total leakage of $728.9 million in 2004.

While the 2004 Retail Sales Leakage Analysis findings are informative, they do not reflect the situation that will prevail when the Center becomes operational. Thus, CBRE Consulting prepared a 2009 Retail Sales Leakage Analysis projection in Exhibits 12, 14, and 16. However, this projection assumes no new interim development or loss of stores, which is not an accurate portrayal of the market. Therefore, the following section provides adjustments to this projection, incorporating information on newly opened or recently closed retail in the primary market area.

Leakage Adjustments for Major New Retail Developments

CBRE Consulting made adjustments to the projected Retail Sales Leakage Analysis findings to account for major new retail developments that have opened in the market area since 2004. Also relevant to the adjustment process is stores that have closed since 2004, as this also has

an impact on the retail base. The purpose of these adjustments is to more appropriately estimate the size of the primary market area retail base at the time the Center becomes fully operational in order to more realistically estimate the Center's impacts.

CBRE Consulting surveyed the City of Rocklin, City of Auburn, Placer County, industry specialists, and news publications to identify retail projects new to the primary and secondary market areas since 2004. The same sources were also queried regarding closed retail stores in the primary and secondary market areas. The City of Rocklin City Manager's Office was able to provide the size of the closed and opened stores in Rocklin. CBRE Consulting estimated sales performance based on averages for categories published in Retail MAXIM's 2004 publication *Perspectives on Retail Real Estate and Finance*. There were no competitive projects newly opened or recently closed in unincorporated areas of Placer County that are part of the secondary market area. A grocery store in Auburn closed recently but that was not included in the analysis.

New Retail Projects. The survey results identified one major project new to Rocklin, an RC Willey store (see Exhibit 17). RC Willey is a large warehouse style store selling furniture, flooring, electronics, and appliances. The store is an estimated 165,000 square feet, with anticipated 2009 sales totaling $45.5 million. However, given RC Willey's location along the Highway 65 corridor, the primary market area for that store extends past Rocklin and Loomis to Roseville and Lincoln. As a result, a significant proportion of RC Willey's sales will originate with persons living outside of Rocklin and Loomis. Therefore, sales diversions are likely to be shared with Roseville and Lincoln. The RC Willey store's primary market area is estimated to be a five mile radius around the store. Only 40 percent of the population within this radius lives in the City of Rocklin and the Town of Loomis. Therefore, the net sales for the store are adjusted by 40 percent, down to $18.2 million, to account for the share of impact on Rocklin and Loomis.

Anticipated Retail Losses. The sales addition is counterbalanced by the losses of two grocery stores this year in the City of Rocklin: an Albertson's and a Food Source store (see Exhibit 17). Pursuant to known or estimated square footages, these two stores are anticipated to total 140,000 square feet of vacated grocery space resulting in a net decline in sales equivalent to $56.3 million in 2009.[8]

Net Changes in Retail Base. The distribution of the new or closed retail sales by retail category is presented in Exhibit 18. The purpose of this distribution is to accurately assess the impact of the store additions or deletions on the market area retail base. The results indicate that the greatest net change by retail category will be the $56.3 million loss in food store sales. A gain of $18.2 million will occur in the home furnishings and appliances category.

Adjusted Retail Sales Leakage Analysis

The primary market area adjusted retail sales attraction/leakage figures for 2009 are presented in Exhibit 19. The only categories with changes are the food stores and home furnishings and appliances. For food stores, the unadjusted leakage analysis showed $22.3 million in 2009 attraction. Once the two closed grocery stores are taken into account, the food stores category shows $34.0 million in leakage. For home furnishings and appliances, the unadjusted leakage analysis showed $9.4 million in leakage in 2009. Once the new RC Willey store is taken into

[8] In addition, a 34,400 square foot Ralph's grocery store closed in the City of Auburn. This store was not included in the analysis however because it is not in the primary market area.

account, the category has $8.8 million in attraction. The overall findings indicate total anticipated primary market area sales of $676.6 million, with $446.5 million in leakage.

The combined primary and secondary market area adjusted retail sales attraction/leakage figures for 2009 are also presented in Exhibit 19. Once the two closed grocery stores are taken into account, the food stores category shows $72.2 million in leakage. In contrast to the primary market area only, once the new RC Willey store is taken into account, the home furnishings and appliances category has leakage of $18.1 million, or about half of the leakage that was estimated without considering the new store. The overall findings indicate total anticipated combined primary and secondary market area sales of $1,280.7 million, with $952.2 million in leakage.

V. SALES IMPACTS

The following analysis examines whether the Center would attract new sales to the primary market area or divert sales from existing retailers. If sales are diverted, the degree of impact on existing primary market area retailers is identified.

APPROACH

CBRE Consulting has developed an analytic approach that conservatively estimates the maximum impact of retailers such as those proposed for the Center on existing retailers. For this analysis, the approach assumes that if the Center is adding sales to a category in an amount greater than any primary market area and secondary market area leakage in the category, ***then at worst***, the amount of Center sales in that category in excess of any leakage will be diverted away from existing primary market area retailers. In other words, the negative economic impacts of the Center's sales will be spread proportionally among all the like retailers in the primary market area.

Exhibit 20 documents the diverted sales estimate and methodology. The approach takes into account the following factors for the most relevant retail sales categories:

- Center sales by major category;
- Estimated Center sales by major category generated by primary and secondary market area residents versus tertiary demand;
- The primary market area as a percentage of the combined primary and secondary market area;
- Leakage, if any, occurring in the primary market area and secondary market area;
- The portion of leakage, if any, in the primary and secondary market area that might be absorbed by Center sales;
- The share of Center sales estimated, at maximum, to be diverted from existing primary market area retailers upon stabilization; and
- The minimum new sales achieved by the Center ***not*** diverted away from existing primary market area retailers (i.e., sales resulting from recaptured leakage).

This is a conservative approach, in that it assumes there will be no net increase in primary market area sales after the Center achieves market stabilization. Such increases commonly happen as residents shift their shopping patterns or increase their expenditures based upon the enhanced availability of consumer goods. This is why CBRE Consulting considers the resulting existing retailer impacts ***maximum estimates*** upon stabilization, and the resulting new sales to the primary market area ***minimum estimates***.

SALES IMPACTS ON EXISTING PRIMARY MARKET AREA RETAILERS

The sales impact results, derived in Exhibit 20 and summarized in Table 4 on the following page, indicate that, at worst, $33.9 million in sales generated at the Center upon stabilization will be diverted away from existing primary market area retailers. Thus, the balance of new sales, or $196.6 million, is the minimum estimate of Center sales new to the primary market area. These new sales will come from a combination of recaptured sales (in select categories) and new sales from primary market, secondary market, and tertiary market demand.

Table 4
Maximum Rocklin Crossings Center Retailers Sales Impacts Upon Stabilization
Primary Market Area
2009 Dollars, in millions

Retail Category	Center Sales	Maximum Sales Diverted From Primary Market Area Retailers	Minimum New Sales to Primary Market Area
Apparel	$14.2	$0.0	$14.2
General Merchandise	30.9	0.0	30.9
Food Stores	32.9	0.0	32.9
Eating and Drinking	5.1	0.0	5.1
Home Furnishings & Appliances	55.3	26.9	28.4
Building Materials	37.6	0.0	37.6
"Other Retail Stores"	54.5	7.0	47.5
Total	**$230.5**	**$33.9**	**$196.6**

Sources: Exhibit 20.

These figures are conservative and are presented as an analytical benchmark. They are considered conservative for several reasons. Foremost, they assume the maximum diversion away from existing retailers upon stabilization of the Center. Thus, they do not take into account any prospective market corrections or enhancements following the introduction of the Center to the marketplace, including competitive retailer repositioning. They also do not account for potential real growth in income among the market area's population, resulting in an increase in per capita spending. More importantly, they do not take into consideration population growth in the market area following introduction of the Center.

Absent any market adjustments, the maximum sales diverted from primary market area retailers represent 5.0 percent of the estimated total market area sales (see Exhibit 21). Only two categories are estimated to have possible sales diversions: home furnishings and appliances; and "other retail stores." There is estimated to be a possible $26.9 million of sales diversions in the home furnishings and appliances category. This represents 52.0 percent of total retail sales in that category. The "other retail stores" category is estimated to have a possible $7.0 million in sales diversions which represents 4.4 percent of sales in that category. The maximum diverted sales as a percent of estimated market area sales by category is displayed in Table 5 on the following page.

Table 5
Maximum Diverted Sales as a percent of Primary Market Area Sales
2009 Dollars

Retail Category	Diverted Sales as a percent of Primary Market Area Sales
Apparel	0.0%
General Merchandise	0.0%
Food Stores	0.0%
Eating and Drinking Places	0.0%
Home Furnishings and Appliances	52.0%
Building Materials	0.0%
Other Retail	4.4%
Average – All Categories	**5.0%**

Source: Exhibit 21.

MITIGATING EFFECTS OF POPULATION GROWTH

In addition to the existing demand, additional demand will be generated by primary and secondary market area population growth in the years immediately following the Center's first full year of operations. The new demand from anticipated population growth will further support new sales at the Center.

For example, between 2009 and 2014, the primary market area's population is anticipated to grow by 5,629 and the combined primary and secondary market area is anticipated to grow by 7,368 (see Exhibits 22 and 23). Given the estimated per capita spending for the primary market area residents and for the combined primary and secondary market area residents, this new population is estimated to generate new sales by 2014, as summarized in Table 6. These figures indicate that by 2014, primary market area residents are estimated to generate an additional $73.5 million in retail sales demand. Combined primary and secondary market area residents are estimated to generate a $97.0 million in retail sales demand.

Table 6
Retail Demand from Population Growth, 2009 – 2014,
2009 Dollars, in millions

Retail Category	Primary Market Area	Combined Primary and Secondary Market Area
Apparel	$3.2	$4.3
General Merchandise	$14.2	$18.7
Food Stores	$17.1	$22.5
Eating and Drinking Places	$9.4	$12.4
Home Furnishings and Appliances	$3.9	$5.1
Building Materials	$11.5	$15.4
Other Retail	$14.2	$18.6
Total	**$73.5**	**$97.0**

Source: Exhibit 23.

This demand from new population growth will play a significant role in mitigating the Center's sales impacts in the "other retail stores" category.

IDENTIFICATION OF AT RISK RETAIL CATEGORIES

Comparing the new population demand figures with the estimated sales diversions identifies the retail sales categories most at long-term risk from the Center's development. This comparison is provided below, in Table 7.

Table 7
Rocklin Crossings Center Maximum Diversions Compared to Growth in Demand
Combined Primary and Secondary Market Area
2009 Dollars, in millions

Retail Category	Estimated Center Diversions in 2009	Demand from New Population Growth, 2009-2014	Estimated Length of Time Required for Mitigation[1]
Apparel	$0.0	$4.3	N/A
General Merchandise	0.0	$18.7	N/A
Food Stores	0.0	$22.5	N/A
Eating and Drinking	0.0	$12.4	N/A
Home Furnishings & Appliances	26.9	$5.1	20+ years
Building Materials	0.0	$15.4	N/A
Other Retail	7.0	$18.6	1-2 years
Total	**$33.9**	**$97.0**	**Varies**

Notes:
(1) Based on level of demand averaged over the five-year period.
Sources: Exhibits 21 and 23; and CBRE Consulting.

This comparative analysis indicates that some market area retail sectors appear more at risk than others by the development of the Center. The sector most at risk is home furnishings and appliances. The only other retail sector with any impact is the "other retail stores" category. In all likelihood, the stores in the "other retail stores" category can withstand temporary sales declines until replaced by new population demand. However, the home furnishings sector may struggle with an initial 52.0 percent diversion in sales (as cited in Table 5). This is partly due to the new RC Willey store. Based on general industry performance data, and sales performance

data estimated elsewhere in this study, the square footage equivalent of the sales diversions in these two at risk categories are as follows:

- Home Furnishings and Appliances, 97,700 square feet (at $275 per square foot per Exhibit 2); and
- Other retail stores, 19,500 square feet (at the $359 per square foot estimated for unknown retail in Exhibit 2).

These findings suggest that at worst, stores totaling these respective square footages are at risk of closing due to the sales impacts of the Center. This is more fully discussed below, by retail category. This finding is worst case because the impacts are most likely to be spread among many stores, rather than just one or a few stores. Some stores will be able to withstand a sales loss for a short period of time, until such sales are replaced by new demand, while others may not.

The remaining sections of this chapter consider the extent to which these maximum sales impacts could affect existing primary market area stores competing in the above categories based on their store characteristics.

STORE IMPACTS FOR AT RISK RETAIL CATEGORIES

CBRE Consulting visited the primary market area as well as the adjacent city of Roseville in August 2006 to visually assess retail market performance, to determine market niches, and to qualitatively assess the degree to which stores might incur lost sales due to the addition of the Center. CBRE Consulting identified competitive shopping centers based on their size and retail focus relative to Rocklin Crossings. CBRE Consulting located existing competitive stores via store location information provided by InfoUSA. The major competitive shopping center and stores will be discussed according to their category of sales. Shopping centers and selected store locations are mapped on Exhibit 24. The map also depicts the location of the proposed Rocklin Crossings Center.

Competitive Shopping Centers

The primary market area contains several competitive shopping centers. There are other smaller, more neighborhood serving shopping centers in the primary market area. However, CBRE Consulting toured those shopping centers considered most competitive with the Rocklin Crossings Center. These shopping centers are identified in Exhibit 24 and described below, followed by a discussion by store type.

- **Rocklin Square Shopping Center** is a community-serving shopping center located at Interstate 80 and Rocklin Road in the City of Rocklin. It is located approximately 2.0 miles southwest of the proposed Center. The center opened in 1982 and has approximately 190,000 square feet of gross leaseable area. Major anchor tenants include Safeway and Longs Drugs.

- **Loomis Town Center** is a neighborhood-serving shopping center located at Interstate 80 and Horseshoe Bar Road in the Town of Loomis. It is located approximately 1.5 miles northeast of the proposed Center. The center opened in 1996 and has approximately 70,000 square feet of gross leaseable area, most of which is taken up by a Raley's Supermarket.

- **K-Mart Center** is a community-serving shopping center located along Pacific Street near Farron Street in the City of Rocklin. It opened in 1993 and has a total of 147,500 square feet. It is located approximately 2.7 miles southwest of the proposed Center. K-Mart is the anchor store. The other anchor, an Albertson's grocery store, closed this year and is currently vacant.

- **Five Star Plaza** is a community-serving shopping center located at the intersection of Five Star Blvd and Destiny Drive in the City of Rocklin. It is located approximately 5.1 miles southeast of the Center. It opened in 1993. Total square footage is 153,000, and it has 43 stores. The anchor used to be a Wal-Mart store. The Wal-Mart moved to a better location in Roseville. The space was retenanted by three furniture stores.

- **Blue Oaks Town Center** is a community-serving shopping center located at the intersection of Blue Oaks Boulevard and Lonetree Boulevard in the City of Rocklin. It is located approximately 7.5 miles west of the proposed Center along the Highway 65 corridor. This center is still under construction, but a 165,000 square foot RC Willey has already opened. The total center will be 528,000 square feet. Other planned tenants include Petco, Dress Barn, Stein Mart, Mervyn's, and Sportsman's Warehouse.

Downtown Shopping Districts

The primary market area contains two downtown shopping districts, one in the City of Rocklin and another in the Town of Loomis. Neither are competitive with the type of retail proposed at Rocklin Crossings.

- **Rocklin's Downtown Area** is located along Pacific Street near the intersection with Rocklin Road. The Downtown Rocklin Plan[9] examines the areas surrounding Pacific Street and Rocklin Road. Although Pacific Street is considered the "main street" of Rocklin, there are many parcels of undeveloped land scattered along the corridor. These breaks in development make it more difficult to have a walkable shopping district. Typical existing businesses include independent restaurants and auto repair shops. The Downtown Rocklin Plan presents a vision for this area that has not yet been fully realized. As it exists now, Rocklin's Downtown Area is not competitive with the type of development planned for Rocklin Crossings. If the vision of the Downtown Rocklin Plan is implemented, and infill development makes this area a pedestrian-oriented shopping district, it is unlikely that the types of stores built will compete directly with big box and chain stores at Rocklin Crossings. Stores in the Downtown Area are likely to be small and cater to residents from the nearby neighborhoods whereas Rocklin Crossings will have large chain stores that will draw shoppers from a larger area.

- **Loomis Historic Shopping District.** The Loomis Town Center Master Plan[10] defines the downtown core of Loomis as located along Taylor Road and Horseshoe Bar Road. Taylor Road is considered the "main street" of the Town of Loomis. Horseshoe Bar Road intersects with Taylor and also with Interstate 80. The Master Plan describes this downtown core area as a shopping district that is evolving into a specialty retail destination serving residents and tourists. This area is historic with many buildings that are architecturally significant. This district is compact and walkable with mainly one-story buildings. There are many small

[9] *Downtown Rocklin Plan Regulating Code Draft* by RBF Consulting/Urban Design Studio, February 10, 2006.
[10] *Loomis Town Center Master Plan: Land Use Plan and Design Guidelines, an Element of the Loomis General Plan*, by Calthorpe Associates, adopted December 5, 1992.

independent restaurants and coffee shops as well as chain stores such as Subway. This type of shopping district offers an experience that is not competitive with the big box and chain stores that are expected at Rocklin Crossings. This shopping district is not likely to be negatively impacted by the new Center.

Apparel Stores

Overview. The primary and secondary market area does not contain very many major brand name apparel stores. By contrast, the nearby City of Roseville has many major apparel stores.

Center Impacts. The analysis indicates there are approximately $13.8 million of primary market area sales leakage in the apparel category estimated in 2009 and $33.8 million of secondary market area sales leakage in the apparel category (see Exhibit 19). New apparel sales generated by the Center, $14.2 million, can be satisfied entirely by the existing leakage (see Exhibit 20). As a result, the Center will have no negative impact on existing primary market area apparel retailers.

General Merchandise

Overview. CBRE Consulting researched major general merchandise stores in the primary and secondary market area. The only major general merchandise store in the primary market area is the K-Mart. In the secondary market area, the only major general merchandise stores are a Target and a K-Mart located in the City of Auburn.

Center Impacts. The analysis indicates there are approximately $120.8 million of primary market area sales leakage in the general merchandise category and $118.3 million of secondary market area sales leakage (see Exhibit 19). New general merchandise sales generated by the Center, $30.9 million, can be satisfied entirely by the existing leakage (see Exhibit 20). As a result, from a supply/demand perspective, the Center should not have a negative impact on existing primary market area general merchandise retailers.

Given that K-Mart is the only major general merchandise store in the primary market area, it would be the most likely to experience negative sales impacts, if any, from the new Center, and especially if a Wal-Mart was built because their product lines overlap. K-Mart is located in a center that recently lost its other anchor, Albertsons. If Albertsons is not replaced, that may have negative impacts on the K-Mart store and could contribute to store closure. However, the leakage analysis shows that K-Mart is not currently serving all the demand for general merchandise products in the primary market area. In fact, there is more than enough demand in the general merchandise category to support the currently operating K-Mart store and the projected sales of a Wal-Mart at Rocklin Crossings. Notwithstanding these considerations, it should be noted that in order to compete effectively with Wal-Mart, K-Mart will have to reassess its current store and make appropriate changes to meet customer demand.

Food Stores

Overview. The major grocery stores located near the Center's site are the Raley's located in the Loomis Town Center in the Town of Loomis and the Safeway located in Rocklin Square Shopping Center in the City of Rocklin. In addition, there was an Albertson's store located in the K-Mart center in the City of Rocklin. However, the Albertson's store closed recently and is currently vacant. Another grocery store in the City of Rocklin, Food Source, also closed this year.

Center Impacts. The analysis indicates there are approximately $34.0 million of primary market area sales leakage in the food stores category and $38.2 million of secondary market area sales leakage. This is after adjusting for two grocery stores in Rocklin (Albertson's and Food Source) that have closed since the sales data for 2004 was published (see Exhibits 18 and 19). Without this adjustment the primary market area actually has attraction in the food stores category. But given recent store closures, there is currently enough leakage in the category such that new food sales generated by the Center, $32.9 million, can be satisfied entirely by the existing leakage. As a result, the Center will have no negative impact on existing primary market area food retailers (see Exhibits 19 and 20).

Eating and Drinking Places

The analysis indicates there are approximately $38.6 million of primary market area sales leakage in the eating and drinking places category estimated in 2009 and $34.0 million of secondary market area sales leakage in the eating and drinking places category. New eating and drinking places sales generated by the Center, $5.1 million, can be satisfied entirely by the existing leakage. As a result, the Center will have no negative impact on existing primary market area eating and drinking places (see Exhibits 19 and 20).

Home Furnishings & Appliances / Building Materials

Overview. CBRE Consulting considers these categories together since some retailers overlap in these areas. There are no major home improvement warehouses such as Home Depot or Lowe's in the primary market area. However, there is one large store that recently opened in the Blue Oaks Town Center called RC Willey. This is a 165,000 square foot store which sells furniture, flooring, electronics and appliances. RC Willey is located in the Highway 65 corridor. This corridor comprises the majority of the City of Roseville's regional retail centers as shown on Exhibit 24.

Without adjusting for the RC Willey store, the primary market area has overall leakage in the home furnishings category (see Exhibit 12). After adjusting for this new store, the analysis indicates there will be approximately $8.8 million of primary market area sales attraction in the home furnishings and appliances category estimated in 2009 and $26.9 million of secondary market area sales leakage in the home furnishings and appliances category. For the combined primary and secondary market area, there will be an estimated $18.1 million in sales leakage. However, the location of the RC Willey store on the Highway 65 corridor suggests that its competitors are more likely to be other home furnishings and appliances stores in that corridor. Small local stores such as Nelthorpe & Sons Appliances in Loomis could experience negative sales impacts. However, Nelthorpe & Sons' location in the historic shopping district of Loomis suggests that its orientation is to local residents who want to buy appliances from a small local business. Clearly, significant competitors to local appliance stores already exist in the Highway 65 corridor. These types of small stores can differentiate themselves from big box stores with high levels of customer service, custom products, and a wide selection. Larger stores such as RC Willey are the main competitors to the types of home furnishings and appliance stores that will be at Rocklin Crossings. Although some smaller home furnishings and appliance stores in the primary market area may experience negative sales impacts from the RC Willey store, the bulk of the impacts are likely to be on stores located on the Highway 65 corridor, i.e. outside the primary market area.

Center Impacts. The adjusted leakage analysis indicated that in 2009 dollars, a maximum of $26.9 million in sales may be diverted away from existing home furnishings and appliances

stores in the primary market area, comprising 52.0 percent of estimated 2009 home furnishings and appliances sales of $51.7 million (see Exhibit 21). This level of diverted sales and the associated percentage share of sales assume the Center achieves full stabilization in 2009, which is unlikely. This level of sales is equivalent to support for approximately 97,700 square feet of home furnishings and appliances store space.[11] The extent to which this will negatively impact existing stores will depend upon their ability to sustain a downturn in sales. This downturn will diminish over time as new market area residents generate additional sales. The cumulative retail demand estimates due to population growth documented in Exhibit 23 indicate that it will take more than twenty years to generate $30.4 million in home furnishings and appliances sales from new growth following the assumed 2009 full year operation of the Center. If stores cannot withstand this downturn in sales, it is possible that a maximum of 97,700 square feet of existing home furnishings and appliances store space is at risk of closing. This square footage, however, may come not just from City of Rocklin stores, but also from City of Roseville stores located along the Highway 65 corridor.

The building materials category has enough leakage to absorb all the new sales at the Center. This means that there is enough demand to support local building materials retailers such as Meek's The Builders Choice store in Rocklin or Hardware Emporium in Loomis. Other types of stores in the building materials category include lumber yards, plumbing and electrical supplies stores, and stores that primarily sell paint, glass or wallpaper. Of course, it would be advantageous for small local stores to differentiate themselves from big box stores by having high levels of customer service, distinctive product lines and more selection. Still the leakage analysis shows no negative sales impacts to building materials retailers in the primary market area.

"Other Retail Stores"

Overview. "Other retail stores" is a broad category that includes sales in office supplies, gardening, or other specialty retail offerings. As a result, it is difficult to precisely identify the "other retail stores" in the primary market area without first knowing all of the "other retail stores" tenants at the proposed Center.

Center Impacts. The adjusted leakage analysis indicated that in 2009 dollars, a maximum of $7.0 million in sales may be diverted away from existing other retail stores in the primary market area, comprising 4.4 percent of estimated 2009 other retail stores sales of $158.6 million (see Exhibit 21). This level of diverted sales and the associated percentage share of sales assume the Center achieves full stabilization in 2009, which is unlikely. This level of sales is equivalent to support for approximately 19,500 square feet of other retail stores space.[12] The extent to which this will negatively impact existing stores will depend upon their ability to sustain a downturn in sales. This downturn will diminish over time as new market area residents generate additional sales. The cumulative retail demand estimates due to population growth documented in Exhibit 23 indicate that it will take one to two years to generate $7.6 million in other retail stores sales from new growth following the assumed 2009 full year operation of the Center. There may be short term impacts to some existing retailers, although they are not expected to lead to store closures. However, if stores cannot withstand this

[11] Assuming average retail sales of $230 per square foot in 2003 dollars, which after inflation adjustment is equivalent to $275 in 2009 dollars.
[12] Assuming average retail sales of $300 per square foot in 2003 dollars, which after inflation adjustment is equivalent to $359 in 2009 dollars.

downturn in sales it is possible that a maximum of 19,500 square feet of existing "other retail stores" space is at risk of closing.

The findings from this chapter are summarized in the following Table 8.

Table 8
Proposed Rockin Crossings
Summary of Impacts[1]

Retail Category	Diverted Sales	Percent of Sales	Supportable Square Feet	Years to Mitigate
Apparel	$0.0	0.0%	N/A	N/A
General Merchandise	0.0	0.0	N/A	N/A
Food Stores	0.0	0.0	N/A	N/A
Eating and Drinking Places	0.0	0.0	N/A	N/A
Home Furnishings and Appliances	26.9	52.0	97,700	20+ years
Building Materials	0.0	0.0	N/A	N/A
"Other Retail Stores"	7.0	4.4	19,500	1 to 2
Total	$33.9	5.0%	117,200	

(1) Refer to Exhibits 20, 21, and 31.
Source: CBRE Consulting.

Table 8 provides a summary of the diverted sales impact discussed in this chapter. Assuming Rocklin Crossings' new primary and secondary market area sales occurred at the proportional expense of existing primary market area retailers, then existing retailers would experience a maximum annual impact of $33.9 million in sales upon stabilization of the Center in 2009 dollars. In total, the maximum diverted sales represent 5.0 percent of the primary market area's estimated 2009 sales in relevant Center sales categories. New population growth is anticipated to help recoup a portion of the lost store sales. In addition, retailers could successfully reposition their stores and primary market area sales could increase overall due to the enhanced regionalism of the primary market area. This is a conservative approach, in that it assumes there will be no net increase in combined primary and secondary market area sales after the Center achieves market stabilization. This is why CBRE Consulting considers the resulting existing retailer impacts maximum estimates upon stabilization.

VI. CUMULATIVE IMPACTS

This chapter analyzes the Center in the context of other currently planned retail projects in the primary market area. This includes five projects that are either currently approved (Stanford Plaza), under construction (Blue Oaks Town Center), under review (Rocklin Pavilions), or, in the case of two projects, are expected to file applications within the next few months (the Granite Drive project and Rocklin Marketplace). These represent the major developments that could impact the primary market area in a significant way via additional retail sales. Other, smaller retail developments of less than 40,000 square feet were excluded because they are not competitive with a shopping center like Rocklin Crossings, both in terms of size and tenant mix. Smaller shopping centers usually have a neighborhood orientation with restaurants and convenience stores such as dry cleaners and nail salons. Rocklin Crossings, however, will be a destination center, i.e., it will attract customers that want to comparison shop for larger purchases. For convenience items, customers are likely to continue to shop at their local neighborhood centers. Also not included in this analysis were several developments which are at a very early stage of planning and were deemed to be too speculative to include in this cumulative impact analysis.

IDENTIFIED PROJECTS

Primary Market Area

CBRE Consulting identified major planned, approved or under construction retail projects in the primary market area. There were no projects of significance identified in the Town of Loomis, but five projects of significance identified in the City of Rocklin. These identified retail projects are presented in Exhibit 25. The reader should note that the primary market area is defined for the subject property Rocklin Crossings and that the projects below may have somewhat different market areas depending on their location in Rocklin and the location of their major competitors. CBRE Consulting does not define a separate market area for each project or store.

Available details for the five projects included in the cumulative impacts analysis are as follows:

- **Blue Oaks Town Center:** Blue Oaks Town Center is a 528,000-square-foot center which is currently under construction. It is located in the City of Rocklin along the Highway 65 corridor at the northwest corner of Blue Oaks Boulevard and Lonetree Boulevard. The anchor store, a 165,000-square-foot RC Willey, opened recently and sells flooring, appliances, furniture, and electronics. Other stores that are scheduled to open include Dress Barn, Petco, Stein Mart, Mervyn's, and Sportsman's Warehouse. It is estimated to be completed in Spring of 2007.

- **Stanford Plaza:** Stanford Plaza is an approximately 120,600-square-foot shopping center that was approved by the City of Rocklin. Construction is expected to begin October 1, 2006 at the intersection of Sunset Boulevard and Stanford Ranch Road. No tenants have been identified yet, and it is not expected to have an anchor store, however it is anticipated that the project will consist of neighborhood serving retail (restaurants, personal services, etc.). It is estimated to be completed in 2008.

- **Rocklin Pavilions:** The City of Rocklin has received an application for the Rocklin Pavilions shopping center and is reviewing it. The site is at the northwest corner of Sierra College Boulevard and Interstate 80, directly across the freeway from the Rocklin Crossings site. Total square feet is expected to be 373,797. No leases have been

signed, but possible anchor tenants could include Target, Kohl's, and Linen & Things. Other categories of retailers include a fabric and hobby store, specialty grocer, home furnishings, apparel, restaurants, and banks. This project is estimated to be completed in 2009.

- **Granite Drive (Granite Bay Ventures):** The City of Rocklin is expecting to receive an application for this shopping center in early 2007. It is located in the same area as Rocklin Crossings and Rocklin Pavilions, near the intersection of Interstate 80 and Sierra College Boulevard. This center is a 250,000-square-foot power center with a regional draw. Possible anchor tenants include a home improvement warehouse and a national theatre chain with 10 plus screens. No specific tenants have been identified, but it is anticipated that the project will consist of regional serving retail. This "pre-application" project has been included in the cumulative impact analysis based on the City of Rocklin's belief that an application is likely to be filed soon.

- **Rocklin Marketplace:** Rocklin Marketplace is a 300,000-square-foot shopping center planned at Highway 65 and Sunset Boulevard in the Highway 65 corridor. The City of Rocklin is expecting to receive an application for this project in early 2007. Tenants and anchors have not been identified, but it is anticipated that the project will consist of regional serving retail. This "pre-application" project has been included in the cumulative impact analysis based on the City of Rocklin's belief that an application is likely to be filed soon.

Secondary Market Area

Within the secondary market area, CBRE Consulting identified several retail projects in the planning stages or approved. Specific projects of note include: a new Home Depot store in the City of Auburn, planned for 129,295 square feet including a garden center; a subdivision called Brady Estates in the City of Auburn which includes 53,490 square feet of retail; and an expansion of the Rock Creek Plaza Shopping Center in the City of Auburn. The economics of retail development are such that the impacts of the proposed center will be greatest within the center's primary market area. Retailers in a primary market area compete primarily with other retailers of like kind within the primary market area. That is why the analysis focuses on the potential for diverted sales, if any, away from other primary market area retailers. Assessing potential impacts on existing retailers in the secondary market area would be problematic and speculative because the secondary market area is made up of several submarkets, each one of which has its own primary market area and, therefore, its own unique characteristics in terms of such factors as current market conditions, competition (existing and planned), market area population growth potential, etc. For these reasons, cumulative impacts resulting from secondary market area projects are not analyzed in this report.

SALES ESTIMATES FOR PLANNED RETAIL DEVELOPMENTS

CBRE Consulting estimated sales for the planned market area retail developments in Exhibit 26. As with the Center itself, sales were estimated using available 10-K's or the Retail MAXIM publication. For Stanford Plaza, Rocklin Marketplace, and the Granite Drive projects, tenants or tenant types are not identified for the planned space. For these allocations of space, CBRE Consulting assumed a generic sales performance estimate, and assigned the sales to an appropriate mix of categories given the center type. The generic sales performance estimate is derived from an average for mall-based retailers. While at least one of these projects will likely enter the market in advance of the Center, their sales are forecasted to 2009 to assess the

prospective impact of the Center in combination with these projects. The results in Exhibit 26 indicate that by 2009, these planned projects are anticipated to generate an additional $497.2 million in retail sales potentially competitive with the Center.

Exhibit 27 identifies estimates of sales by retail category for the identified planned retail projects in the market area. For analytical purposes, the sales are distributed as follows:

- $55.3 million in apparel;
- $141.4 million in general merchandise;
- $33.0 million in food stores;
- $37.4 million in restaurants;
- $52.6 million in home furnishings and appliances;
- $21.1 million in building materials;
- $156.4 million in other retail.

Of these new sales, 95 percent, or $472.3 million are estimated to be generated by primary and secondary market area residents, per the previous market split assumptions. The remaining sales are expected to comprise tertiary market demand, originating from undefined areas outside the primary and secondary market areas (e.g. motorists traveling along Interstate 80 through Rocklin).

CUMULATIVE SALES IMPACTS

Approach

Utilizing the same methodology discussed in Chapter V, Sales Impacts, CBRE Consulting estimated the maximum 2009 impact of the planned retail developments on existing retailers in the primary market area in combination with the Center. This approach, presented in Exhibits 28 through 31, considered the following factors:

- New primary market area sales base which includes minimum new sales to the primary market area resulting from Rocklin Crossings;
- New combined primary and secondary market area sales base which includes minimum new sales to the primary market area resulting from Rocklin Crossings;
- The primary market area sales as a percentage of the combined primary and secondary market area sales;
- New sales in the primary market area from the five cumulative projects;
- The portion of new cumulative projects' sales that will come from the primary and secondary market area;
- Unabsorbed leakage in the primary market area and in the secondary market area;
- Maximum cumulative sales diversions for the Center and the planned projects;
- Sales diversions as a percentage of estimated sales.

Exhibit 31 summarizes the diverted sales impacts resulting from development of the Center and all five primary market area cumulative projects.

Findings

The cumulative sales impact results indicate that, assuming development of all five projects, at worst, $212.0 million in sales will comprise sales diverted away from existing primary market area retailers (see Exhibit 31). The diverted sales impact estimate is $38.5 million on apparel

stores, $68.7 million on home furnishings and appliances stores, and $104.9 million on "other retail stores." There are no diverted sales anticipated in the general merchandise, food stores, restaurants, or building materials stores categories. The fact that there is estimated to be no diverted sales in the general merchandise category indicates that there is enough demand to support current sales at the Rocklin K-Mart and projected sales at Rocklin Crossings without negative sales impacts to K-Mart.

- **Apparel.** The estimated $38.5 million in diverted apparel store sales is equivalent to approximately 151,500 square feet of supportable space. The primary market area is projected to require more than twenty years to generate this level of additional demand.[13] Thus, it appears approximately 151,500 square feet of apparel store space in the primary market area is at risk of closing unless the primary market area is able to transition to become an area that attracts more retail sales than its residents generate (e.g., like Roseville).

- **Home Furnishings and Appliances.** The estimated $68.7 million in diverted home furnishings and appliances store sales is equivalent to approximately 249,700 square feet of supportable space. The primary market area is projected to require more than twenty years to generate this level of additional demand. Thus, it appears approximately 249,700 square feet of home furnishings and appliances store space in the primary market area is at risk of closing unless the primary market area is able to transition to become an area that attracts more retail sales than its residents generate (e.g., like Roseville).

- **Other Retail Stores.** The estimated $104.9 million in diverted other retail store sales is equivalent to approximately 292,200 square feet of supportable space. The primary market area is projected to require more than twenty years to generate this level of additional demand. Thus, it appears approximately 292,200 square feet of other retail store space in the primary market area is at risk of closing unless the primary market area is able to transition to become an area that attracts more retail sales than its residents generate (e.g., like Roseville).

These cumulative impact figures are conservative and are presented as an analytical benchmark. They are considered conservative for several reasons. Foremost, they assume the maximum diversion away from existing retailers upon stabilization of the Rocklin Crossings shopping center and the five cumulative centers. Thus, they do not take into account any prospective market corrections or enhancements following the introduction of these centers into the marketplace, including competitive retailer repositioning. Also, it is unlikely that the full magnitude of the negative impacts will be experienced by just one or several stores in the market area. Therefore, the impacts could be more realistically spread among a wider number of stores. If this occurs, then some store sales declines may not be severe enough to trigger store closure, reducing the magnitude of impacted square footage. This is also a conservative analysis in that it assumes the stores achieve stabilized sales in year one. However, retail stores typically achieve stabilized sales after about two to three years. Therefore the initial impact is overstated.

[13] The exact number of years is difficult to estimate. CBRE Consulting's demand estimates due to population growth only extend out as far as 2014. It is difficult to project beyond this period because of the uncertainties associated with forecasting population growth and changes in spending patterns so far into the future.

The five cumulative projects total 1.6 million square feet of planned retail space. Given the large amount of potential retail development that is planned for Rocklin, and particularly the retail planned for the Interstate 80 corridor, it is possible that Rocklin could transition to a retail hub serving the secondary market area. In this case, Rocklin would become a city which attracts a significant amount of sales from non-residents, similar to the City of Roseville.

The extent to which these potential store closures become problematical for the primary market area's retail market depends upon the strength of that market. This strength, and the resulting likelihood of the potential vacancies causing urban decay, is discussed in the following chapter.

VII. URBAN DECAY DETERMINATION

The purpose of this chapter is to assess the degree to which development of the Center will or will not contribute to urban decay in the primary market area. Urban decay could theoretically result from development of the Center and other known market area planned retail developments due to closure of other stores resulting from negative economic impacts. However, while urban decay could result from such store closures, it does not necessarily result. To make this determination, it is necessary to consider whether, if stores remained closed, urban decay would likely result. This chapter discusses the definition of urban decay, the study's approach to determining urban decay potential, retailer demand in the primary market area, and CBRE Consulting's urban decay determination.

STUDY DEFINITION OF URBAN DECAY

In recent years, the California Courts of Appeal have addressed the need to address the potential for "urban decay" in environmental documents for large retail projects. The leading case is Bakersfield Citizens for Local Control v. City of Bakersfield (2004) 124 Cal.App.4th 1184, in which the court set aside two environmental impact reports for two proposed Wal-Mart projects that would have been located less than five miles from each other. This was the first court decision to use the new term "urban decay," as opposed to the similar term "blight," which is a concept from redevelopment law. The court quoted "experts [who] are now warning about land use decisions that cause a chain reaction of store closures and long-term vacancies, ultimately destroying existing neighborhoods and leaving decaying shells in their wake." (Id. at p. 1204.) The court also discussed prior case law that addressed the potential for large retail projects to cause "physical deterioration of [a] downtown area" or "a general deterioration of [a] downtown area." (Id. at pp. 1206, 1207.) The Bakersfield court also described the circumstances in which the duty to address urban decay issues arise.

It is apparent from the case law discussed above that proposed new shopping centers do not trigger a conclusive presumption of urban decay. However, when there is evidence suggesting that the economic and social effects caused by the proposed shopping center ultimately could result in urban decay or deterioration, then the lead agency is obligated to assess this indirect impact. Many factors are relevant, including the size of the project, the type of retailers and their market areas and the proximity of other retail shopping opportunities. The lead agency cannot divest itself of its analytical and informational obligations by summarily dismissing the possibility of urban decay or deterioration as a "social or economic effect" of the project.

Against this background and for the purpose of this study, urban decay is defined as physical deterioration that is so prevalent and substantial it impairs the proper utilization of affected real estate or the health, safety, and welfare of the surrounding community. Physical deterioration includes, but is not limited to, abnormally high business vacancies, abandoned buildings and commercial sites, boarded doors and windows, parked trucks and long term unauthorized use of properties and parking lots, extensive gang or offensive graffiti painted on buildings, dumping of refuse or overturned dumpsters on properties, dead trees or shrubbery and uncontrolled weed growth or homeless encampments.

APPROACH TO DETERMINING URBAN DECAY POTENTIAL

CBRE Consulting engaged in several tasks to assess the probability of urban decay ensuing from development of the Center. These tasks revolved around assessing the potential for closed primary market area store spaces, if any, to remain vacant for a prolonged period of time or to

be leased to other retailers within a reasonable marketing period. Several sources with many years of activity in the market area were contacted regarding the health of the Rocklin/Loomis retail market and the depth of prospective demand for retail space. The purpose of this research was to determine if sufficient retailer demand exists to absorb vacated space in the event existing primary market area retailers close due to any negative impacts of the Center and other identified planned projects.

RETAILER DEMAND IN THE PRIMARY MARKET AREA

CBRE Consulting conducted telephone interviews with several real estate brokers experienced in the Rocklin/Loomis/Roseville retail market. The real estate brokers represented a mix of independent commercial brokerage houses. All of the brokers contacted have experience working with tenants and landlords in the market area. In the course of the interviews, the real estate brokers shared their candid thoughts and some proprietary information with CBRE Consulting. Findings from these interviews are summarized below.

Market Characterization

The real estate brokers contacted for this study all spoke favorably about the Rocklin retail market. They indicated that the market is strong, with an estimated retail vacancy of between 1 and 4 percent in 2006. The area has experienced a lot of housing growth, although recently that housing growth has been slowing. Retail growth also has slowed down in response. One weakness has been unanchored shopping centers which have a harder time leasing than centers with a pre-determined anchor. One broker indicated that the primary market area was overbuilt with unanchored centers.

The Rocklin/Loomis retail market is split primarily into two areas. The Stanford Ranch area is in the northwest section of the City of Rocklin along Highway 65. Parts of the area have been recently annexed into the city from unincorporated Placer County. Many new housing developments are being built in this area and along Highway 65. Most of the stores in this area are new. Because of the strong population growth projected in the Stanford Ranch area, this retail market has the attention of many national retailers, who have recently opened or are currently looking to open locations in the area. Many of these retailers have located in the City of Roseville which also lies on the Highway 65 corridor. Testament to this strength is the construction of Blue Oaks Town Center in the City of Rocklin along the Highway 65 corridor. The main anchor in this center, RC Willey, opened its doors recently and reportedly has been doing very well. Brokers believe that the Rocklin Crossings development would not impact the retail in the Stanford Ranch area because that retail is new, healthy, and draws on residents of neighboring Roseville and areas of unincorporated Placer County, as well as residents of Rocklin.

The other major retail area in Rocklin is along Interstate 80. This area is older and has not seen much recent development. There are two grocery anchored centers in this area. The Loomis Town Center is located at the intersection of Horseshoe Bar Road and Interstate 80 in the Town of Loomis. This 10-year old center has a Raley's store as an anchor and several chain restaurants (Taco Bell, Quiznos, Round Table Pizza, and Starbucks). There is also a Wells Fargo bank and a hair salon in the center. The Rocklin Square Shopping Center is also located in this area. It is anchored by a Safeway and Longs Drugs. Although this area is older, there are quite a few developments being planned. The Interstate 80 interchange at Sierra College Boulevard is going to be rebuilt by Caltrans and the City of Rocklin. This has sparked interest for development at the interchange. The site for Rocklin Crossings is located there as are two sites

for other proposed retail centers listed in the pipeline in Exhibit 25. The area to the east of Interstate 80 includes areas where new homes are being developed, especially in the Granite Bay neighborhood. Brokers indicated that the areas east of Interstate 80 would supply many of the customers to Rocklin Crossings.

Brokers stated that grocery stores in this older area would be impacted by the grocery sales of a Wal-Mart supercenter, but none of the brokers believes that the impacts would lead to store closures. The closest grocery stores to Rocklin Crossings are the Safeway in the Rocklin Square Shopping Center and the Raley's Supermarket in the Loomis Town Center. These stores are the most likely to experience some sales impacts from the proposed Wal-Mart Supercenter at Rocklin Crossings. However, the opinions of brokers that no grocery store is likely to close is supported by the retail leakage analysis which shows that two recent grocery store closures in the City of Rocklin leave more than enough demand to support the currently operating grocery stores and the projected grocery sales of a Supercenter at Rocklin Crossings. As is often the case when new competition enters the market, the existing grocery stores will likely need to remodel and possibly reposition themselves to remain competitive.

In addition to Rocklin's two primary retail areas, there is also a third commercial area along Pacific Street. Part of this area, between Midas Avenue and Farron Street, is designated by the City of Rocklin as part of the Downtown Plan. This area is primarily residential. Most businesses are old and well established. Typical businesses are small independent restaurants and auto repair shops. Brokers interviewed did not consider this area to have significant retail and therefore did not think that the Downtown area would compete at all with Rocklin Crossings nor be impacted by Rocklin Crossings. On Pacific Street near Farron Street is a shopping center with a Big K-Mart as an anchor. The other anchor, an Albertson's grocery store, closed recently and is vacant. Brokers believe that a national grocery store is unlikely to retenant the Albertson's space. More likely tenants would be a local grocery, specialty grocery, or automotive use such as a motorcycle dealership.

This third commercial area was considered a "no-man's land" by one broker who stated that it is not an ideal area for retail. Another broker believes that this area is transitioning from retail to auto services and light industrial uses. There is one new retail building along Pacific Street that is currently vacant. The broker leasing that property stated that the likely tenants would be quasi-retailers such as hair salons, automotive services, or restaurants. The broker expects to be able to lease all the space within 6 months.

Re-Tenanting Potential

The real estate brokers collectively believe that if any existing retail operations close due to the introduction of the Center, then it would be possible to re-tenant the space. The current environment of slowing retail growth, however, indicates that it may take longer to retenant space than it has in the past. The most recent experience in re-tenanting large spaces comes from a Wal-Mart store that formerly anchored the Five Star Plaza in the City of Rocklin. The Wal-Mart closed when it relocated to a more prominent location in the City of Roseville. It took less than a year to retenant the space. The space was divided into three parts and furniture stores moved in. In general, it is easier to retenant smaller spaces since there are many more types of business that can fit into a small space and fewer stores that truly need and can afford a large space. The one caution is that small stores often depend on anchors for customer traffic. If a shopping center has lost an anchor, it may be more difficult to retenant the small spaces until a new anchor moves in. Overall, the existing market area has a low vacancy rate,

which is an indication of the market area's stable performance and ability to re-tenant vacancies as they occur.

URBAN DECAY CONCLUSION

While there may be alternative definitions of what constitutes urban decay, CBRE Consulting relied on the definition presented earlier in this section, which focused on determining whether or not prevalent and substantial physical deterioration in the primary market area would likely result from the development of Rocklin Crossings. CBRE Consulting's conclusion is based on consideration of current primary market area conditions, findings regarding diverted sales, and re-tenanting potential, as summarized below.

- Current Market Conditions—In general, the primary market area's retail market is healthy with low vacancy (less than or equal to 5 percent) and evidence of retenanting capability. The new Stanford Ranch area is especially unlikely to be negatively impacted by Rocklin Crossings. The older Interstate 80 corridor is more vulnerable to negative sales impacts. Brokers believe that grocery stores in this area would be negatively impacted by the potential Wal-Mart supercenter, but none of the brokers expected that impacts would lead to store closures. In between these two retail areas lies the Downtown area. Because the stores in the Downtown area are smaller independent stores, brokers did not think that they would directly compete with the types of stores that will go into Rocklin Crossings. This area does currently have large vacancies such as the empty Albertson's store, but brokers indicated that vacant spaces would eventually be retenanted, although not necessarily with traditional retail stores.

- Diverted Sales—The opening of the Rocklin Crossings may result in some existing primary market area store closures due to diverted sales. In certain categories, such as home furnishings and appliances, it could take twenty or more years to generate additional primary market area sales from new population growth to offset the diverted sales in those specific categories. However, it is quite likely that the duration of this diverted sales impact would be reduced if vacated stores are re-tenanted by other types of retail, restaurant, and/or service establishments (e.g. a jewelry store, gift shop, restaurant, auto repair or supplies store, etc.), which is a common occurrence in most shopping centers. The Downtown area seems especially likely to transition from retail to more services-oriented corridor.

- Re-tenanting Potential—Except for the newly vacant Albertson's store, the existing primary market area shopping centers have low vacancy rates, which is an indication of the primary market area's stable performance and ability to re-tenant smaller vacancies as they may occur. Therefore, vacated retail spaces have the potential to be successfully re-tenanted. Such re-tenanting would benefit the market and expand local and regional shopping opportunities.

In conclusion, while it is expected that the Rocklin Crossings project will result in some diverted sales and that some closures of primary market area stores may occur, these events are not expected to lead to physical deterioration so prevalent and substantial that it impairs the proper utilization of affected real estate or the health, safety, and welfare of the surrounding community. Therefore, CBRE Consulting concludes that although development of the Rocklin Crossings center may contribute to further retail vacancies in the primary market area, those vacancies are unlikely to result in urban decay.

ASSUMPTIONS AND GENERAL LIMITING CONDITIONS

Please note that the fieldwork for this analysis was completed in August 2006. Accordingly, CBRE Consulting assumes no responsibility for market events pertinent to the City of Rocklin or the Rocklin Crossings Shopping Center site occurring after that date.

CBRE Consulting has made extensive efforts to confirm the accuracy and timeliness of the information contained in this study. Such information was compiled from a variety of sources, including interviews with government officials, review of City and County documents, and other third parties deemed to be reliable. Although CBRE Consulting believes all information in this study is correct, it does not warrant the accuracy of such information and assumes no responsibility for inaccuracies in the information by third parties. We have no responsibility to update this report for events and circumstances occurring after the date of this report. Further, no guarantee is made as to the possible effect on development of present or future federal, state or local legislation, including any regarding environmental or ecological matters.

The accompanying projections and analyses are based on estimates and assumptions developed in connection with the study. In turn, these assumptions, and their relation to the projections, were developed using currently available economic data and other relevant information. It is the nature of forecasting, however, that some assumptions may not materialize, and unanticipated events and circumstances may occur. Therefore, actual results achieved during the projection period will likely vary from the projections, and some of the variations may be material to the conclusions of the analysis.

Contractual obligations do not include access to or ownership transfer of any electronic data processing files, programs or models completed directly for or as by-products of this research effort, unless explicitly so agreed as part of the contract.

This report may not be used for any purpose other than that for which it is prepared. Neither all nor any part of the contents of this study shall be disseminated to the public through publication advertising media, public relations, news media, sales media, or any other public means of communication without prior written consent and approval of CBRE Consulting.

APPENDIX: EXHIBITS

DRAFT EXHIBIT 1
DEVELOPMENT PROGRAM SUMMARY (1)
ROCKLIN CROSSINGS

Retail Space	Estimated Square Feet
Anchor Tenants	
Supercenter (2)	231,353
Home Improvement (3)	141,038
Other Possible Tenants (4)	
Apparel	30,000
Electronics	30,000
Home Furnishings	25,000
Unknown Retail (5)	64,509
Pad Sites (4)	
Restaurants	15,000
Two Banks (6)	6,600
Total Development	**543,500**

Notes:
(1) Based on information provided by Donahue Schriber.
(2) Wal-Mart is under consideration for this space. Includes garden center at 25,353 square feet.
(3) Home Depot is under consideration for this space. Includes garden center at 34,760.
(4) Specific retail tenants have not been identified for the entire project; however, prospective types of tenants are identified for the majority of space based upon the applicant's marketing goals and efforts for the project.
(5) Unknown retail is assumed to include stores in the California Board of Equalization category of "other retail stores" which includes packaged liquor stores, gifts, art goods and novelties, sporting goods, florists, photographic equipment and supplies, musical instruments, stationary and books, jewelry, office and school supplies, second-hand merchandise, farm and garden supply stores, mobile homes/trailers and campers, boat and motorcycle dealers, and miscellaneous other retail stores.
(6) Average square feet for banks taken from Dollars & Cents of Shopping Centers: 2004.

Sources: Donahue Schriber; Dollars & Cents of Shopping Centers: 2004 by ULI; and CBRE Consulting.
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DRAFT EXHIBIT 2
ESTIMATE OF ROCKLIN CROSSINGS SHOPPING CENTER SALES
2009

Retail Store or Category (1)	Estimated Square Feet	Average Sales Per Sq. Ft. 2003 (2)	Average Sales Per Sq. Ft. 2009 (3)	Estimated Store Sales 2009
RETAILER IDENTIFIED				
Supercenter	231,353	$396 (4)	$474	$109,677,482
Home Improvement	141,038	$371 (5)	$444	$62,665,924
RETAILER NOT IDENTIFIED				
Apparel	30,000	$212 (6)	$254	$7,616,905
Electronics	30,000	$426 (7)	$510	$15,305,667
Home Furnishings	25,000	$230 (8)	$275	$6,886,352
Restaurants	15,000	$285 (9)	$341	$5,119,853
Unknown Retail	64,509	$300	$359	$23,177,306
Bank	6,600	N/A	N/A	N/A
TOTAL	**543,500**		**$424**	**$230,449,488**

Notes:
(1) Donahue Schriber provided information on the type and square feet of anticipated retailers.
(2) CBRE Consulting relied on Retail MAXIM's July 2004 report of 2003 retail sales per square foot estimates, which also includes averages for different categories of retailers. For all unidentified retail, CBRE Consulting assumed the generally accepted industry standard average sales of $300 per square foot in 2003 dollars.
(3) Adjusted for inflation based on the consumer price index for all urban consumers in California as defined by the U.S. Department of Labor Bureau of Labor Statistics. Inflation for the 2003-04 period is 2.6 percent; inflation for the 2004-05 period is 3.7 percent. Assumed an annual rate of 3.0 percent between 2005 and 2009.
(4) Since Wal-Mart is under consideration for this space, the average sales per square foot is actual for Wal-Mart. Sales per square foot estimated from Wal-Mart 10-K report for fiscal year 2005 and adjusted for inflation based on above assumptions.
(5) Since Home Depot is under consideration for this space, the average sales per square foot is actual for Home Depot, per Retail MAXIM.
(6) Average sales per square foot of the family/women's apparel category, per Retail MAXIM.
(7) Average sales per square foot of the electronics category, per Retail MAXIM.
(8) Average sales per square foot of Bed Bath and Beyond, Cost-Plus, Home Goods, Kirklands, Linens 'N Things, Pier One, and Sears Great Outdoors, per Retail MAXIM.
(9) Average sales per square foot of the casual dining and family dining categories per Retail MAXIM.

Sources: Donahue Schriber; Retail MAXIM's Perspectives on Retail Real Estate and Finance, July 2004; State of California's Division of Labor Statistics and Research; and CBRE Consulting.
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DRAFT EXHIBIT 3
ESTIMATED DISTRIBUTION OF WAL-MART STORE SALES BY BOARD OF EQUALIZATION (BOE) CATEGORY
2006

	All Wal-Mart Stores (1)	Allocation of Wal-Mart Sales into State Board of Equalization Categories (2)				
Type of Goods	Percent of Sales	Apparel	General Merchandise	Food Stores	Home Furnishings and Appliances	Other Retail
Grocery, candy and tobacco	30.0%	-	-	30.0%	-	-
Hard goods	19.0%	-	4.8%	-	4.7%	9.5%
Soft goods and domestics	15.0%	5.0%	5.0%	-	5.0%	-
Electronics	10.0%	-	3.3%	-	3.3%	3.3%
Pharmaceuticals	8.0%	-	8.0%	-	-	-
Health and beauty aids	7.0%	-	7.0%	-	-	-
Sporting goods and toys	5.0%	-	-	-	-	5.0%
Stationery and books	3.0%	-	-	-	-	3.0%
Photo processing	1.0%	-	-	-	-	1.0%
Jewelry	1.0%	-	-	-	-	1.0%
Shoes	1.0%	1.0%	-	-	-	-
Total	**100.0%**	**6.0%**	**28.1%**	**30.0%**	**13.0%**	**22.8%**

Notes:
(1) United States Securities and Exchange Commission, Wal-Mart Stores, Inc. Fiscal Year Ended January 31, 2006, Form 10-K.
(2) Sales categories reported by State of California BOE. CBRE Consulting matched the Wal-Mart sales categories with the BOE categories. Only those BOE sales categories relevant to this analysis are presented here. If the type of good was believed to span more than one BOE category, CBRE Consulting apportioned the percentage of sales based upon professional judgement and examination of merchandising at representative Wal-Mart stores. Wal-Mart presents the percentage breakdown of sales for its Discount Stores and Supercenter Stores combined in its 10-K.

Sources: United States Securities and Exchange Commission, Wal-Mart Stores, Inc. Fiscal Year 2005 Form 10-K; California Board of Equalization; and CBRE Consulting.
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DRAFT EXHIBIT 4
ESTIMATED SALES BY RETAIL CATEGORY
ROCKLIN CROSSINGS
2009 DOLLARS

Type of Retail	Rocklin Crossings (1) Total Square Feet	Rocklin Crossings (1) 2009 Estimated Sales	Sales Category: Apparel	General Merchandise	Food Stores	Eating and Drinking Places	Home Furnishings and Appliances	Building Materials	Other Retail Stores
Supercenter	231,353	$109,677,482	$6,580,649	$30,855,932	$32,903,245	$0	$14,294,632	$0	$25,043,025
As % of estimated store sales			6.0%	28.1%	30.0%	0.0%	13.0%	0.0%	22.8%
Home Improvement (2)	141,038	$62,665,924	$0	$0	$0	$0	$18,799,777	$37,599,554	$6,266,592
As % of estimated store sales			0.0%	0.0%	0.0%	0.0%	30.0%	60.0%	10.0%
Apparel	30,000	$7,616,905	$7,616,905	$0	$0	$0	$0	$0	$0
As % of estimated store sales			100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Electronics	30,000	$15,305,667	$0	$0	$0	$0	$15,305,667	$0	$0
As % of estimated store sales			0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%
Home Furnishings	25,000	$6,886,352	$0	$0	$0	$0	$6,886,352	$0	$0
As % of estimated store sales			0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%
Restaurant	15,000	$5,119,853	$0	$0	$0	$5,119,853	$0	$0	$0
As % of estimated store sales			0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
Unknown Retail	64,509	$23,177,306	$0	$0	$0	$0	$0	$0	$23,177,306
As % of estimated store sales			0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Total	536,900	$230,449,488	$14,197,554	$30,855,932	$32,903,245	$5,119,853	$55,286,428	$37,599,554	$54,486,923

Notes:
(1) Refer to Exhibit 2.
(2) The home improvement sales were divided into appropriate retail categories to determine the potential impact on those categories. Based on breakdown of sales at Lowe's and Home Depot stores provided for in the relevant Form 10-Ks on file with the United States Securities and Exchange Commission.

Sources: Donahue Schriber; Retail Maxim's Perspectives on Retail Real Estate and Finance, July 2004; Lowes, 2004 Form 10-K; Home Depot, 2004 Form 10-K; and Sedway Group.
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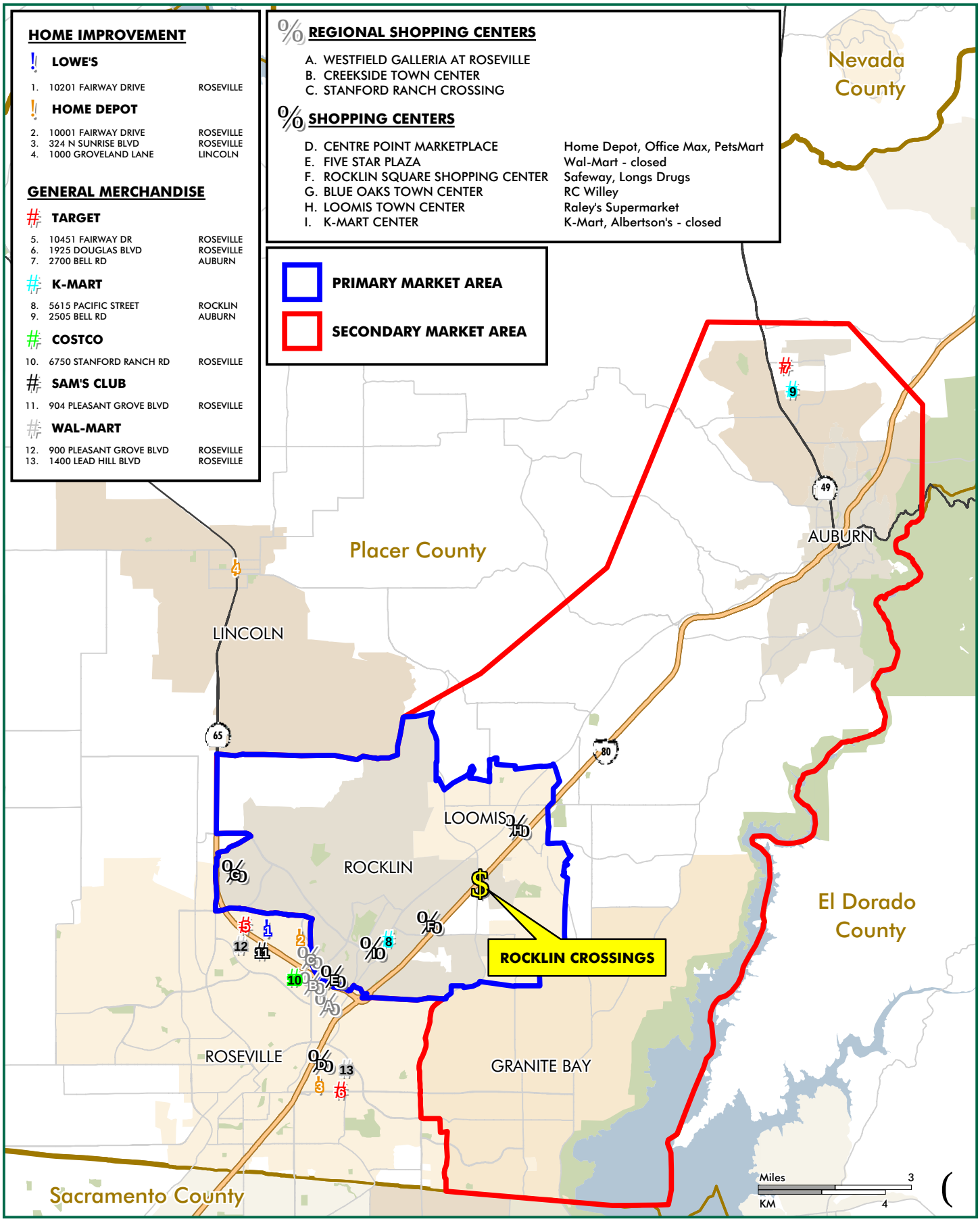
Exhibit 5: Primary and Secondary Market Areas, Competitive Centers and Retailers



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DRAFT EXHIBIT 6
POPULATION ASSUMPTIONS
PRIMARY AND SECONDARY MARKET AREAS (1)
2000 - 2015 (2) (3)

	Estimate	Calculated				Estimate	Calculated				Estimate	Estimate	Average Annual Growth Rate		
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2015	'00-'05	'05-'10	10-'15
City of Rocklin	36,330	39,037	41,945	45,070	48,427	52,035	52,948	53,878	54,823	55,786	56,765	61,338	7.4%	1.8%	1.6%
Town of Loomis	6,260	6,231	6,202	6,173	6,144	6,115	6,301	6,492	6,689	6,892	7,101	8,129	-0.5%	3.0%	2.7%
Primary Market Area	42,590	45,267	48,146	51,242	54,571	58,150	59,249	60,370	61,512	62,678	63,866	69,467	6.4%	1.9%	1.7%
City of Auburn	12,462	12,506	12,550	12,594	12,638	12,683	12,912	13,146	13,384	13,626	13,872	15,027	0.4%	1.8%	1.6%
Unincorporated Area (3)	47,113	47,007	46,901	46,796	46,691	46,586	46,699	46,813	46,927	47,041	47,156	47,733	-0.2%	0.2%	0.2%
Secondary Market Area	59,575	59,513	59,451	59,390	59,329	59,269	59,612	59,959	60,311	60,667	61,028	62,760	-0.1%	0.6%	0.6%
Total Primary and Secondary Market Areas	102,165	104,780	107,598	110,632	113,900	117,419	118,861	120,329	121,823	123,345	124,894	132,227	2.8%	1.2%	1.1%

Notes:
(1) The primary market area is defined as the city of Rocklin and the town of Loomis. See Exhibit 5 for map of the secondary market area.
(2) Population estimates for the primary market area and for the City of Auburn are provided by SACOG. SACOG estimates years 2000, 2005, 2010, and 2015. Intermediate years (2001 to 2004, 2006 to 2009) estimated by CBRE Consulting.
(3) Population estimtes for the unincorporated areas of secondary market estimated using Claritas. Claritas reports population for 2000, 2005, and 2010. Intermediate years (2001 to 2004, 2006 to 2009) estimated by CBRE Consulting. Future years (2011 - 2015) estimated using the growth rate for 2005-2010.

Sources: Sacramento Area Council of Governments (SACOG); Claritas; and CBRE Consulting.
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DRAFT EXHIBIT 7
DERIVATION OF POPULATION IN UNINCORPORATED AREAS OF PLACER COUNTY
2000 - 2010 (1)

		Placer County Major Incorporated Areas (2)					
Year	Placer County [A]	Auburn [B]	Loomis [C]	Rocklin [D]	Roseville [E]	Total [F=B+C+D+E]	Unincorporated [G=A-F]
2000	248,399	12,462	6,260	36,330	79,921	134,973	113,426
2001	258,223	12,506	6,231	39,037	84,265	142,038	116,184
2002	268,435	12,550	6,202	41,945	88,846	149,542	118,893
2003	279,051	12,594	6,173	45,070	93,675	157,512	121,540
2004	290,087	12,638	6,144	48,427	98,767	165,977	124,111
2005	301,560	12,683	6,115	52,035	104,136	174,969	126,591
2006	307,116	12,912	6,301	52,948	104,710	176,871	130,244
2007	312,774	13,146	6,492	53,878	105,287	178,803	133,971
2008	318,536	13,384	6,689	54,823	105,868	180,764	137,772
2009	324,404	13,626	6,892	55,786	106,451	182,754	141,650
2010	330,381	13,872	7,101	56,765	107,038	184,776	145,605
Avg. Annual Growth Rate 2000 to 2005	3.95%	0.35%	-0.47%	7.45%	5.44%	5.33%	2.22%
Avg. Annual Growth Rate 2005 to 2010	1.84%	1.81%	3.03%	1.76%	0.55%	1.10%	2.84%

Notes:
(1) Relied on Sacramento Area Council of Governments (SACOG) data for relevant geographic areas to deduce unincorporated population. SACOG provides estimates for 2000, 2005, and 2010. Intermediate years were estimated by CBRE Consulting using the calculated average annual growth rates.
(2) Represents the major cities reported in the California State Board of Equalization "Taxable Sales in California, Sales & Use Tax, 2004, Forty-fourth Annual Report" publication. The one exception is the Town of Loomis which is not one of the major cities reported, but is included because it is part of the primary market area.

Sources: Sacramento Area Council of Governments (SACOG) http://www.sacog.org/demographics/index.cfm; and CBRE Consulting.

DRAFT EXHIBIT 8
POPULATION OF PRIMARY AND SECONDARY MARKET AREA
PLACER COUNTY
2000 - 2010

Year	Auburn [A]	Loomis [B]	Rocklin [C]	Unincorporated (1) [D]	Total PMA & SMA [E=A+B+C+D]
2000	12,462	6,260	36,330	47,113	102,165
2001	12,506	6,231	39,037	47,007	104,780
2002	12,550	6,202	41,945	46,901	107,598
2003	12,594	6,173	45,070	46,796	110,632
2004	12,638	6,144	48,427	46,691	113,900
2005	12,683	6,115	52,035	46,586	117,419
2006	12,912	6,301	52,948	46,699	118,861
2007	13,146	6,492	53,878	46,813	120,329
2008	13,384	6,689	54,823	46,927	121,823
2009	13,626	6,892	55,786	47,041	123,345
2010	13,872	7,101	56,765	47,156	124,894
Avg. Annual Growth Rate 2000 to 2005	0.35%	-0.47%	7.45%	-0.22%	2.76%
Avg. Annual Growth Rate 2005 to 2010	1.81%	3.03%	1.76%	0.24%	1.61%

Notes:
(1) The unincorporated area of the secondary market area was estimated using Claritas data. Intermediate years were estimated by CBRE Consulting using the calculated average annual growth rate between periods. The Claritas data was checked for accuracy by comparing 2000 population numbers published by SCAG to 2000 population numbers by Claritas for relevant census tracts in Placer County. The difference was only 3 percent and therefore the Claritas data was considered accurate.

Sources: Claritas; Sacramento Area Council of Governments; and CBRE Consulting.
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December 29, 2006

DRAFT EXHIBIT 9
DERIVATION OF SALES IN UNINCORPORATED AREAS OF PLACER COUNTY
2004

Type of Retailer	Placer County [A]	Placer County Major Incorporated Areas (1) Auburn [B]	Loomis [C]	Rocklin [D]	Roseville [E]	Total [F=B+C+D+E]	Unincorporated [G=A-F]
Apparel stores	$182,781,000	$3,168,000	$2,839,006 (3)	$13,852,042 (2)	$158,633,000	$178,492,048	$4,288,952
General merchandise stores	$692,463,000	$25,396,000	$2,839,006 (3)	$23,294,000	$561,058,000	$612,587,006	$79,875,994
Food stores	$256,228,000	$13,861,000	$6,600,000 (3)	$41,139,000	$95,389,000	$156,989,000	$99,239,000
Eating and drinking places	$464,769,000	$24,055,000	$5,786,000	$43,576,000	$235,917,000	$309,334,000	$155,435,000
Home furnishings/appliance	$205,139,000	$8,431,000	$2,839,006 (3)	$22,212,000	$136,822,000	$170,304,006	$34,834,994
Bldg. matrl./farm implements	$492,760,000	$7,542,000	$7,203,000	$42,218,000	$288,940,000	$345,903,000	$146,857,000
Auto dealers and auto supply	$1,519,350,000	$57,491,000	$2,839,006 (3)	$28,173,000	$1,201,552,000	$1,290,055,006	$229,294,994
Service stations	$368,851,000	$57,201,921 (2)	$2,839,006 (3)	$54,603,000	$130,953,000	$245,596,927	$123,254,073
Other retail stores	$841,812,000	$39,681,079 (2)	$6,799,972	$111,687,958 (2)	$446,106,000	$604,275,008	$237,536,992
Total	**$5,024,153,000**	**$236,827,000**	**$40,584,000**	**$380,755,000**	**$3,255,370,000**	**$3,913,536,000**	**$1,110,617,000**

Notes:

(1) Represents the major cities reported in the California State Board of Equalization "Taxable Sales in California (Sales & Use Tax), During 2004, Forty-fourth Annual Report" publication. The one exception is the Town of Loomis which is included because it is part of the primary market area.

(2) The California State Board of Equalization (BOE) omitted these sales because their publication would result in the disclosure of confidential information. Instead, the BOE includes them in an "other retail stores" BOE category. To avoid overstating the "other retail stores" category's taxable sales and understating those categories where information was not disclosed by BOE, CBRE Consulting made adjustments to the sales data. CBRE Consulting calculated the city's "other retail sales" as a percent of its total taxable sales. Then, CBRE Consulting calculated the county's "other retail" as a percent of its total taxable sales to serve as a benchmark. If the city's percentage exceeded the county benchmark, the difference was used as an estimate for the city's overstatement of "other retail". CBRE Consulting took the estimated overstatement of sales in "other retail" and distributed them to the categories with disclosure issues. An exception was made for the apparel category in Rocklin. Using the above method overstated apparel such that the total apparel sales in the three cities were greater than the county's apparel sales. Therefore, the share of apparel sales in the county (3.6 percent) was used to estimate Rocklin's apparel sales.

(3) For Loomis, the BOE does not publish sales data in the following categories: apparel, general merchandise, food stores, home furnishings and appliances, auto dealers, and service stations. It omits these sales because their publication would result in the disclosure of confidential information. Instead, the BOE included them in the "other retail stores" category. For the retail leakage analysis, it is necessary to estimate sales in each category. To adjust for the BOE omission, the local businesses in those categories were checked using Claritas Business Points. The only major or national brand store in those categories was the Raley's grocery store. Sales for that store were estimated using Retail Maxim's sales per square foot estimate for supermarkets of $348 in 2003. That estimate was adjusted for inflation and applied to the size of the store, which is 61,000 square feet. Since only 30 percent of grocery store sales are taxable, the total sale number was discounted to reflect that. This resulted in a taxable sales estimate for the food store category in Loomis of $6.6 million. Sales for food stores was then taken out of the other retail category. Other retail sales for Loomis was calculated such that it would be the same share of total sales that is true in Placer County. That share is 16.8 percent.The rest of the sales taken out of the other retail category was evenly divided among the other five categories.

Sources: California State Board of Equalization; and CBRE Consulting.
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December 29, 2006

DRAFT EXHIBIT 10
SALES IN UNINCORPORATED AREAS IN THE SECONDARY MARKET AREA
PLACER COUNTY
2004

Type of Retailer	Placer County Unincorporated Areas			Secondary Market Area Unincorporated Population (3)	Secondary Market Area Unincorporated Sales
	Sales (1)	Population (2)	Sales Per Capita		
	[A]	[B]	[C=A/B]	[D]	[E=C*D]
Apparel stores	$4,288,952	124,111	$35	46,691	$1,613,519
General merchandise stores	$79,875,994	124,111	$644	46,691	$30,049,637
Food stores	$99,239,000	124,111	$800	46,691	$37,334,069
Eating and drinking places	$155,435,000	124,111	$1,252	46,691	$58,475,207
Home furnishings/appliance	$34,834,994	124,111	$281	46,691	$13,105,050
Bldg. matrl./farm implements	$146,857,000	124,111	$1,183	46,691	$55,248,133
Auto dealers and auto supply	$229,294,994	124,111	$1,848	46,691	$86,261,603
Service stations	$123,254,073	124,111	$993	46,691	$46,368,626
Other retail stores	$237,536,992	124,111	$1,914	46,691	$89,362,272
Total	**$1,110,617,000**		**$8,949**		**$417,818,117**

Notes:
(1) See Exhibit 9, "Derivation of Sales in Unincorporated Areas of Placer," Column G.
(2) See Exhibit 7, "Derivation of Population in Unincorporated Areas of Placer County," Column G.
(3) See Exhibit 8, "Population of Secondary Market Area, Placer County Portion," Column D.

Source: CBRE Consulting.
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DRAFT EXHIBIT 11
ROCKLIN CROSSINGS
RETAIL SALES LEAKAGE ANALYSIS (1)
PRIMARY MARKET AREA (PMA)
2004

	PER CAPITA (2)			TOTAL				
Type of Retailer	SACOG's Six County Area Avg. Sales (3)	PMA Spending (4)	PMA Sales	PMA Spending	PMA Sales		Attraction/ (Leakage)	Percent Attraction/ (Leakage)
Apparel Stores	$405	$495	$305	$27,021,882	$16,691,048	(5)	($10,330,834)	-38.2%
General Merchandise Stores (6)	$1,743	$2,151	$499	$117,506,954	$27,246,531	(5)	($90,260,422)	-76.8%
Food Stores (7)	$2,363	$2,608	$2,912	$142,505,581	$159,130,000	(5)	$16,624,419	10.4%
Eating and Drinking Places	$1,138	$1,431	$903	$78,199,780	$49,362,000		($28,837,780)	-36.9%
Home Furnishings and Appliances	$481	$588	$458	$32,109,499	$25,051,006	(5)	($7,058,494)	-22.0%
Building Materials (8)	$1,368	$1,767	$905	$96,520,892	$49,421,000		($47,099,892)	-48.8%
Auto Dealers and Auto Supplies	$2,428	$3,075	$568	$168,005,174	$31,012,006	(5)	($136,993,169)	-81.5%
Service Stations	$893	$1,093	$1,051	$59,698,517	$57,442,006	(5)	($2,256,511)	-3.8%
Other Retail Stores (9)	$1,850	$2,148	$2,169	$117,369,613	$118,487,929	(5)	$1,118,316	0.9%
Totals	$12,671	$15,354	$9,770	$838,937,891	$533,843,526		($305,094,365)	-36.4%

Notes:
(1) All figures are expressed in constant 2004 dollars.
(2) Population figures per SACOG.
(3) Control area defined as the area covered by SACOG: the counties of El Dorado, Placer, Sacramento, Sutter, Yolo, and Yuba.
(4) Analysis assumes 2004 average household income of $89,966 in the primary market area, per Claritas, Inc.
(5) Due to disclosure issues, per BOE, some sales categories in Rocklin and Loomis are combined with the "other retail stores" category. Refer to Exhibit 6 for how sales in non-disclosed categories were estimated.
(6)Includes general merchandise and drug stores. Drug stores are assumed to comprise 9.9 percent of total general merchandise sales based on CBRE Consulting's analysis of control area averages. Taxable transactions for drug stores have been adjusted by 0.70, to account for non-taxable sales. Therefore, 70 percent of all drug store sales are taxable.
(7) Taxable transactions for grocery stores have been adjusted by 0.30, to account for non-taxable sales. Therefore, 30 percent of all food store sales are taxable.
(8) Building materials group includes hardware stores, plumbing and electrical supplies, paint and wallpaper products, glass stores, farm implement dealers, and lumber.
(9) Other retail stores includes packaged liquor stores, gifts, art goods and novelties, sporting goods, florists, photographic equipment and supplies, musical instruments, stationary and books, jewelry, office and school supplies, second-hand merchandise, farm and garden supply stores, mobile homes/trailers and campers, boat and motorcycle dealers, and miscellaneous other retail stores.

Sources: State Board of Equalization; SACOG; Claritas, Inc.; and CBRE Consulting.
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DRAFT EXHIBIT 12
ROCKLIN CROSSINGS
PROJECTED RETAIL SALES LEAKAGE
PRIMARY MARKET AREA (PMA)
2009 PROJECTION

	City of Rocklin and Town of Loomis Annual Per Capita				2009 Estimated Total (3)			
	2004 (1)		2009 Estimate (2)					
Type of Retailer	Spending	Sales	Spending	Sales	PMA Spending	PMA Sales	Attraction / (Leakage)	Percent Attraction/ (Leakage)
Apparel Stores	$495	$305	$577	$356	$36,174,457	$22,344,469	($13,829,988)	-38.2%
General Merchandise	$2,151	$499	$2,510	$582	$157,307,709	$36,475,198	($120,832,511)	-76.8%
Food Stores (4)	$2,608	$2,912	$3,044	$3,399	$190,773,615	$213,028,889	$22,255,273	10.4%
Eating and Drinking Places	$1,431	$903	$1,670	$1,054	$104,686,811	$66,081,393	($38,605,418)	-36.9%
Home Furnishings and Appliances	$588	$458	$686	$535	$42,985,301	$33,536,026	($9,449,275)	-22.0%
Building Materials (5)	$1,767	$905	$2,062	$1,056	$129,213,462	$66,160,376	($63,053,086)	-48.8%
Auto Dealers and Auto Supplies	$3,075	$568	$3,588	$662	$224,910,171	$41,516,076	($183,394,096)	-81.5%
Service Stations	$1,093	$1,051	$1,275	$1,227	$79,918,989	$76,898,175	($3,020,814)	-3.8%
Other Retail Stores (6)	$2,148	$2,169	$2,507	$2,531	$157,123,850	$158,620,951	$1,497,101	0.9%
Totals	$15,354	$9,770	$17,918	$11,402	$1,123,094,366	$714,661,553	($408,432,813)	-36.4%

Notes:
(1) Refer to 2004 leakage Exhibit 11.
(2) Adjusted for inflation based on the consumer price index for all urban consumers in California, as defined by the California Department of Industrial Relations, Division of Labor Statistics and Research. Inflation for the mid-year period 2004-2005 (3.68%). Inflation for the periods 2005-2009 estimated to be 3.00% per year.
(3) Estimated 2009 City of Rocklin and Town of Loomis population of 62,679, based on SCAG 2005-10 growth rate projections, applied to 2005 SACOG estimate of 58,150.
(4) Includes estimated taxable and non-taxable sales.
(5) Building materials group includes hardware stores, plumbing and electrical supplies, paint and wallpaper products, glass stores, farm implement dealers, and lumber.
(6) Other retail stores includes packaged liquor stores, gifts, art goods and novelties, sporting goods, florists, photographic equipment and supplies, musical instruments, stationary and books, jewelry, office and school supplies, second-hand merchandise, farm and garden supply stores, mobile homes/trailers and campers, boat and motorcycle dealers, and miscellaneous other retail stores.

Sources: State Board of Equalization; SACOG; Claritas, Inc.; and CBRE Consulting.
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DRAFT EXHIBIT 13
ROCKLIN CROSSINGS
RETAIL SALES LEAKAGE ANALYSIS (1)
SECONDARY MARKET AREA
2004

	PER CAPITA (2)			TOTAL			
Type of Retailer	SACOG's Six County Area Avg. Sales (3)	Secondary Market Area Spending (4)	Secondary Market Area Sales	Secondary Market Area Spending	Secondary Market Area Sales	Attraction/ (Leakage)	Percent Attraction/ (Leakage)
Apparel Stores	$405	$505	$27	$29,977,019	$1,613,519	($28,363,500)	-94.6%
General Merchandise Stores (5)	$1,743	$2,199	$528	$130,484,791	$31,330,050	($99,154,741)	-76.0%
Food Stores (6)	$2,363	$2,637	$2,098	$156,479,970	$124,446,898	($32,033,072)	-20.5%
Eating and Drinking Places	$1,138	$1,466	$986	$86,990,906	$58,475,207	($28,515,699)	-32.8%
Home Furnishings and Appliances	$481	$600	$221	$35,619,746	$13,105,050	($22,514,695)	-63.2%
Building Materials (7)	$1,368	$1,814	$931	$107,636,875	$55,248,133	($52,388,742)	-48.7%
Auto Dealers and Auto Supplies	$2,428	$3,152	$1,454	$187,015,419	$86,261,603	($100,753,816)	-53.9%
Service Stations	$893	$1,116	$782	$66,236,907	$46,368,626	($19,868,281)	-30.0%
Other Retail Stores (8)	$1,850	$2,184	$1,506	$129,559,726	$89,362,272	($40,197,453)	-31.0%
Totals	$12,671	$15,675	$8,532	$930,001,357	$506,211,359	($423,789,998)	-45.6%

Notes:
(1) All figures are expressed in constant 2004 dollars.
(2) Population figures per SACOG.
(3) Control area defined as the area covered by SACOG: the counties of El Dorado, Placer, Sacramento, Sutter, Yolo, and Yuba.
(4) Analysis assumes 2004 average household income of $92,914, per Claritas, Inc.
(5) Includes general merchandise and drug stores. Drug stores are assumed to comprise 9.9 percent of total general merchandise sales based on CBRE Consulting's analysis of control area averages. Taxable transactions for drug stores have been adjusted by 0.70, to account for non-taxable sales. Therefore, 70 percent of all drug store sales are taxable.
(6) Taxable transactions for grocery stores have been adjusted by 0.30, to account for non-taxable sales. Therefore, 30 percent of all food store sales are taxable.
(7) Building materials group includes hardware stores, plumbing and electrical supplies, paint and wallpaper products, glass stores, farm implement dealers, and lumber.
(8) Other retail stores includes packaged liquor stores, gifts, art goods and novelties, sporting goods, florists, photographic equipment and supplies, musical instruments, stationary and books, jewelry, office and school supplies, second-hand merchandise, farm and garden supply stores, mobile homes/trailers and campers, boat and motorcycle dealers, and miscellaneous other retail stores.

Sources: State Board of Equalization; SACOG; Claritas, Inc.; and CBRE Consulting.
P:\2005\1005255 Donahue Schriber\Exhibits\[Leakage Model (2005 regression) - SMA.xls]Ex13-BaseYr. [PRD] 29-Dec-06

DRAFT EXHIBIT 14
ROCKLIN CROSSINGS
PROJECTED RETAIL SALES LEAKAGE
SECONDARY MARKET AREA
2009 PROJECTION

Type of Retailer	Secondary Market Area Annual Per Capita				2009 Estimated Total (3)			
	2004 (1)		2009 Estimate (2)					
	Spending	Sales	Spending	Sales	Secondary Market Area Spending	Secondary Market Area Sales	Attraction / (Leakage)	Percent Attraction/ (Leakage)
Apparel Stores	$505	$27	$590	$32	$35,771,323	$1,925,399	($33,845,924)	-94.6%
General Merchandise	$2,199	$528	$2,567	$616	$155,706,397	$37,385,883	($118,320,513)	-76.0%
Food Stores (4)	$2,637	$2,098	$3,078	$2,448	$186,726,224	$148,501,430	($38,224,794)	-20.5%
Eating and Drinking Places	$1,466	$986	$1,711	$1,150	$103,805,512	$69,777,970	($34,027,542)	-32.8%
Home Furnishings and Appliances	$600	$221	$701	$258	$42,504,741	$15,638,146	($26,866,595)	-63.2%
Building Materials (5)	$1,814	$931	$2,117	$1,087	$128,442,172	$65,927,129	($62,515,043)	-48.7%
Auto Dealers and Auto Supplies	$3,152	$1,454	$3,679	$1,697	$223,163,917	$102,935,241	($120,228,676)	-53.9%
Service Stations	$1,116	$782	$1,303	$912	$79,039,941	$55,331,290	($23,708,651)	-30.0%
Other Retail Stores (6)	$2,184	$1,506	$2,548	$1,758	$154,602,524	$106,635,243	($47,967,281)	-31.0%
Totals	$15,675	$8,532	$18,293	$9,957	$1,109,762,750	$604,057,731	($505,705,019)	-45.6%

Notes:

(1) Refer to 2004 leakage Exhibit 1.1 for this city.

(2) Adjusted for inflation based on the consumer price index for all urban consumers in California, as defined by the California Department of Industrial Relations, Division of Labor Statistics and Research. Inflation for the annual period 2004-2005 (3.68%). Inflation for the periods 2005-2009 estimated to be 3.00% per year.

(3) Estimated 2009 secondary market area population of 60,667, based on SCAG 2005-10 growth rate projections, applied to 2005 SACOG estimate of 59,269.

(4) Includes estimated taxable and non-taxable sales.

(5) Building materials group includes hardware stores, plumbing and electrical supplies, paint and wallpaper products, glass stores, farm implement dealers, and lumber.

(6) Other retail stores includes packaged liquor stores, gifts, art goods and novelties, sporting goods, florists, photographic equipment and supplies, musical instruments, stationary and books, jewelry, office and school supplies, second-hand merchandise, farm and garden supply stores, mobile homes/trailers and campers, boat and motorcycle dealers, and miscellaneous other retail stores.

Sources: State Board of Equalization; SACOG; Claritas, Inc.; and CBRE Consulting.
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DRAFT EXHIBIT 15
RETAIL SALES LEAKAGE ANALYSIS (1)
PRIMARY AND SECONDARY MARKET AREAS
2004

	TOTAL			
Type of Retailer	Primary and Secondary Market Areas Spending	Primary and Secondary Market Areas Sales	Attraction/ (Leakage)	Percent Attraction (Leakage)
Apparel Stores	$56,998,900	$18,304,567	($38,694,333)	(67.9%)
General Merchandise Stores	$247,991,744	$58,576,581	($189,415,163)	(76.4%)
Food Stores	$298,985,551	$283,576,898	($15,408,653)	(5.2%)
Eating and Drinking Places	$165,190,686	$107,837,207	($57,353,479)	(34.7%)
Home Furnishings and Appliances	$67,729,245	$38,156,056	($29,573,189)	(43.7%)
Building Materials	$204,157,766	$104,669,133	($99,488,634)	(48.7%)
Auto Dealers and Auto Supplies	$355,020,593	$117,273,609	($237,746,984)	(67.0%)
Service Stations	$125,935,424	$103,810,632	($22,124,792)	(17.6%)
Other Retail Stores	$246,929,339	$207,850,202	($39,079,137)	(15.8%)
Total	**$1,768,939,248**	**$1,040,054,885**	**($728,884,364)**	**(41.2%)**

Notes:
(1) The numbers in this exhibit are calculated by adding Exhibit 11 results to Exhibit 13 results

Source: CBRE Consulting.
P:\2005\1005255 Donahue Schriber\Exhibits\[Leakage Model (2005 regression) - December 29, 2006

DRAFT EXHIBIT 16
PROJECTED RETAIL SALES LEAKAGE (1)
PRIMARY AND SECONDARY MARKET AREAS
2009

	TOTAL			
Type of Retailer	Primary and Secondary Market Areas Spending	Primary and Secondary Market Areas Sales	Attraction/ (Leakage)	Percent Attraction (Leakage)
Apparel Stores	$71,945,780	$24,269,868	($47,675,912)	(66.3%)
General Merchandise Stores	$313,014,106	$73,861,082	($239,153,024)	(76.4%)
Food Stores	$377,499,839	$361,530,319	($15,969,521)	(4.2%)
Eating and Drinking Places	$208,492,323	$135,859,362	($72,632,960)	(34.8%)
Home Furnishings and Appliances	$85,490,042	$49,174,172	($36,315,870)	(42.5%)
Building Materials	$257,655,634	$132,087,506	($125,568,129)	(48.7%)
Auto Dealers and Auto Supplies	$448,074,088	$144,451,317	($303,622,771)	(67.8%)
Service Stations	$158,958,930	$132,229,465	($26,729,465)	(16.8%)
Other Retail Stores	$311,726,374	$265,256,194	($46,470,180)	(14.9%)
Total	**$2,232,857,116**	**$1,318,719,284**	**($914,137,832)**	**(40.9%)**

Notes:
(1) The numbers in this exhibit are calculated by adding Exhibit 12 results to Exhibit 14 results

Source: CBRE Consulting.
P:\2005\1005255 Donahue Schriber\Exhibits\[Leakage Model (2005 regression) - December 29, 2006

DRAFT EXHIBIT 17
ADJUSTED SALES FOR NEWLY OPENED AND RECENTLY CLOSED STORES (1)
ESTIMATED 2009 SALES ADJUSTMENT

Store Assumptions	Average Sales Per Sq. Ft. 2005 (2)	Average Sales Per Sq. Ft. 2009 (3)	Estimated Square Feet (4)	Estimated Net Sales 2009	Adjustment for Location (5)	Adjusted Estimated Net Sales 2009
NEW STORES						
RC Willey (Rocklin)	$245	$276	165,000	$45,498,694	40%	$18,199,478
CLOSED STORES						
Albertson's (Rocklin)	$402	$453	(70,000)	($31,688,965)	N/A	($31,688,965)
Food Source (Rocklin)	$312	$351	(70,000)	($24,563,140)	N/A	($24,563,140)
Subtotal - Closed Stores			(140,000)	(56,252,105)	N/A	(56,252,105)
TOTAL (NET)			**25,000**	**(10,753,411)**		**(38,052,627)**

Notes:
(1) Includes stores larger than 40,000 square feet that have opened or closed since 2004, in Rocklin, Loomis, Auburn and areas of unincorporated Placer County in the secondary market area.
(2) CBRE Consulting relied on Retail Maxim's July, 2004 report of 2003 retail sales per square foot estimates, which also include averages for different categories of retailers. Sales were adjusted for inflation based on the consumer price index. See Exhibit 2 footnote 2 for details.
(3) Assumed an annual rate of 3.0 percent inflation between 2005 and 2009.
(4) Information on the size of closed stores in Rocklin comes from Rob Braulik, Assistant City Manager of the City of Rocklin.
(5) Because the RC Willey store is located on the western side of Rocklin along Highway 65, its primary market area is different from Rocklin Crossings' primary market area. For the purpose of this analysis, the RC Willey store's primary market area is estimated to be a five mile radius around the store. Only 40 percent of the population within this radius lives in the City of Rocklin and the Town of Loomis. Therefore, the net sales for the store is adjusted by 40 percent to account for the share of impact on Rocklin and Loomis.

Sources: Retail Maxim's 2004 publication "Perspectives on Retail Real Estate and Finance"; City of Rocklin; and CBRE Consulting.
P:\2005\1005255 Donahue Schriber\Exhibits\[Leakage Model (2005 regression) - SMA.xls]Ex13-BaseYr. December 29, 2006

DRAFT EXHIBIT 18
ESTIMATED DISTRIBUTION OF NEW/CLOSED STORE SALES BY CATEGORY
ESTIMATED 2009 SALES ADJUSTMENT

		Allocation of New/Closed Store Sales into State Board of Equalization Categories (1)				
Store	Estimated Sales (2)	Apparel	General Merchandise	Food Stores	Home Furnishings and Appliances	Other Retail
RC Willey	$18,199,478	-	-	-	$18,199,478	-
Albertsons	($31,688,965)	-	-	($31,688,965)	-	-
Food Source	($24,563,140)	-	-	($24,563,140)	-	
Total	**($38,052,627)**	**$0**	**$0**	**($56,252,103)**	**$18,199,479**	**$0**

Notes:
(1) Sales categories reported by State of California BOE.
(2) See Exhibit 17.

Sources: California Board of Equalization and CBRE Consulting.
P:\2005\1005255 Donahue Schriber\Exhibits\[Leakage Model (2005 regression) - SMA.xls]Ex13-BaseYr.[PRG] December 29, 2006

DRAFT EXHIBIT 19
ADJUSTED SALES AND ATTRACTION (LEAKAGE) RESULTS
PRIMARY MARKET AREA AND COMBINED PRIMARY AND SECONDARY MARKET AREAS
2009 DOLLARS (IN MILLIONS)

		Primary Market Area (City of Rocklin and Town of Loomis)				Primary and Secondary Market Areas				Secondary Market Area Adjusted Attraction (Leakage)
Type of Retailer	New/Closed Store Sales (1)	Model Result Sales (2)	Model Result Attraction (Leakage) (2)	Adjusted Sales	Adjusted Attraction (Leakage)	Model Result Sales (3)	Model Result Attraction (Leakage) (3)	Adjusted Sales	Adjusted Attraction (Leakage)	
	[A]	[B]	[C]	[D=A+B]	[E=A+C]	[F]	[G]	[H=A+F]	[I=A+G]	[J=I-E]
Apparel Stores	-	$22.3	($13.8)	$22.3	($13.8)	$24.3	($47.7)	$24.3	($47.7)	($33.8)
General Merchandise Stores	-	$36.5	($120.8)	$36.5	($120.8)	$73.9	($239.2)	$73.9	($239.2)	($118.3)
Food Stores	($56.3)	$213.0	$22.3	$156.8	($34.0)	$361.5	($16.0)	$305.3	($72.2)	($38.2)
Eating and Drinking Places	-	$66.1	($38.6)	$66.1	($38.6)	$135.9	($72.6)	$135.9	($72.6)	($34.0)
Home Furnishings and Appliances	$18.2	$33.5	($9.4)	$51.7	$8.8	$49.2	($36.3)	$67.4	($18.1)	($26.9)
Building Materials	-	$66.2	($63.1)	$66.2	($63.1)	$132.1	($125.6)	$132.1	($125.6)	($62.5)
Auto Dealers and Auto Supplies	-	$41.5	($183.4)	$41.5	($183.4)	$144.5	($303.6)	$144.5	($303.6)	($120.2)
Service Stations	-	$76.9	($3.0)	$76.9	($3.0)	$132.2	($26.7)	$132.2	($26.7)	($23.7)
Other Retail Stores	-	$158.6	$1.5	$158.6	$1.5	$265.3	($46.5)	$265.3	($46.5)	($48.0)
Total	**($38.1)**	**$714.7**	**($408.4)**	**$676.6**	**($446.5)**	**$1,318.7**	**($914.1)**	**$1,280.7**	**($952.2)**	**($505.7)**

Notes:
(1) See Exhibit 18, "Estimated Distribution of New/Closed Store Sales by Category."
(2) See Exhibit 12, "Projected Retail Sales Leakage (Primary Market Area)."
(3) See Exhibit 16, "Projected Retail Sales Leakage (Primary and Secondary Market Areas)."

Source: CBRE Consulting.
P:\2005\1005255 Donahue Schriber\Exhibits\[Leakage Model (2005 regression) - SMA.xls]Ex13-BaseYr. [PRD]

DRAFT EXHIBIT 20
MAXIMUM CENTER SALES IMPACTS ON PRIMARY MARKET AREA RETAIL SALES
2009 DOLLARS (IN MILLIONS)

Type of Retailer	New Rocklin Crossings Sales (1)	Source of Sales (2)		Retail Sales (3)			Absorbed Leakage (4)		Maximum Sales Diverted From Primary Market Area Retailers (5)	Minimum New Sales to Primary Market Area (6)
		Primary and Secondary Market Areas	Tertiary Demand	Primary Market Area	Primary and Secondary Market Areas	Primary as as % of PMA & SMA	Primary Market Area Leakage	Secondary Market Area Leakage		
	[A]	[B=A*0.95]	[C=A*0.05]	[D]	[E]	[F=D/E]	[G]	[H]	[I=BxF+G+H]	[J=A+I]
Apparel Stores	$14.2	$13.5	$0.7	$22.3	$24.3	92%	($6.9)	($16.9)	$0.0	$14.2
General Merchandise Stores	$30.9	$29.4	$1.5	$36.5	$73.9	49%	($60.4)	($59.2)	$0.0	$30.9
Food Stores (6)	$32.9	$31.3	$1.6	$156.8	$305.3	51%	($17.0)	($19.1)	$0.0	$32.9
Eating and Drinking Places	$5.1	$4.8	$0.3	$66.1	$135.9	49%	($19.3)	($17.0)	$0.0	$5.1
Home Furnishings and Appliances	$55.3	$52.5	$2.8	$51.7	$67.4	77%	$0.0	($13.4)	($26.9)	$28.4
Building Materials	$37.6	$35.7	$1.9	$66.2	$132.1	50%	($31.5)	($31.3)	$0.0	$37.6
Auto Dealers and Auto Supplies	$0.0	$0.0	$0.0	$41.5	$144.5	29%	($91.7)	($60.1)	$0.0	$0.0
Service Stations	$0.0	$0.0	$0.0	$76.9	$132.2	58%	($1.5)	($11.9)	$0.0	$0.0
Other Retail Stores	$54.5	$51.8	$2.7	$158.6	$265.3	60%	$0.0	($24.0)	($7.0)	$47.5
Total	**$230.5**	**$219.0**	**$11.5**	**$676.6**	**$1,280.7**	**53%**	**($228.4)**	**($252.9)**	**($33.9)**	**$196.6**

Notes:
(1) See Exhibit 4, "Estimated Sales by Retail Category."
(2) CBRE Consulting estimates that 95 percent of sales will be generated from the primary and secondary market area residents, with 5 percent of sales generated by tertiary market demand.
(3) See Exhibit 19.
(4) Calculated as 50 percent of leakage amounts from Exhibit 19. The new retail opportunities at Rocklin Crossings will attract some but not all spending that is currently leaked out of the primary market area. In addition, the new retail stores at Rocklin Crossings will attract some of the secondary market area spending leakage. Thus, CBRE Consulting estimates that 50 percent of leakage in the primary market area and secondary market area would be absorbed by Rocklin Crossings.
(5) The figures in this column comprise the maximum amount of new sales diverted from existing primary market area retailers, assuming sales in excess of any leakage will be diverted away from existing primary market area retailer in proportion to the primary market area retailers' estimated contribution to combined primary and secondary market area sales. This approach implies that any negative impacts of the Center will be spread proportionally among all the like retailers in the primary market area.
(6) The calculation represents total new center sales less the maximum sales diverted from primary market area retailers. Figures may not total due to rounding.

Source: CBRE Consulting.
P:\2005\1005255 Donahue Schriber\Exhibits\[Leakage Model (2005 regression) - SMA.xls]Ex13-BaseYr. [PRD] December 29, 2006

DRAFT EXHIBIT 21
MAXIMUM DIVERTED SALES AS A PERCENT
OF ESTIMATED PRIMARY MARKET AREA SALES
2009 ESTIMATE (IN MILLIONS)

Type of Retailer	Maximum Sales Diverted From PMA Retailers (1) [A]	Primary Market Area Retail Sales (2) [B]	Diverted Sales as a Percent of Total Retail Sales [C=A/B]
Apparel Stores	$0.0	$22.3	0.0%
General Merchandise Stores	$0.0	$36.5	0.0%
Food Stores (3)	$0.0	$156.8	0.0%
Eating and Drinking Places	$0.0	$66.1	0.0%
Home Furnishings and Appliances	$26.9	$51.7	52.0%
Building Materials	$0.0	$66.2	0.0%
Auto Dealers and Auto Supplies	$0.0	$41.5	0.0%
Service Stations	$0.0	$76.9	0.0%
Other Retail Stores	$7.0	$158.6	4.4%
Total (4)	**$33.9**	**$676.6**	5.0%

Note:
(1) See Exhibit 20, "Maximum Rocklin Crossings Shopping Center Sales Impacts on Primary Market Area Retail Sales," Column I.
(2) See Exhibit 20, "Maximum Rocklin Crossings Shopping Center Sales Impacts on Primary Market Area Retail Sales," Column D.

Source: CBRE Consulting.
P:\2005\1005255 Donahue Schriber\Exhibits\[Leakage Model (2005 regression) - SMA.xls]Ex13-BaseYr. [PRD]
December 29, 2006

DRAFT EXHIBIT 22
NEW POPULATION RETAIL DEMAND (ANNUAL)
PRIMARY MARKET AREA AND COMBINED PRIMARY AND SECONDARY MARKET AREA
2009 DOLLARS (IN MILLIONS)
2009 - 2014

Area	2009 - 2010	2010 - 2011	2011 - 2012	2012 - 2013	2013 - 2014
Primary Market Area, Additional Sales From Population Growth					
Annual Population Growth (1)	1,188	1,081	1,100	1,120	1,140
Estimated Additional Sales (2)					
Apparel stores	$0.7	$0.6	$0.6	$0.6	$0.7
General merchandise stores	$3.0	$2.7	$2.8	$2.8	$2.9
Food stores	$3.6	$3.3	$3.3	$3.4	$3.5
Eating and drinking places	$2.0	$1.8	$1.8	$1.9	$1.9
Home furnishings/appliance	$0.8	$0.7	$0.8	$0.8	$0.8
Bldg. matrl./farm implements	$2.4	$2.2	$2.3	$2.3	$2.3
Other retail stores	$3.0	$2.7	$2.8	$2.8	$2.9
Total Additional Sales	$15.5	$14.0	$14.4	$14.6	$15.0
Primary and Secondary Market Area, Additional Sales From Population Growth					
Annual Population Growth (1)	1,549	1,420	1,443	1,466	1,490
Estimated Additional Sales (3)					
Apparel stores	$0.9	$0.8	$0.8	$0.9	$0.9
General merchandise stores	$3.9	$3.6	$3.7	$3.7	$3.8
Food stores	$4.7	$4.3	$4.4	$4.5	$4.6
Eating and drinking places	$2.6	$2.4	$2.4	$2.5	$2.5
Home furnishings/appliance	$1.1	$1.0	$1.0	$1.0	$1.0
Bldg. matrl./farm implements	$3.2	$3.0	$3.0	$3.1	$3.1
Other retail stores	$3.9	$3.6	$3.6	$3.7	$3.8
Total Additional Sales	$20.3	$18.7	$18.9	$19.4	$19.7

Notes:
(1) See Exhibit 6, "Population Assumptions." Interim population numbers not indicated on Exhibit 6 are estimated using the calculated growth rates.
(2) Calculated by multiplying per capita expenditures for each category by population growth for each given year. Relied on annual per capita expenditures as of 2009 in Exhibit 12, "Projected Retail Sales Leakage (Primary Market Area)."
(3) Calculated by multiplying per capita expenditures for each category by population growth for each given year. Relied on annual expenditures as of 2009 in Exhibit 16, "Projected Retail Sales Leakage (Primary and Secondary Market Area)" divided by population assumptions in Exhibit 6.

Source: CBRE Consulting.
P:\2005\1005255 Donahue Schriber\Exhibits\[Leakage Model (2005 regression) - SMA.xls]Ex13- December 29, 2006

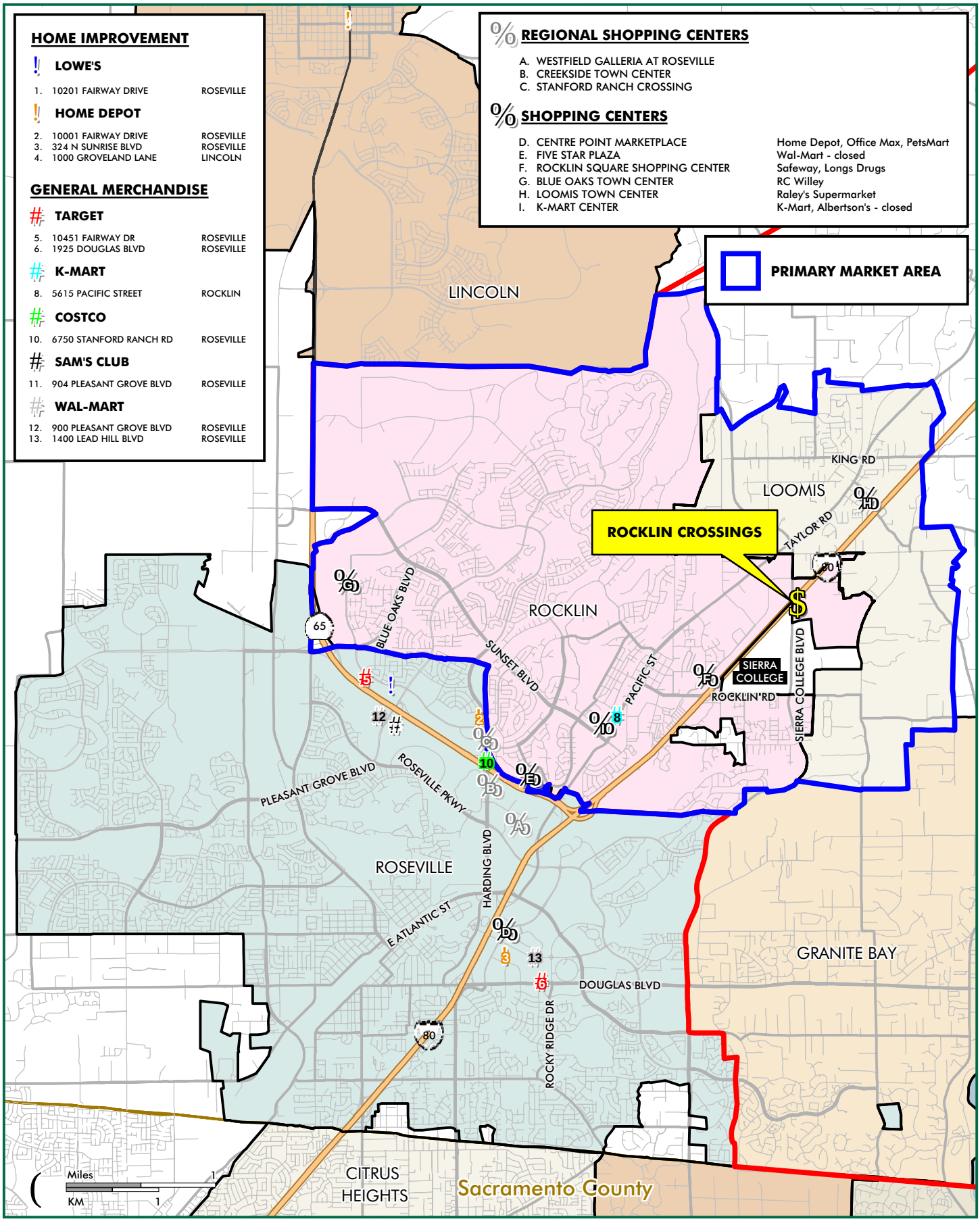
DRAFT EXHIBIT 23
NEW POPULATION RETAIL DEMAND (CUMULATIVE)
PRIMARY MARKET AREA AND COMBINED PRIMARY AND SECONDARY MARKET AREA
2009 DOLLARS (IN MILLIONS)
2009 - 2014

Area	2009 - 2010	2010 - 2011	2011 - 2012	2012 - 2013	2013 - 2014
Primary Market Area, Additional Sales From Population Growth					
Annual Population Growth (1)	1,188	2,269	3,370	4,490	5,629
Estimated Additional Sales (2)					
Apparel stores	$0.7	$1.3	$1.9	$2.5	$3.2
General merchandise stores	$3.0	$5.7	$8.5	$11.3	$14.2
Food stores	$3.6	$6.9	$10.2	$13.6	$17.1
Eating and drinking places	$2.0	$3.8	$5.6	$7.5	$9.4
Home furnishings/appliance	$0.8	$1.5	$2.3	$3.1	$3.9
Bldg. matrl./farm implements	$2.4	$4.6	$6.9	$9.2	$11.5
Other retail stores	$3.0	$5.7	$8.5	$11.3	$14.2
Total Additional Sales	$15.5	$29.5	$43.9	$58.5	$73.5
Primary and Secondary Market Area, Additional Sales From Population Growth					
Annual Population Growth (1)	1,549	2,969	4,412	5,878	7,368
Estimated Additional Sales (2)					
Apparel stores	$0.9	$1.7	$2.5	$3.4	$4.3
General merchandise stores	$3.9	$7.5	$11.2	$14.9	$18.7
Food stores	$4.7	$9.0	$13.4	$17.9	$22.5
Eating and drinking places	$2.6	$5.0	$7.4	$9.9	$12.4
Home furnishings/appliance	$1.1	$2.1	$3.1	$4.1	$5.1
Bldg. matrl./farm implements	$3.2	$6.2	$9.2	$12.3	$15.4
Other retail stores	$3.9	$7.5	$11.1	$14.8	$18.6
Total Additional Sales	$20.3	$39.0	$57.9	$77.3	$97.0

Notes:
(1) See Exhibit 6, "Population Assumptions." Interim population numbers not indicated on Exhibit 6 are estimated using the calculated growth rates.
(2) The summation of figures in Exhibit 22.

Source: CBRE Consulting.
P:\2005\1005255 Donahue Schriber\Exhibits\[Leakage Model (2005 regression) - SMA.xls]Ex13-BaseYr. [MBH]
December 29, 2006

Exhibit 24: Competitive Centers and Retailers in the Primary Market Area



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DRAFT EXHIBIT 25
SURVEY OF OTHER POTENTIAL MAJOR RETAIL DEVELOPMENT ACTIVITY (1)
PRIMARY MARKET AREA AND SECONDARY MARKET AREA
SEPTEMBER 2006

Area/Project	Location	Acres	New Sq. Ft.	Status	Estimated Completion	Status/Information
Primary Market Area (Rocklin and Loomis)						
City of Rocklin						
Blue Oaks Town Center	NW Corner of Blue Oaks Blvd. & Lonetree Blvd.	61.02	528,000	Under Construction	Spring 2007	Currently 178,000 square feet have been completed and another 350,000 square feet are under construction. R.C. Willey building is currently open (165,000 sq. ft.). Other tenants include Dress Barn, Petco, Stein Mart, Mervyns and Sportsman's Warehouse.
Stanford Plaza	Sunset Blvd. & Stanford Ranch Rd.	11.00	120,600	Approved	2008	The project, which consists of eight buildings, was approved in April 2005. Construction is expected to begin by October 1, 2006. This center will not have an anchor. Tenants have not be identified, however it is anticipated that the project will consist of neighborhood serving retail (food store, restaurants, hair salon, ice cream shop, etc.).
Rocklin Pavilions	NW Corner of Sierra College & I-80	45.90	373,797	Application Submitted	2009	No leases have been signed, but possible anchor tenants could include Target, Kohl's, and Linens & Things. Other types of retailers include a fabric and hobby store, specialty grocer, home furnishings, apparel, restaurants, and financial institutions.
Granite Drive (Granite Bay Ventures)	Corner of Sierra College & I-80	63.00	250,000	Pre-Application	N/A	Application expected to be filed in early 2007. Posssible tenants include a home improvement warehouse and a national chain theatre with 10 plus screens. No specific tenants have been identified, however it is anticipated that the project will consist of regional serving retail (large name brand stores, department store, etc.)
Rocklin Marketplace	I-65 and Sunset Blvd.	30.00	300,000	Pre-Application	N/A	Application expected to be filed by early 2007. There are three spaces of 45,000 square feet each which could be combined for one big box store. Tenants and anchors have not been identified, however it is anticipated that the project will consist of regional serving retail (large name brand stores, department store, etc.)
Subtotal - Primary Market Area			**1,572,397**			

Continued . . .

DRAFT EXHIBIT 25
SURVEY OF OTHER POTENTIAL MAJOR RETAIL DEVELOPMENT ACTIVITY (1)
PRIMARY MARKET AREA AND SECONDARY MARKET AREA
SEPTEMBER 2006

Area/Project	Location	Acres	New Sq. Ft.	Status	Estimated Completion	Status/Information
Secondary Market Area (Auburn and areas of Unincorporated Placer County)						
Home Depot	NW of Hwy 49 & F Ave., Auburn	10.64	129,295	Approved	N/A	Includes a 24,304 square foot garden center. The project was approved in April, 2006.
Brady Estates	SE Corner of Brady Ln. & Baseline Rd., Auburn	4.80	53,490	Application Submitted	N/A	Proposed subdivision of 9 lots with a retail space building of 53,490 square feet. Tenants have not be identified, however it is anticipated that the project will consist of neighborhood serving retail (food store, restaurants, hair salon, ice cream shop, etc.).
Rock Creek Plaza Shopping Center	Hwy 49 & Bell Rd., Auburn	22.00	50,608	Application Submitted	N/A	Proposed remodeling and expansion of existing community serving shopping center. Existing anchor tenants include Big K-Mart, Payless ShoeSource, Ralph's Grocery and Rite Aid Pharmacy.
Subtotal - Secondary Market Area			**233,393**			
Other Excluded Potential Developments (1)						
Villages at Pavilion	Granite Dr. near Sierra College Blvd., Rocklin	6.76	61,000	Application Submitted	N/A	Project will consist of four buildings, one two stories tall with office space on the second floor. The development is adjacent to Rocklin Pavilions. This center will have no anchor. Tenants have not been identified, however it is anticipated that the project will consist of community serving retail (apparel, general merchandise, food store, restaurants, specialty stores, etc.). Currently the project is on hold awaiting further information from the developer.
Hanzlick Property	Lower Granite Drive, Rocklin	20.00	150,000	Pre-Application	N/A	No application has been submitted. It will be developed in the next 3 to 5 years with a grocery anchor.
I-80 Center	Near Interstate 80 and Sierra College Blvd, Rocklin	13.00	200,000	Pre-Application	N/A	Application is expected in 2007. Planned to have a home improvement warehouse anchor.
Whitney Ranch SC	Whitney Ranch Parkway and Wildcat Way, Rocklin	25.00	200,000	Pre-Application	N/A	Planned to be anchored by a grocery store and contain a gas station and drug store. Application is not expected until 2008.
Subtotal - Other Excluded Potential Developments			**611,000**			

Note:

(1) CBRE Consulting excluded those developments with less than 40,000 square feet that would not be competitive. In addition, the following projects were identified, but were not included because they are at a very early stage of planning and were deemed to be too speculative to include in this cumulative analysis: Villages at Pavillion, the Hanzlick property (Granite Bay Ventures), the I-80 Center (developer Paul Petrovich), and the Whitney Ranch SC (Taylor Properties).

Sources: City of Rocklin Development Activity Report, June 2006; City of Loomis 2006 Active Projects Planning Status Report, August 15, 2006; Sacramento Business Journal; Placer County Current Development Report; City of Rocklin Community Development Department; City of Rocklin Planning Department; City of Auburn Planning Department; Placer County Planning Department; and CBRE Consulting.

DRAFT EXHIBIT 26
SALES ESTIMATES FOR MAJOR PLANNED RETAIL DEVELOPMENTS
PRIMARY MARKET AREA
2009 DOLLARS

Store Assumptions	Average Sales Per Sq. Ft. 2005 (1) [A]	Average Sales Per Sq. Ft. 2009 (2) [B=(A*(1.03)^4)]	Estimated Square Feet (3) [C]	Estimated Net Sales 2009 [D=B*C]
Primary Market Area (Rocklin and Loomis)				
City of Rocklin				
Blue Oaks Town Center (4)				
Petco	$198	$223	13,500	$3,008,500
Dress Barn	$245	$276	31,868	$8,787,600
Stein Mart	$202	$227	37,000	$8,412,100
Mervyn's	$285	$321	50,000	$16,038,500
Sportsman's Warehouse	$255	$287	60,000	$17,245,700
Other Retail	$342	$384	170,632	$65,597,000
Stanford Plaza	$342 (5)	$384	120,600	$46,362,900
Rocklin Pavilions				
General Merchandise (eg. Target)	$300	$338	127,000	$42,891,500
General Merchandise (eg. Kohl's)	$285	$321	89,000	$28,565,600
Domestics (eg. Linen & Things)	$169	$190	28,000	$5,331,800
Fabric and Hobby	$168	$189	24,000	$4,541,400
Specialty Grocer	$536	$604	12,000	$7,243,200
Home Furnishings	$245	$275	18,000	$4,958,100
Apparel	$226	$254	25,000	$6,347,400
Restaurants	$414	$466	10,000	$4,658,700
Other retail	$343	$386	40,797	$15,732,700
Granite Drive (Granite Bay Ventures)	$342 (5)	$384	250,000	$96,108,800
Rocklin Marketplace	$342 (5)	$384	300,000	$115,330,600
Total			1,407,397	$497,162,100

Notes:
(1) Average store sales per square foot are based on the national averages from the respective retailers' 2005 10-K Annual Report filled with the U.S. Securities and Exchanges Commission. Figures for other retailers were based on Retail Maxim's 2004 publication, "Perspectives on Real Estate and Finance," which calculates 2003 estimated of average sales per square foot for different retailers. CBRE Consulting grew the 2003 sales per square foot figures to 2005 numbers using the statewide 2003-2004 average inflation rate of 2.63 percent and the 2004-2005 inflation rate of 3.68 percent.
(2) CBRE Consulting assumed an average growth rate of 3.0 percent from 2005 to 2009.
(3) See Exhibit 25 for estimated square feet. When a tenant was known, but the estimated store size was not available, CBRE Consulting used an average store size from the retailer's 10-K Annual Report.
(4) The 165,000 square foot R.C. Willey is excluded here. It is included in Exhibit 16 under newly opened stores.
(5) The average sales per square foot for Stanford Plaza, the Granite Drive project, and Rocklin Marketplace were taken from the Retail Maxim's 2003 estimate of and average of $321 per square foot for all mall-based stores, and then escalated to 2005 per inflation factors in footnote 1.

Sources: Petco's 2005 10-K Annual Report; Stein Mart's 2005 10-K Annual Report; Internetretailer.com; Retail Maxim's July 2004 Perspectives on Retail Real Estate and Finance; and CBRE Consulting.
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DRAFT EXHIBIT 27
CATEGORIZATION OF MAJOR PLANNED RETAIL DEVELOPMENT SALES
PRIMARY MARKET AREA
2009 DOLLARS

Shopping Center / Store	Estimated Sales 2009 (2)	Sales Category (1)						
		Apparel	General Merchandise	Food Stores	Eating and Drinking Places	Home Furnishings and Appliances	Building Materials	Other Retail
Primary Market Area								
City of Rocklin								
Blue Oaks Town Center								
Petco	$3,008,500	-	-	-	-	-	-	$3,008,500
Dress Barn	$8,787,600	$8,787,600	-	-	-	-	-	-
Stein Mart	$8,412,100	$8,412,100	-	-	-	-	-	-
Mervyn's	$16,038,500	-	$16,038,500	-	-	-	-	-
Sportsman's Warehouse	$17,245,700	-	-	-	-	-	-	$17,245,700
Other retail	$65,597,000	-	-	-	-	-	-	$65,597,000
			-	-				
Stanford Plaza	$46,362,900	-	11,590,725	4,636,290	11,590,725	-	-	18,545,160
As % of estimated store sales		0%	25%	10%	25%	0%	0%	40%
Rocklin Pavilions			-	-	-	-	-	-
		-			-	-	-	-
General Merchandise (eg. Target)	$42,891,500	-	$42,891,500	-	-	-	-	-
Famliy Apparel (eg. Kohl's)	$28,565,600	-	$28,565,600	-	-	-	-	-
Domestics (eg. Linen & Things)	$5,331,800	-		-	-	5,331,800	-	-
Fabric and Hobby	$4,541,400	-		-	-	-	-	$4,541,400
Specialty Grocer	$7,243,200			$7,243,200	-	-	-	
Home Furnishings	$4,958,100		-	-	-	$4,958,100	-	-
Apparel	$6,347,400	$6,347,400	-	-	-	-	-	-
Restaurants	$4,658,700	-	-	-	$4,658,700	-	-	-
Other retail	$15,732,700	-	-	-	-	-	-	$15,732,700
				-	-		-	-
Rocklin Marketplace	$115,330,600	17,299,590	23,066,120	11,533,060	11,533,060	23,066,120	11,533,060	17,299,590
As % of estimated store sales		15%	20%	10%	10%	20%	10%	15%
Granite Drive (Granite Bay Ventures)	$96,108,800	14,416,320	19,221,760	9,610,880	9,610,880	19,221,760	9,610,880	14,416,320
As % of estimated store sales		15%	20%	10%	10%	20%	10%	15%
Total Primary Market Area	**$497,162,100**	**$55,263,010**	**$141,374,205**	**$33,023,430**	**$37,393,365**	**$52,577,780**	**$21,143,940**	**$156,386,370**

Notes:
(1) Sales categories reported by State of California BOE.
(2) Estimated sales figures are from Exhibit 26, "Sales Estimates for Major Planned Retail Developments.

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DRAFT EXHIBIT 28
RETAIL SALES BASE ADJUSTMENT FOR CUMULATIVE SALES IMPACTS
PRIMARY MARKET AREA (PMA) AND COMBINED PRIMARY AND SECONDARY MARKET AREA (P&SMA)
2009 ESTIMATE (IN MILLIONS)

	New Primary Market Area (PMA) Sales Base			New Primary and Secondary Market Areas (P&SMA) Sales			
Type of Retailer	PMA Retail Sales (1) [A]	Minimum New Sales to PMA (2) [B]	New PMA Retail Sales Base [C=A+B]	P&SMA Retail Sales (3) [D]	Minimum New Sales to PMA (2) [E]	New P&SMA Retail Sales Base [F=D+E]	PMA as a Percent of P&SMA [G=C/F]
Apparel Stores	$22.3	$14.2	$36.5	$24.3	$14.2	$38.5	95.0%
General Merchandise	$36.5	$30.9	$67.4	$73.9	$30.9	$104.8	64.3%
Food Stores	$156.8	$32.9	$189.7	$305.3	$32.9	$338.2	56.1%
Eating and Drinking Places	$66.1	$5.1	$71.2	$135.9	$5.1	$141.0	50.5%
Home Furnishings and Appliances	$51.7	$28.4	$80.2	$67.4	$28.4	$95.8	83.7%
Building Materials	$66.2	$37.6	$103.8	$132.1	$37.6	$169.7	61.1%
Auto Dealers and Auto Supplies	$41.5	$0.0	$41.5	$144.5	$0.0	$144.5	28.7%
Service Stations	$76.9	$0.0	$76.9	$132.2	$0.0	$132.2	58.2%
Other Retail Stores	$158.6	$47.5	$206.1	$265.3	$47.5	$312.8	65.9%
Total	$676.6	$196.6	$873.2	$1,280.7	$196.6	$1,477.3	59.1%

Notes:
(1) Refer to Exhibit 20, Column D.
(2) Minimum new sales resulting from the Rocklin Crossings project. Refer to Exhibit 20, Column J.
(3) Refer to Exhibit 20, Column E.

Source: CBRE Consulting.
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DRAFT EXHIBIT 29
CUMULATIVE IMPACTS OF MAJOR RETAIL DEVELOPMENTS
ON PRIMARY MARKET AREA (PMA) RETAILERS
2009 DOLLARS (IN MILLIONS)

	2009 Estimated New Sales (1)	Retail Sales Category						
		Apparel	General Merchandise	Food Stores	Eating and Drinking Places	Home Furnishings and Appliances	Building Materials	Other Retail Stores
Total New Sales in PMA (2)								
Blue Oaks Town Center, Stanford Plaza, Rocklin Pavilions, Granite Drive (Granite Bay Ventures), and Rocklin Marketplace	$497.2	$55.3	$141.4	$33.0	$37.4	$52.6	$21.1	$156.4
Portion of New Sales from P&SMA at 95% (3)								
Blue Oaks Town Center, Stanford Plaza, Rocklin Pavilions, Granite Drive (Granite Bay Ventures), and Rocklin Marketplace	$472.3	$52.5	$134.3	$31.4	$35.5	$49.9	$20.1	$148.6
Sales Generated in PMA								
PMA as a Percent of P&SMA (4)		95.0%	64.3%	56.1%	50.5%	83.7%	61.1%	65.9%
Blue Oaks Town Center, Stanford Plaza, Rocklin Pavilions, Granite Drive (Granite Bay Ventures), and Rocklin Marketplace	$323.8	$49.9	$86.4	$17.6	$17.9	$41.8	$12.3	$97.9
Unabsorbed Leakage								
Unabsorbed PMA & SMA Leakage (5)	($215.4)	($11.4)	($105.1)	($20.0)	($34.0)	$0.0	($44.9)	$0.0
Max Sales Diverted from PMA Retailers (6)								
Blue Oaks Town Center, Stanford Plaza, Rocklin Pavilions, Granite Drive (Granite Bay Ventures), and Rocklin Marketplace	$178.2	$38.5	$0.0	$0.0	$0.0	$41.8	$0.0	$97.9

Notes:
(1) Reflects the sum of the retail categories.
(2) Refer to Exhibit 27.
(3) Primary and secondary market area estimated at 95 percent of total sales. Refer to Exhibit 20, footnote 2.
(4) Percentage calculated in Exhibit 28 to account for Rocklin Crossings sales in the retail base.
(5) The analysis assumes that up to 50 percent of leakage in the primary market area and the secondary market area will be absorbed before sales impacts occur. Accounts for primary and secondary market area leakage already absorbed by new sales at the Rocklin Crossings in Exhibit 20.
(6) The maximum sales diverted from primary market area retailers is equivalent to the sales generated in the primary market area, less any unabsorbed leakage.

Sources: CBRE Consulting.
P:\2005\1005255 Donahue Schriber\Exhibits\[Leakage Model (2005 regression) - SMA.xls]Ex13-BaseYr.[PRD] 29-Dec-06

DRAFT EXHIBIT 30
CUMULATIVE IMPACTS OF MAJOR RETAIL DEVELOPMENTS (1)
MAXIMUM DIVERTED SALES AS A PERCENT OF
TOTAL ESTIMATED SALES IN THE PRIMARY MARKET AREA
ASSUMING SALES ADJUSTMENT FOR ROCKLIN CROSSINGS
2009 ESTIMATE (IN MILLIONS)

Retail Category	Maximum Center Sales Diverted from PMA Retailers (2) [A]	New PMA Retail Sales Base (3) [B]	Additional Diverted Sales as a % of Estimated Sales [C=A/B]
Apparel Stores	($38.5)	$36.5	105.3%
General Merchandise	$0.0	$67.4	0.0%
Food Stores	$0.0	$189.7	0.0%
Eating and Drinking Places	$0.0	$71.2	0.0%
Home Furnishings and Appliances	($41.8)	$80.2	52.1%
Building Materials	$0.0	$103.8	0.0%
Other Retail Stores	($97.9)	$206.1	47.5%
Total	($178.2)	$754.8	

Notes:
(1) Includes Blue Oaks Town Center, Stanford Plaza, Rocklin Pavillion, Granite Drive (Granite Bay Ventures), and Rocklin Marketplace
(2) Refer to Exhibit 29.
(3) Refer to Exhibit 28, column C.

Sources: CBRE Consulting.
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DRAFT EXHIBIT 31
MAXIMUM DIVERTED SALES IMPACTS
ROCKLIN CROSSINGS
CUMULATIVE PRIMARY MARKET AREA PROJECTS
2009 ESTIMATE (IN MILLIONS)

Project Retail Category	Maximum Sales Diversion (1) [A]	Number of Years to Mitigate (2) [B]	Sales Average (2009 Dollars) (3) [C]	Impacted Square Feet (Rounded) [D=A/C]
Rocklin Crossings Only				
Apparel Stores	$0.0	N/A	N/A	N/A
General Merchandise	$0.0	N/A	N/A	N/A
Food Stores	$0.0	N/A	N/A	N/A
Eating and Drinking Places	$0.0	N/A	N/A	N/A
Home Furnishings and Appliances	($26.9)	20+ years	$275	97,700
Building Materials	$0.0	N/A	N/A	N/A
Other Retail Stores	($7.0)	1 to 2 years	$359	19,500
Total	($33.9)			117,200
Rocklin Crossings and All Primary Market Area Cumulative Projects				
Apparel Stores	($38.5)	20+ years	$254	151,500
General Merchandise	$0.0	N/A	N/A	N/A
Food Stores	$0.0	N/A	N/A	N/A
Eating and Drinking Places	$0.0	N/A	N/A	N/A
Home Furnishings and Appliances	($68.7)	20+ years	$275	249,700
Building Materials	$0.0	N/A	N/A	N/A
Other Retail Stores	($104.9)	20+ years	$359	292,200
Total	($212.0)			693,400

Notes:
(1) Refer to Exhibits 21 and 30.
(2) Estimated based on the cumulative retail demand in Exhibit 23.
(3) Estimates for 2009 sales per square foot by category for home furnishings and appliances, apparel, and other retail stores from Exhibit 2. Sales per square foot estimate for general merchandise is an average of the two estimates for general merchandise on Exhibit 26.

Sources: CBRE Consulting.
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APPENDIX C

Traffic Report

TRAFFIC IMPACT ANALYSIS

ROCKLIN CROSSINGS

ROCKLIN, CALIFORNIA

DRAFT

LSA

March 2007

TRAFFIC IMPACT ANALYSIS

ROCKLIN CROSSINGS

ROCKLIN, CALIFORNIA

Submitted to:

City of Rocklin
3970 Rocklin Road
Rocklin, California 95677

Prepared by:
LSA Associates, Inc.
20 Executive Park, Suite 200
Irvine, California 92614-4731
(949) 553-0666

LSA Project No. DSR330

LSA

March 2007

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TABLE OF CONTENTS

INTRODUCTION 1
PROJECT DESCRIPTION 1
METHODOLOGY 4
EXISTING CONDITIONS 9
Roadway Network 9
Existing Traffic Volumes 13
Existing Levels of Service 13
PROJECT TRIP GENERATION AND DISTRIBUTION 13
EXISTING PLUS PROJECT 20
EXISTING PLUS APPROVED PROJECTS (BASELINE) 29
Existing plus Approved Projects (Baseline) Traffic Volumes 29
Existing Plus Approved Projects (Baseline) Levels of Service 29
EXISTING PLUS APPROVED PROJECTS (BASELINE) PLUS PROJECT 36
Existing plus Approved Projects (Baseline) plus Project Levels of Service 36
Recommended Mitigation: Existing Plus Approved Projects (Baseline) Plus Project 42
CUMULATIVE (YEAR 2025) CONDITIONS 42
Development of Future Traffic Volumes 42
Intersection Turning Movements 42
2025 No Project without Dominguez Road 44
2025 Plus Project without Dominguez Road 49
Recommended Mitigation: 2025 Plus Project Without Dominguez Road 55
SPECIAL ISSUES 57
Dominguez Road Sensitivity Analysis 57
Recommended Mitigation: 2025 Plus Project With Dominguez Road 63
I-80/Sierra College Interchange 70
Freeway Mainline Analysis 71
Driveway Throat Length 71
Right Turns From Unsignalized Driveway 71
MITIGATION MEASURES 73
Existing Plus Approved Projects (Baseline) Plus Project 73
2025 Plus Project Without Dominguez Road 74
2025 Plus Project With Dominguez Road 76

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APPENDICES

A: Traffic Counts
B: Existing LOS Worksheets
C: Existing plus Project LOS Worksheets
D: Approved Projects List
E: Existing plus Approved Projects LOS Worksheets
F: Existing plus Approved Projects plus Project LOS Worksheets
G: Year 2025 No Project (Without Dominguez Road) Traffic Volume Development and LOS Worksheets
H: Year 2025 plus Project (Without Dominguez Road) LOS Worksheets
I: Year 2025 No Project (With Dominguez Road) Traffic Volume Development and LOS Worksheets
J: Year 2025 plus Project (With Dominguez Road) LOS Worksheets
K: Year 2025 plus Project (Without Dominguez Road) Ramp Intersections - Synchro Analysis
L: Year 2025 plus Project (With Dominguez Road) Ramp Intersections - Synchro Analysis)
M: Year 2025 plus Project (Without Dominguez Road) Freeway Segments - HCS Analysis)
N: Year 2025 plus Project (With Dominguez Road) Freeway Segments - HCS Analysis

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FIGURES AND TABLES

FIGURES

Figure 1: Project Location 2
Figure 2: Site Plan 3
Figure 3: Study Intersections and Roadway Segments 10
Figure 4: Existing Geometrics and Traffic Control 11
Figure 5: Existing Peak Hour Traffic Volumes 14
Figure 6: Existing Saturday Peak Hour Traffic Volumes 15
Figure 7: Project Trip Distribution and Peak Hour Project Trips 21
Figure 8: Saturday Peak Hour Project Trips 22
Figure 9: Existing Plus Project Peak Hour Traffic Volumes 23
Figure 10: Existing Plus Project Saturday Peak Hour Traffic Volumes 24
Figure 11: Short-Term Geometrics and Traffic Control 27
Figure 12: Location of Approved Projects 30
Figure 13: Existing Plus Approved Projects (Baseline) Peak Hour Traffic Volumes 32
Figure 14: Existing Plus Approved Projects (Baseline) Saturday Peak Hour Traffic Volumes 33
Figure 15: Existing Plus Approved Projects (Baseline) Plus Project Peak Hour Traffic Volumes 38
Figure 16: Existing Plus Approved Projects (Baseline) Plus Project Saturday Peak Hour Traffic Volumes 39
Figure 17: Existing Plus Approved Projects (Baseline) Plus Project Condition - Mitigations 43
Figure 18: Year 2025 No Project Peak Hour Traffic Volumes - Without Dominguez Road 45
Figure 19: Year 2025 No Project Saturday Peak Hour Traffic Volumes - Without Dominguez Road 46
Figure 20: Year 2025 Geometrics and Traffic Control 50
Figure 21: Year 2025 Plus Project Peak Hour Traffic Volumes - Without Dominguez Road 51
Figure 22: Year 2025 Plus Project Saturday Peak Hour Traffic Volumes - Without Dominguez Road 52
Figure 23: Year 2025 Plus Project Without Dominguez Road - Mitigations 58
Figure 24: Year 2025 No Project Peak Hour Traffic Volumes - With Dominguez Road 59
Figure 25: Year 2025 No Project Saturday Peak Hour Traffic Volumes - With Dominguez Road 60
Figure 26: Year 2025 Plus Project Peak Hour Traffic Volumes - With Dominguez Road 64
Figure 27: Year 2025 Plus Project Saturday Peak Hour Traffic Volumes - With Dominguez Road 65
Figure 28: Year 2025 Plus Project With Dominguez Road - Mitigations 69

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TABLES

Table A: Existing Peak Hour Intersection Levels of Service 16
Table B: Existing Daily Roadway Segment Level of Service SummaryTable C: Rocklin Crossings Trip Generation 17
Table C: Rocklin Crossings Trip Generation 18
Table D: Existing Plus Project Peak Hour Intersection Level of Service Summary 25
Table E: Existing Plus Project Daily Roadway Segment Level of Service Summary 26
Table F: Existing Plus Project Peak Hour Roadway Segment Level of Service Summary 28
Table G: Trip Generation of Approved Projects 31
Table H: Existing Plus Approved Projects (Baseline) Condition Intersection Level of Service Summary 34
Table I: Existing Plus Approved Projects (Baseline) Daily Roadway Segment Level of Service Summary 35
Table J: Existing Plus Approved Projects (Baseline) Peak Hour Roadway Segment Level of Service Summary 37
Table K: Existing Plus Approved Projects (Baseline) Plus Project Condition Intersection Level of Service Summary 40
Table L: Existing Plus Approved Projects (Baseline) Plus Project Daily Roadway Segment Level of Service Summary 41
Table M: 2025 No Project Without Dominguez Road Condition Peak Hour Intersection Level of Service Summary 47
Table N: 2025 No Project Without Dominguez Road Daily Roadway Segment Level of Service Summary 48
Table O: 2025 Plus Project Without Dominguez Road Condition Peak Hour Intersection Level of Service Summary 53
Table P: 2025 Plus Project Without Dominguez Road Daily Roadway Segment Level of Service Summary 54
Table Q: 2025 Without Dominguez Road Peak Hour Roadway Segment Level of Service Summary 56
Table R: 2025 No Project With Dominguez Road Condition Peak Hour Intersection Level of Service Summary 61
Table S: 2025 No Project With Dominguez Road Daily Roadway Segment Level of Service Summary 62
Table T: 2025 Plus Project With Dominguez Road Condition Peak Hour Intersection Level of Service Summary 66
Table U: 2025 Plus Project With Dominguez Road Daily Roadway Segment Level of Service Summary 67
Table V: I-80/Sierra College Boulevard Freeway Ramp Intersection Analysis (2025 Plus Project) ... 70
Table W: 2025 With Project - Freeway Segment Level of Service Summary 72
Table X: Existing Plus Approved Projects (Baseline) Plus Project Condition Peak Hour Intersection Level of Service Summary - With Mitigation 75
Table Y: 2025 Plus Project Without Dominguez Road Condition Peak Hour Intersection Level of Service Summary - With Mitigation 77
Table Z: 2025 Plus Project With Dominguez Road Condition Peak Hour Intersection Level of Service Summary - With Mitigation 79

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INTRODUCTION

This report presents the results of an analysis by LSA Associates, Inc. (LSA) of the traffic impacts associated with the proposed Rocklin Crossings project in the City of Rocklin (City), California. The project proposes the construction of an approximately 543,500-square-foot (sf) commercial/retail center on a 49.53± acre site at the southeast corner of Interstate 80 (I-80) and Sierra College Boulevard. The proposed regional shopping center will include two major tenants, currently expected to be Wal-Mart Supercenter and The Home Depot. The project is located west of and directly adjacent to the proposed Rocklin 60 residential project.

This analysis examines the traffic impacts expected to result from the addition of vehicle traffic generated by the proposed project on the existing, existing plus approved projects, and cumulative (year 2025) traffic condition at surrounding intersections and roadway segments. "Approved projects," in this context, are land use and infrastructure projects that have received all discretionary approvals requiring environmental review. Traffic volumes and levels of service (LOS) for year 2025 conditions were determined using the City of Rocklin Traffic Model. Potential mitigation measures for facilities significantly impacted by the project are identified in this study.

This analysis has been prepared in consultation with City staff and is consistent with the objectives and methodologies set forth in the City's General Plan Transportation Element and applicable provisions of the California Environmental Quality Act (CEQA). This analysis also recommends mitigation measures based on the project's effects under the existing plus approved projects and cumulative (2025) scenarios.

PROJECT DESCRIPTION

The proposed project is a regional shopping center including two major tenants (presently expected to be a Wal-Mart Supercenter and The Home Depot). The proposed project will be built on a 49.53± acre site at the southeast corner of Interstate 80 (I-80) and Sierra College Boulevard. The location of the proposed project is shown in Figure 1. The site is currently undeveloped. Up to 543,500 sf of retail/commercial structures will be constructed. The proposed Wal-Mart Supercenter would consist of 206,000 sf of main building area with a 25,353 sf garden center. The Home Depot store would be 106,278 sf with a 34,760 sf garden center. The remaining 171,109 sf would be made up of smaller retail and restaurant-type uses. Traveler-serving uses such as gas stations and a hotel may also be provided. The project site plan is shown in Figure 2.

Although the Sierra College Boulevard/I-80 interchange reconstruction project is not part of the proposed project description, this project will significantly affect access to Rocklin Crossings. The Sierra College Boulevard/I-80 interchange project will widen the bridge over I-80, reconstruct the on- and off-ramps, and include full widening of Sierra College Boulevard across the northerly portion of the frontage of the Rocklin Crossings project. The main access into Rocklin Crossings will be constructed as part of the Sierra College Boulevard overcrossing project and dedicated as a City right-of-way. The Sierra College Boulevard/I-80 interchange reconstruction project is underway and will be completed prior to the opening of Rocklin Crossings.

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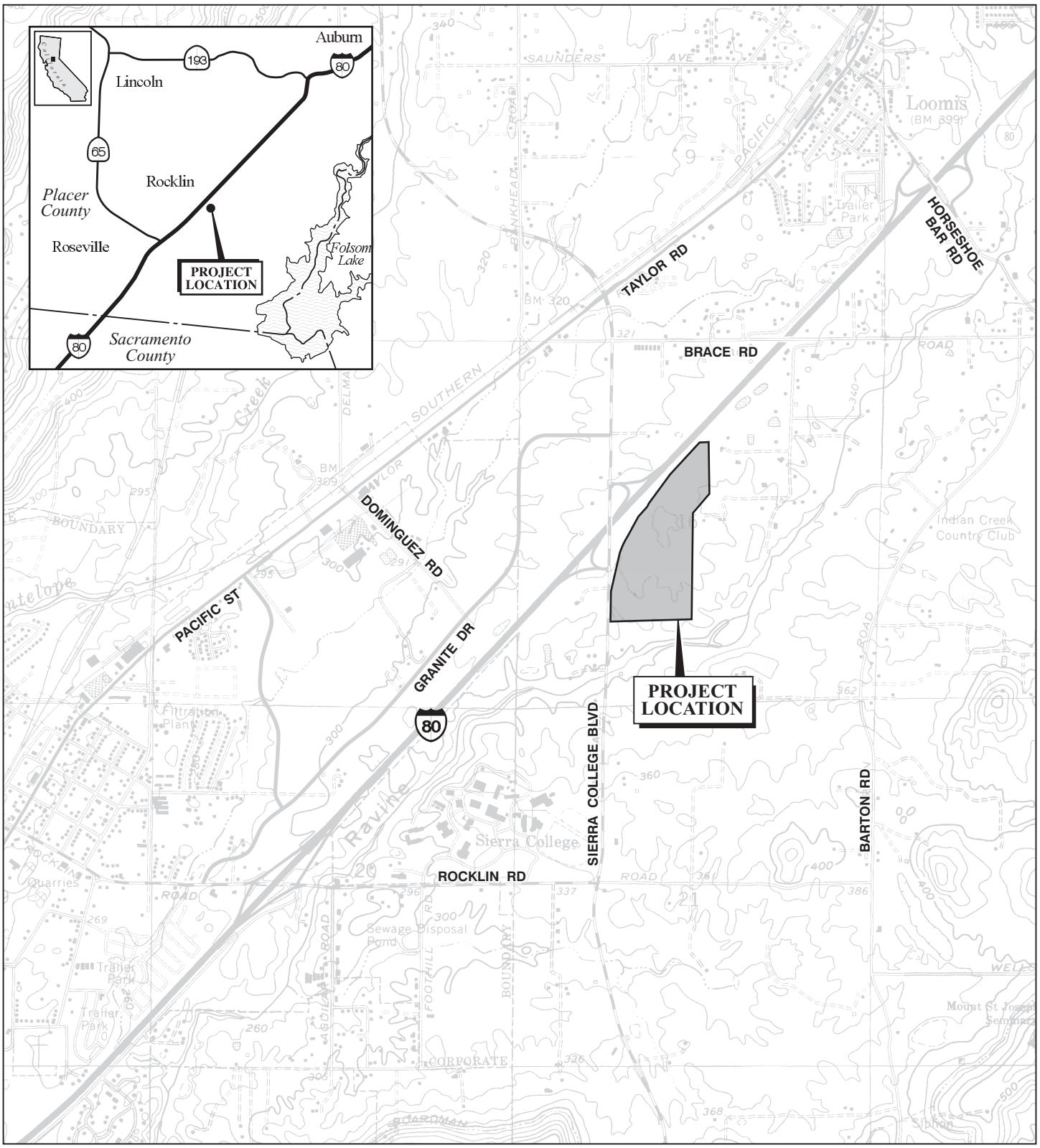


LSA

FIGURE 1

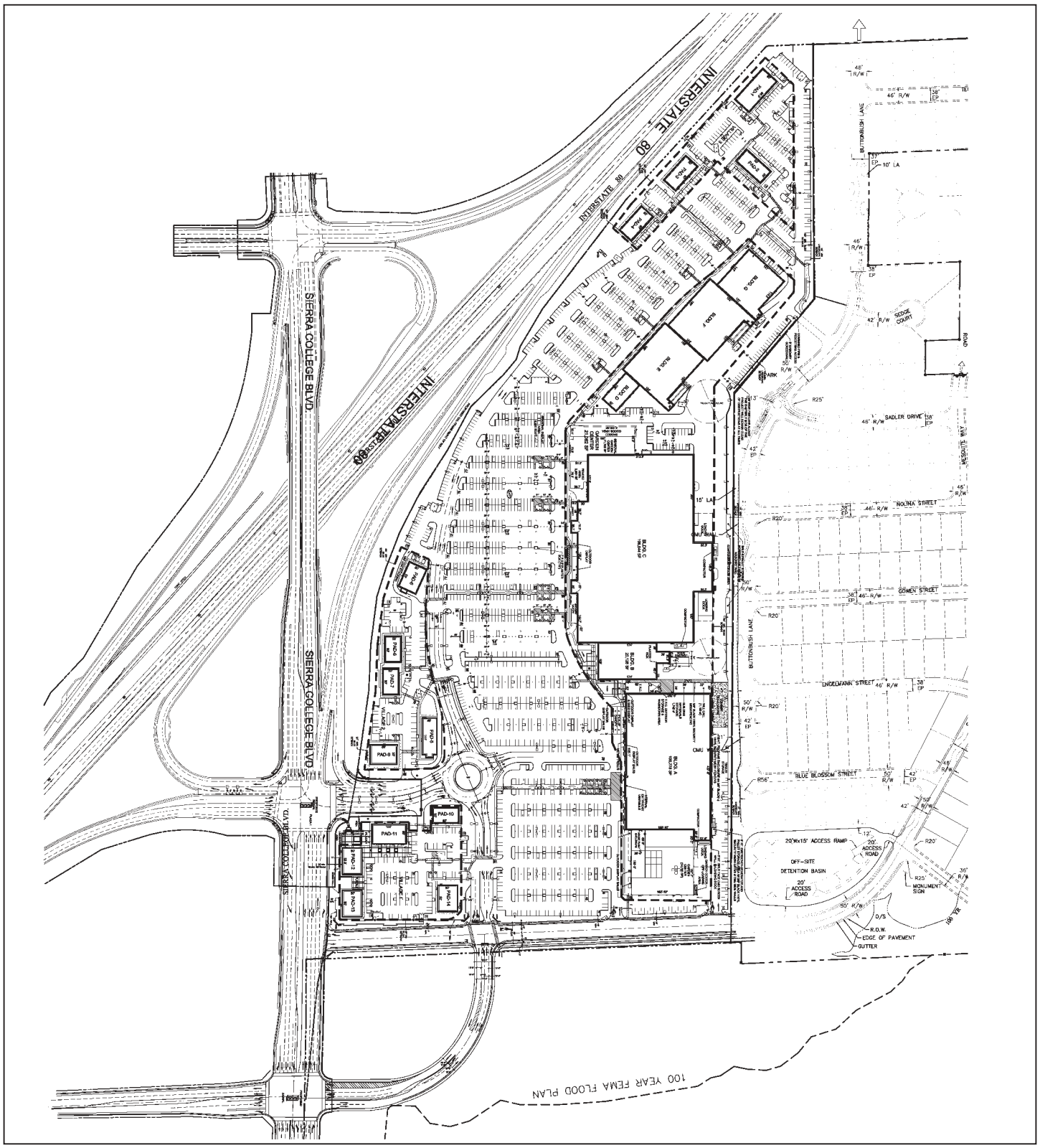
N

0 1000 2000
FEET

SOURCE: USGS 7.5' Quad - Rocklin, Ca.

Rocklin Crossings
Project Location

I:\DSR330\Location.cdr (9/12/06)



LSA

FIGURE 2

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0 200 400

FEET

SOURCE: RSC Engineering

Rocklin Crossings

Site Plan

Three project access locations to Rocklin Crossings will be provided from Sierra College Boulevard. The northernmost project access would form the east leg of the planned I-80 eastbound/Sierra College Boulevard ramp. The middle access will provide right turns into and out of the project only. The southernmost access point will align with the future extension of Dominguez Road over I-80.

METHODOLOGY

The traffic impact analysis is based on intersection levels of service for the following scenarios:

- Existing
- Existing plus Project
- Existing plus Approved Projects (Baseline)
- Existing plus Approved Projects (Baseline) plus Project
- Year 2025
- Year 2025 plus Project

Intersection LOS Methodology. *Traffix* computer software was utilized to determine the levels of service (LOS) at signalized and unsignalized study area intersections based on the Circular 212 "Critical Movement Analysis" (CMA) planning methodology and HCM 2000 Methodology, respectively. This methodology is approved by the City and is consistent with the method used for previous traffic impact analyses prepared for projects in the City.

The CMA methodology compares the amount of traffic an intersection is able to process (capacity) to the level of traffic during peak hours (volume). The resulting volume-to-capacity ratio (v/c) is expressed in terms of LOS, where LOS A represents free-flow activity and LOS F represents overcapacity operation. The CMA methodology provides a planning level assessment of the traffic volume at an intersection and is used by many cities and agencies within California for the purposes of traffic impact analysis. Some of the cities and agencies besides Rocklin that utilize the Circular 212 CMA methodology include West Sacramento, Fairfield, Roseville, Union City, San Carlos, the Contra Costa Transportation Authority, and the City/County Associations of Governments of San Mateo County. In addition, a number of agencies throughout the state utilize the Intersection Capacity Utilization (ICU) methodology, which is similar to the Circular 212 CMA methodology but does not take into account the effects of signal phasing on the LOS. Utilization of a methodology that calculates v/c ratio has proven to be an accurate method of disclosing traffic impacts of development projects.

LOS is a qualitative assessment of the quantitative effects of such factors as traffic volume, roadway geometrics, and signal phasing on roadway and intersection operations. LOS criteria for signalized intersections are presented below.

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LOS Description

A No approach phase is fully utilized by traffic, and no vehicle waits longer than one red indication. Typically, the approach appears quite open, turns are made easily, and nearly all drivers find freedom of operation.

B This service level represents stable operation, where an occasional approach phase is fully utilized, and a substantial number are nearing full use. Many drivers begin to feel restricted within platoons of vehicles.

C This level still represents stable operating conditions. Occasionally, drivers may have to wait through more than one red signal indication, and backups may develop behind turning vehicles. Most drivers feel somewhat restricted but not objectionably so.

D This level encompasses a zone of increasing restriction approaching instability at the intersection. Delays to approaching vehicles may be substantial during short peaks within the peak period; however, enough cycles with lower demand occur to permit periodic clearance of developing queues, thus preventing excessive backups.

E Capacity occurs at the upper end of this service level. It represents the most vehicles that any particular intersection approach can accommodate. Full utilization of every signal cycle is attained, no matter how great the demand.

F This level describes forced flow operations at low speeds, where volumes exceed capacity. These conditions usually result from queues of vehicles backing up from a restriction downstream. Speeds are reduced substantially, and stoppages may occur for short or long periods due to the congestion. In the extreme case, speed can drop to zero.

The relationship between LOS and the v/c ratio for signalized intersections is as follows:

Level of Service	Volume to Capacity (CMA Methodology)
A	≤ 0.600
B	0.610–0.700
C	0.710–0.800
D	0.810–0.900
E	0.910–1.000
F	> 1.000

Because the CMA methodology does not provide an accurate representation of the LOS of an unsignalized intersection, the 2000 Highway Capacity Manual (HCM) methodology has been used to determine intersection levels of service at unsignalized intersections. For the unsignalized HCM methodology, the LOS is presented in terms of total intersection delay (at four-way stop intersections) and approach delay of the major and minor streets (at two-way stop intersections) in seconds per vehicle. The relationship of delay and LOS at unsignalized intersections is summarized below.

DRAFT

Level of Service	Unsignalized Intersection Delay per Vehicle (sec)
A	≤10.0
B	>10.0 and ≤15.0
C	>15.0 and ≤25.0
D	>25.0 and ≤35.0
E	>35.0 and ≤50.0
F	>50.0

The HCM methodology has also been used to determine LOS at the Caltrans controlled signalized I-80/Sierra College Boulevard freeway ramp intersections with Sierra College Boulevard. The HCM method is used by Caltrans for intersections it controls. The HCM analysis at the interchange ramp intersections is provided for purposes of comparison to the LOS analysis presented in the Caltrans Environmental Document and supporting focused interchange Traffic Study conducted in January 2003.

Roadway Level of Service Methodology. Roadway segment analysis in the project area was also conducted as part of this traffic study. To identify the project's impact on the operating condition of a roadway segment, an LOS ranking scale was used. The LOS is based on average daily traffic (ADT) roadway segment threshold capacities as presented below.

	Roadway Segment Capacities: Two-Way Average Daily Traffic Volumes						
LOS	Two-Lane Collector	Four-Lane Undivided Arterial	Four-Lane Divided Arterial	Four-Lane Restricted Access Arterial	Six-Lane Divided Arterial	Six-Lane Restricted Access Arterial	Four-Lane Freeway
A	9,000	18,000	20,250	21,600	30,315	30,315	37,600
B	10,700	21,300	23,625	25,200	36,000	36,000	52,800
C	12,000	24,000	27,000	28,800	40,500	40,500	68,000
D	13,500	27,000	30,375	32,400	45,560	45,560	76,000
E	15,000	30,000	33,750	36,000	50,525	50,525	80,000

The LOS E capacity shown in the above table represents an approximation of the number of vehicles that the roadway can comfortably carry on a daily basis before it is considered to be at capacity. If the ADT on a roadway segment exceeds the LOS E capacity, then the daily LOS of the roadway is considered to be LOS F. It is important to note that an ADT capacity must assume several critical characteristics of traffic, including the percentage of daily traffic in the peak hour and the directional split within that peak hour. Actual characteristics of a specific roadway can significantly influence the daily capacity as described later. To calculate the daily LOS for each roadway segment, the ADT on each segment was divided by the capacity of the segment (the LOS E capacity as shown in the above table) to determine the daily v/c ratio for each roadway. The v/c ratio was compared to the values in the table below to determine the daily LOS for each roadway segment.

DRAFT

Level of Service	Volume to Capacity Ratio
A	≤ 0.600
B	0.610–0.700
C	0.710–0.800
D	0.810–0.900
E	0.910–1.000
F	> 1.000

The daily LOS, as described above, is a planning-level threshold that is generally used to determine the overall cross-sections of roadways within a circulation network. While it can provide an indication of whether the existing or forecast volume might result in unsatisfactory operation of the roadway, it does not provide an accurate representation of the actual operation of the roadway, especially during the peak hours of the day. For purposes of this project impact analysis, the daily capacity was first examined to determine whether the roadway might exceed its theoretical daily capacity. If the roadway volume exceeded the daily capacity (v/c greater than 1.00), then the peak-hour v/c ratio was calculated. If the peak-hour capacity is also exceeded, the roadway segment is considered to be operating at an unsatisfactory LOS. Although the roadway segment may seem to be operating with unsatisfactory LOS when the daily volume is examined, it is not considered unsatisfactory LOS if the peak-hour traffic volumes does not exceed the capacity. This is because traffic along a roadway segment will be greatest during the peak commute hours. As a result, if traffic operations are satisfactory during the peak hour, when traffic volumes are highest, then the segment will also operate at satisfactory LOS during the remaining off-peak hours of the day.

Level of Service Standard. According to the City general plan circulation element, the city considers LOS C as the upper limit of satisfactory operations except for intersections (both signalized and unsignalized) and roadway segments located within 0.5 mile from direct access to an interstate freeway, where LOS D is considered satisfactory. Mitigation is required for any intersection or roadway segment where project traffic causes the intersection to deteriorate from satisfactory to unsatisfactory operation. The City does not have an adopted criterion that defines significant impact at an existing deficient intersection or roadway segment; therefore, criteria were developed in coordination with the City to address this potential condition. If an intersection or roadway segment is already operating at unsatisfactory level of service, an increase of 5 percent (addition of 0.05) to the v/c ratio or a change in letter grade would constitute a significant project impact. An increase of 0.05 in the v/c ratio would be considered a measurable worsening of the intersection or roadway operations and therefore would constitute a significant project impact. A change in letter grade would be considered a perceivable worsening to a motorist and therefore would constitute a significant project impact. If an unsignalized intersection is already operating at unsatisfactory LOS C (LOS D within 0.5 mile of freeway access), then the addition of more than 5 percent of the total traffic at the intersection or a change in letter grade would be considered a significant project impact.

The Town of Loomis was contacted to determine the LOS standard and significance criteria for intersections and roadway segments within the Town of Loomis. LSA was directed by Town staff to apply the same LOS standard and significance criteria to Loomis intersections and roadway segments as applied in the City of Rocklin.

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Study Area. The study area was developed in consultation with the City and based on input received in response to the Notice of Preparation for the project. Arterial street intersections that were most likely to be impacted by travel to and from the project were included in the study area. Existing travel patterns in the project area that the project could impact were considered, including intersections located north of the study area within the Town of Loomis. Three intersections were added to the study area to ensure that the greatest area of potential impact was included in the study. In addition, segments of I-80 and SR-65 were added to the study area at the request of Caltrans. The freeway segment analysis is included in the "Special Issues" section of this report.

Of the 21 study area intersections, 12 are located within 0.5 mile from direct access to an interstate freeway while the remaining 9 intersections are outside of the 0.5-mile criterion. Levels of service will be analyzed at the following study area intersections for the a.m., p.m., and Saturday peak hours for each development scenario. Intersections within 0.5 mile from a freeway access location (where the LOS D standard would apply) are noted with an asterisk (*). The jurisdiction of intersections located outside of the City of Rocklin are indicated in parentheses after the intersection name.

1. Pacific Street/Rocklin Road
2. Granite Drive/Rocklin Road*
3. I-80 westbound ramp/Rocklin Road*
4. I-80 eastbound ramp/Rocklin Road*
5. Dominguez Road (Del Mar Avenue)/Pacific Street
6. Granite Drive/Dominguez Road
7. Sierra College Boulevard/Taylor Road* (Loomis)
8. Sierra College Boulevard/Brace Road* (Loomis)
9. Sierra College Boulevard/Granite Drive*
10. Sierra College Boulevard/I-80 Westbound Ramp*
11. Sierra College Boulevard/I-80 Eastbound Ramp*
12. Sierra College Boulevard/Dominguez Road* (Future Intersection)
13. Sierra College Boulevard/Rocklin Road
14. Horseshoe Bar Road/Taylor Road* (Loomis)
15. Horseshoe Bar Road/I-80 Westbound Ramp* (Loomis)
16. Horseshoe Bar Road/I-80 Eastbound Ramp* (Loomis)
17. Barton Road/Brace Road (Loomis)
18. Barton Road/Rocklin Road (Loomis)
19. Sierra College Boulevard/King Road (Loomis)
20. Sierra College Boulevard/English Colony Way (Placer County)
21. Taylor Road/King Road (Loomis)

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The following roadway segments were included in the study area. Roadway segments located within 0.5 mile of direct access to an interstate freeway, where LOS D is considered satisfactory, are noted with an asterisk (*).

- Taylor Road between King Road and Horseshoe Bar Road (Loomis)
- Taylor Road between Horseshoe Bar Road and Sierra College Boulevard (Loomis)
- Pacific Street between Sierra College Boulevard and Dominguez Road
- Pacific Street between Dominguez Road and Rocklin Road
- Rocklin Road between Pacific Street and Granite Drive *
- Rocklin Road between I-80 and Sierra College Boulevard *
- Rocklin Road between Sierra College Boulevard and Barton Road (Loomis)
- Barton Road between Rocklin Road and Brace Road (Loomis)
- Horseshoe Bar Road between I-80 and Brace Road * (Loomis)
- Brace Road between I-80 and Barton Road (Loomis)
- Brace Road between I-80 and Sierra College Boulevard (Loomis)
- Sierra College Boulevard between English Colony Way and King Road (Placer County)
- Sierra College Boulevard between King Road and Taylor Road (Loomis)
- Sierra College Boulevard between Taylor Road and I-80 *
- Sierra College Boulevard between I-80 and Dominguez Road *
- Sierra College Boulevard between Dominguez Road and Rocklin Road
- Granite Drive between Dominguez Road and Sierra College Boulevard
- Granite Drive between Dominguez Road and Rocklin Road
- Dominguez Road between Taylor Road and Granite Drive
- King Road between Sierra College Boulevard and Taylor Road (Loomis)

Further analysis for a roadway segment forecast to operate beyond the LOS C or D threshold of the daily capacities includes an analysis of the a.m. and p.m. peak-hour directional volumes. The a.m. and p.m. peak-hour v/c ratios were evaluated based on per-lane capacity of 1,650 vehicles per hour. The location of the study intersections and study roadway segments is illustrated in Figure 3.

EXISTING CONDITIONS

Roadway Network

The existing intersection geometrics and traffic control at study area intersections are illustrated in Figure 4. The roadways that will provide access to the project are described below:

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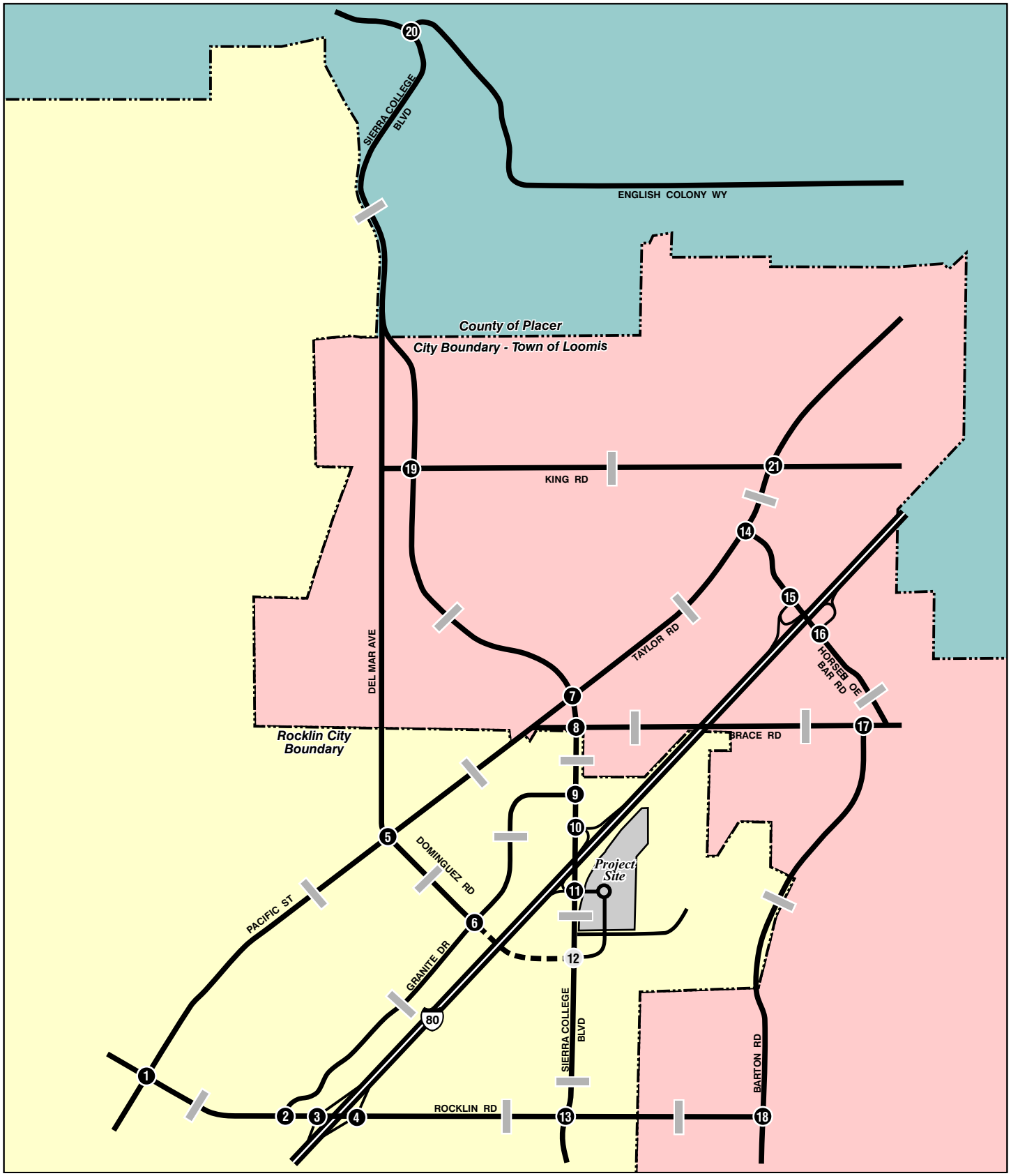


LSA

FIGURE 3

LEGEND

1 - Study Area Intersection

12 - Future Intersection

- Study Area Roadway Segment

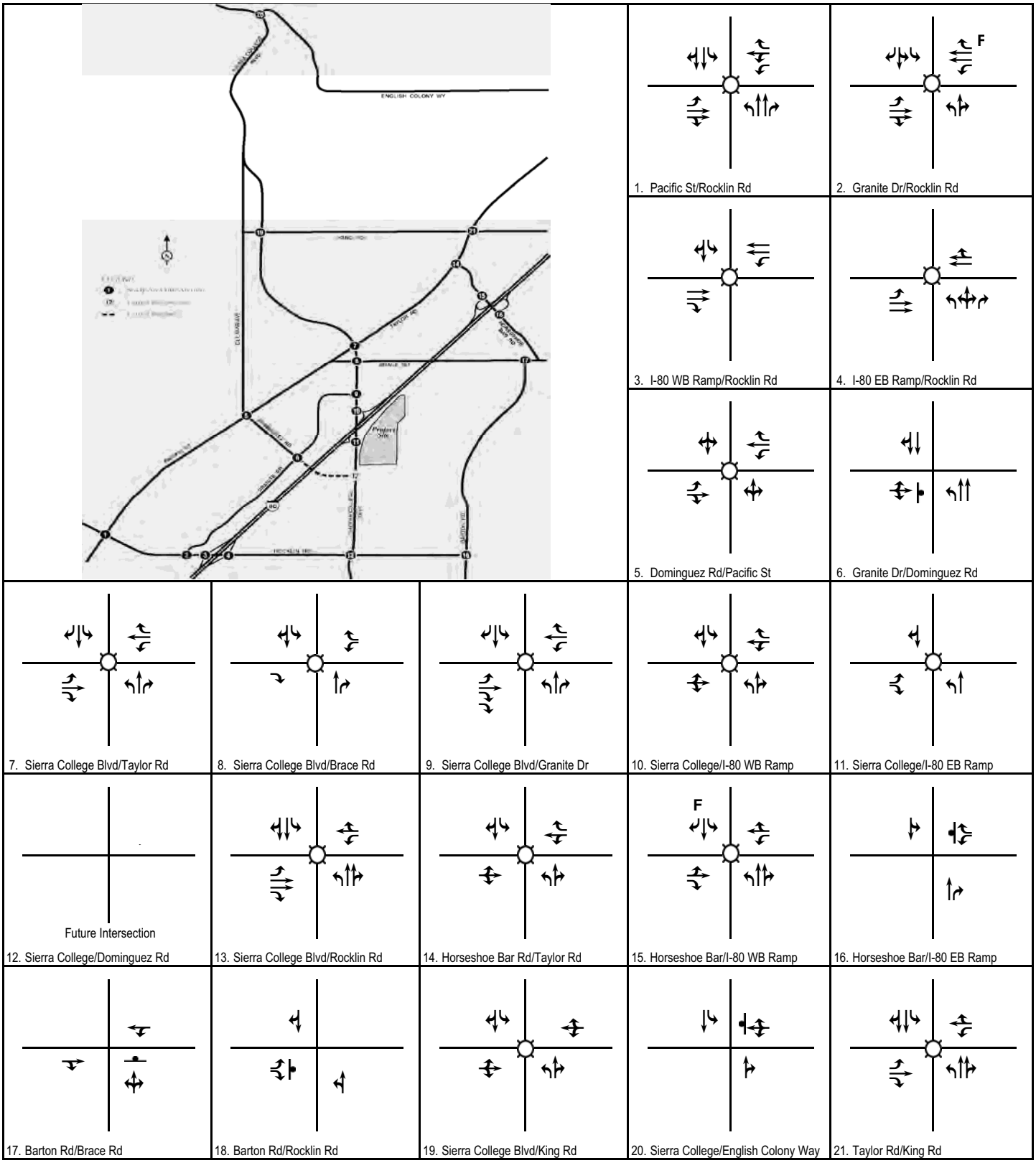
- Future Roadway

N

SCHEMATIC - NOT TO SCALE

Rocklin Crossings

Study Intersections and Roadway Segments



LSA

FIGURE 4

Legend

Signal

Stop Sign

F Free Right Turn

Rocklin Crossings

Existing Geometrics and Traffic Control

- **Interstate 80 (I-80).** I-80 is an interstate highway providing inter-regional access in the vicinity of the project. Throughout the study area, I-80 generally travels in a southwest to northeast direction. Interchanges along I-80 near the project site are provided at Rocklin Road, Sierra College Boulevard, and Horseshoe Bar Road. Direct access to the project site will be provided from the I-80 eastbound ramps at Sierra College Boulevard.
- **State Route 65 (SR-65).** SR-65 provides regional access in the vicinity of the project. SR-65 runs generally northwest from I-80 and joins SR-70 near the town of Marysville. Near the I-80 connector, SR-65 is a four-lane expressway with interchanges at N. Harding Boulevard/Stanford Ranch Road, Pleasant Grove Boulevard, Blue Oaks Boulevard, and Washington Boulevard.
- **Pacific Street.** Pacific Street is a two-lane roadway located east of Granite Drive, a four-lane roadway from Rocklin Road to Sierra Meadows Drive, and a two-lane roadway north of Sierra Meadows Drive. Pacific Street is classified as an Arterial in the City General Plan Circulation Element and is classified as a Truck Route by the City. This roadway provides travel throughout the entire City limits. Pacific Street becomes Taylor Road east of Sierra College Drive.
- **Granite Drive.** Granite Drive is a four-lane southwest-northeast roadway located west of I-80. Granite Drive is classified as an Arterial in the City General Plan Circulation Element. Granite Drive runs from Rocklin Road in the south and terminates at Sierra College Boulevard just north of the project site. Granite Drive is classified as a Truck Route from Dominguez Road to Sierra College Boulevard.
- **Sierra College Boulevard.** Sierra College Boulevard is a north-south roadway that forms the western boundary of the project site. This roadway is classified as an Arterial roadway with an ultimate six-lane cross-section in the City's General Plan Circulation Element. Sierra College Boulevard is designated as a Truck Route by the City. Within the study area, Sierra College Boulevard is a two-lane roadway north of Rocklin Road and a four-lane roadway immediately south of Rocklin Road.

Direct access to the project will be provided via three locations on Sierra College Boulevard.

- **Rocklin Road.** Rocklin Road is an east-west roadway located south of the project site. West of Sierra College Boulevard, Rocklin Road is a four-lane roadway. Immediately east of Sierra College Boulevard, there are two eastbound and one westbound travel lanes. Farther east, Rocklin Road becomes a two-lane roadway and terminates at Barton Road.
- **Dominguez Road.** Dominguez Road is classified as a Collector roadway on the City's General Plan. North of Pacific Street, Dominguez Road becomes Del Mar Avenue. Dominguez Road/Del Mar Avenue is currently a two-lane undivided roadway. Currently, Dominguez Road terminates at Granite Drive, west of I-80. Dominguez Drive is planned to be extended across I-80 and will become the west leg of the southern project driveway. The Dominguez Road extension is included in the City's Traffic Impact Fee and Capital Improvement Program.
- **Brace Road.** Brace Road is a two-lane east-west roadway located north of the project site. This roadway is located within the City of Loomis.
- **Horseshoe Bar Road.** This roadway is located within the City of Loomis and provides access to I-80. Horseshoe Bar Road is a two-lane roadway running in a northwest-southeast direction and is located north of the project site.

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Existing Traffic Volumes

Existing traffic counts at the 21 study intersections were collected in October 2006 (a.m. and p.m. peak hours) and September 2006 (Saturday peak hour). The traffic counts are provided in Appendix A. These counts were taken during a nonholiday period when schools were in session and therefore include the traffic generated by Sierra College and all schools within the study area. The existing a.m. and p.m. peak-hour and Saturday peak-hour traffic volumes are illustrated in Figures 5 and 6.

Existing Levels of Service

Levels of service at study area intersections and roadway segments were calculated for the existing conditions and are summarized in Tables A and B. The existing LOS worksheets are provided in Appendix B.

As shown in Table A, the following two intersections are operating at an unsatisfactory LOS in the existing condition.

- Sierra College Boulevard/I-80 eastbound ramp
- Taylor Road/Horseshoe Bar Road

As shown in Table B, all but two roadway segments currently operate with satisfactory LOS, per City guidelines. The following roadway segments are currently operating at unsatisfactory LOS:

- Taylor Road between King Road and Horseshoe Bar Road
- Sierra College Boulevard between Taylor Road and I-80

PROJECT TRIP GENERATION AND DISTRIBUTION

The proposed project is a regional shopping center with approximately 543,500 sf of retail/ commercial use, including two major tenants (presently expected to be a Wal-Mart Supercenter and The Home Depot). An estimation of the number of vehicle trips was generated for the site using the trip rates from the Institute of Transportation Engineers (ITE) *Trip Generation*, 7th Edition, and the article, "Trip Generation Characteristics of Free-Standing Discount Superstores," *ITE Journal*, August 2006. The project trip generation is shown in Table C. As indicated in the table, the project is forecast to generate 18,788 daily trips, 617 a.m. peak-hour trips, 1,914 p.m. peak-hour trips, and 2,280 Saturday peak-hour trips.

As explained above, although *Trip Generation*, 7th Edition, is the industry-recognized source of trip generation information, this study departs from the approach employed in the ITE manual in one respect because of a study conducted of trips generated by superstores, the results of which were published in the August 2006 ITE Journal. This article proposes a higher trip generation rate for superstores than the one used in the ITE manual. Due to existence of an ongoing debate in some quarters about trip generation rates associated with Wal-Mart Supercenters, LSA employed a conservative approach that assumes the higher trip generation rate in the ITE Journal article. LSA took this approach, even though there are good reasons to question the high trip generation rate posited by the ITE Journal article.

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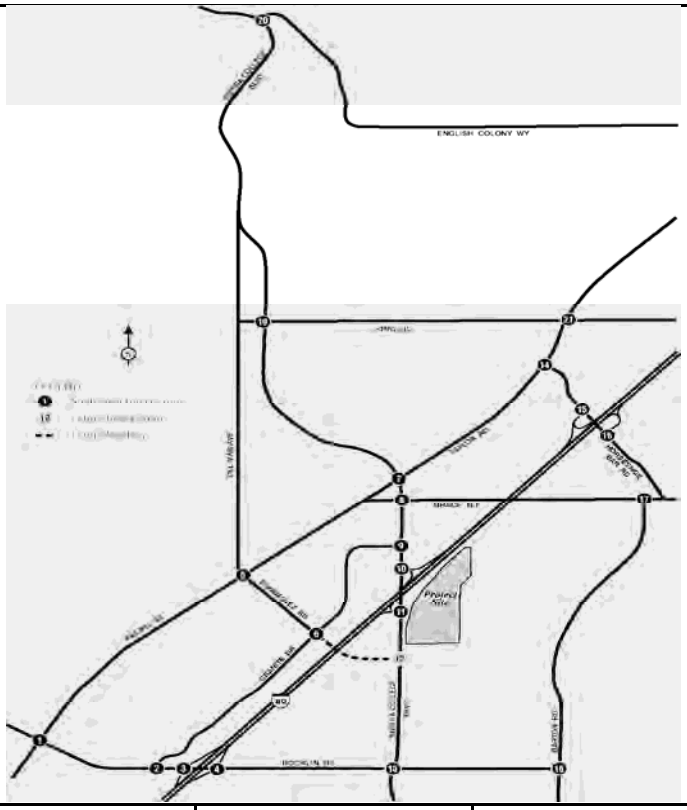


1 Pacific St/Rocklin Rd

19 / 21	404 / 514	183 / 122
22 / 34	153 / 113	43 / 23
25 / 41	289 / 443	496 / 509
99 / 221	71 / 148	370 / 595

2 Granite Dr/Rocklin Rd

104 / 357	7 / 16	304 / 489
128 / 233	713 / 676	12 / 23
17 / 23	12 / 14	11 / 35
567 / 586	528 / 745	6 / 40

3 I-80 WB Ramp/Rocklin Rd

244 / 258	2 / 2	157 / 52
620 / 686	412 / 516	
862 / 1102	339 / 503	

4 I-80 EB Ramp/Rocklin Rd

208 / 211	569 / 527	
570 / 548	2 / 1	735 / 602
47 / 119	631 / 1057	

5 Dominguez Rd/Pacific St

50 / 129	16 / 46	23 / 38
71 / 27	318 / 401	36 / 20
23 / 25	68 / 19	59 / 46
61 / 18	292 / 460	66 / 28

6 Granite Dr/Dominguez Rd

47 / 24	255 / 197	
36 / 60	70 / 63	
86 / 30	90 / 293	

7 Sierra College Blvd/Taylor Rd

167 / 109	426 / 341	23 / 26
65 / 152	171 / 305	67 / 97
153 / 120	243 / 551	142 / 253
31 / 36	232 / 266	172 / 207

8 Sierra College Blvd/Brace Rd

554 / 514	68 / 84	
58 / 87		
380 / 567	36 / 99	
76 / 92	67 / 75	

9 Sierra College Blvd/Granite Dr

63 / 67	476 / 504	103 / 70
61 / 131	25 / 32	34 / 178
152 / 96	368 / 526	74 / 72
41 / 35	30 / 20	126 / 112

10 Sierra College/I-80 WB Ramp

458 / 576	206 / 213	
460 / 560	35 / 38	
211 / 159	375 / 320	

11 Sierra College/I-80 EB Ramp

122 / 224	711 / 672	
206 / 211	115 / 31	
270 / 334	289 / 387	

12 Sierra College/Dominguez Rd

Future Intersection

13 Sierra College/Rocklin Rd

47 / 78	432 / 505	50 / 67
69 / 171	114 / 235	242 / 404
390 / 298	463 / 604	58 / 52
66 / 30	173 / 139	67 / 30

14 Horseshoe Bar Rd/Taylor Rd

6 / 10	359 / 409	457 / 409
14 / 7	67 / 12	22 / 8
6 / 8	269 / 476	66 / 104
406 / 572	14 / 13	45 / 77

15 Horseshoe Bar/I-80 WB Ramp

419 / 387	233 / 202	17 / 48
74 / 75	33 / 46	76 / 67
162 / 88	433 / 373	68 / 177
30 / 72	80 / 50	39 / 140

16 Horseshoe Bar/I-80 EB Ramp

245 / 245	98 / 98	
353 / 353	50 / 50	
312 / 312	55 / 55	

17 Barton Rd/Brace Rd

79 / 64	124 / 150	
133 / 143	155 / 72	
110 / 57	105 / 114	

18 Barton Rd/Rocklin Rd

98 / 55	72 / 43	
83 / 61	87 / 242	
240 / 153	55 / 68	

19 Sierra College Blvd/King Rd

17 / 3	425 / 298	100 / 63
3 / 21	16 / 14	4 / 4
2 / 2	190 / 487	18 / 39
65 / 88	11 / 4	41 / 15

20 Sierra College/English Colony

518 / 314	71 / 47	
257 / 559	1 / 4	
37 / 57	4 / 3	

21 Taylor Rd/King Rd

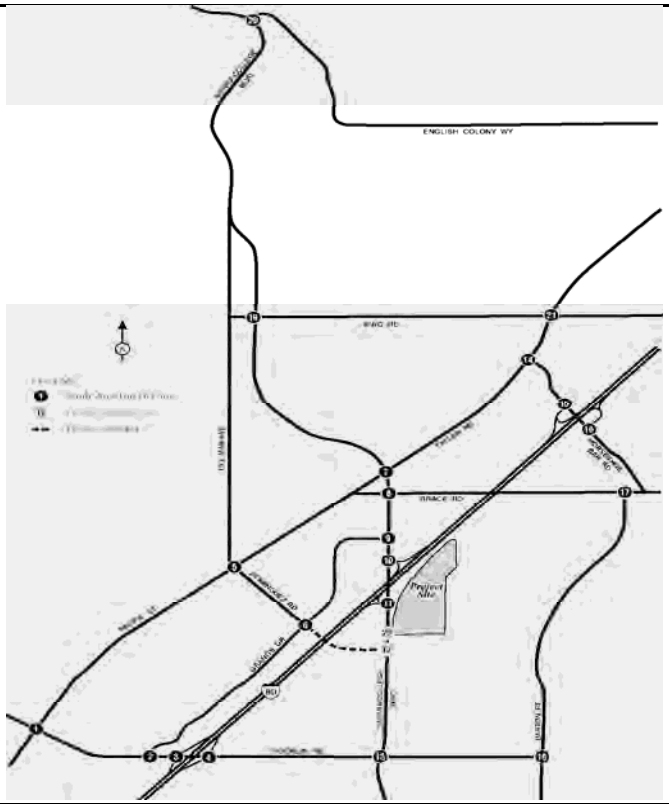
323 / 239	60 / 28	
211 / 67	96 / 91	242 / 317
229 / 362	376 / 282	67 / 114
119 / 32	102 / 83	103 / 95

FIGURE 5

123 / 456 AM / PM Peak Hour Volume

Rocklin Crossings

Existing Peak Hour Traffic Volumes



1 Pacific St/Rocklin Rd

16	304	110	114	48	304
22	56	22	15	276	397

2 Granite Dr/Rocklin Rd

129	22	448	295	380	35
212	378	11	32	16	29

3 I-80 WB Ramp/Rocklin Rd

357	1	301	379	145
645	72			

4 I-80 EB Ramp/Rocklin Rd

261	498
203	757
26	114

5 Dominguez Rd/Pacific St

20	10	5	5	245	15
13	286	8	5	9	7

6 Granite Dr/Dominguez Rd

10	243		
9	19	8	164

7 Sierra College Blvd/Taylor Rd

60	267	29	24	202	83
25	220	28	28	324	69

8 Sierra College Blvd/Brace Rd

374	31	35	43	
14		383	11	

9 Sierra College Blvd/Granite Dr

98	278	56	25	18	119
107	19	78	146	298	94

10 Sierra College/I-80 WB Ramp

323	113	28	162
		489	69

11 Sierra College/I-80 EB Ramp

78	407		
247	192	151	311

12 Sierra College/Dominguez Rd

Future Intersection

13 Sierra College/Rocklin Rd

68	328	39	25	167	44
84	152	188	203	376	34

14 Horseshoe Bar Rd/Taylor Rd

6	312	300	273	12	102
6	16	8	14	333	99

15 Horseshoe Bar/I-80 WB Ramp

202	172	40	60	58	125
48	43	39	103	288	80

16 Horseshoe Bar/I-80 EB Ramp

256	88	206	46
		257	45

17 Barton Rd/Brace Rd

		56	60
52	21	22	90

18 Barton Rd/Rocklin Rd

96	38		
75	173	85	48

19 Sierra College Blvd/King Rd

2	289	50	47	10	38
2	14	8	6	267	19

20 Sierra College/English Colony

288	31	21	3
		278	4

21 Taylor Rd/King Rd

49	244	19	176	55	110
54	47	171	159	274	110

FIGURE 6

Rocklin Crossings

Existing Saturday Peak Hour Traffic Volumes

Table A: Existing Peak Hour Intersection Level of Service Summary

	Intersection	Existing Condition					
		AM Peak Hour		PM Peak Hour		Saturday	
		V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS
1	Rocklin Road/Pacific Street [1]	0.734	C	0.709	C	0.453	A
2	Rocklin Road/Granite Drive	0.389	A	0.637	B	0.452	A
3	Rocklin Road/I-80 Westbound Ramps	0.663	B	0.834	D	0.534	A
4	Rocklin RoadI-80 Eastbound Ramps	0.716	C	0.757	C	0.433	A
5	Dominguez Road/Pacific Street [1]	0.391	A	0.454	A	0.230	A
6	Dominguez Road/Granite Drive [1]	11.7 sec	B	11.9 sec	B	9.9 sec	A
7	Sierra College Boulevard/Taylor Road (Loomis)	0.614	B	0.728	C	0.423	A
8	Sierra College Boulevard/Brace Road (Loomis)	0.440	A	0.522	A	0.295	A
9	Sierra College Boulevard/Granite Drive	0.521	A	0.534	A	0.384	A
10	Sierra College Boulevard/I-80 Westbound Ramps	0.740	C	0.747	C	0.575	A
11	Sierra College Boulevard/I-80 Eastbound Ramps	0.892	D	0.970	E	0.639	B
12	Sierra College Boulevard/Dominguez Road	-	-	-	-	-	-
13	Sierra College Boulevard/Rocklin Road [1]	0.591	A	0.660	B	0.443	A
14	Taylor Road/Horseshoe Bar Road (Loomis)	0.837	D	0.998	E	0.626	B
15	Horseshoe Bar Road/I-80 Westbound Ramps (Loomis)	0.392	A	0.369	A	0.310	A
16	Horseshoe Bar Road/I-80 Eastbound Ramps (Loomis)	16.4 sec	C	16.0 sec	C	12.1 sec	B
17	Barton Road/Brace Road [1] (Loomis)	16.1 sec	C	15.0 sec	C	9.5 sec	A
18	Barton Road/Rocklin Road [1] (Loomis)	15.6 sec	C	10.9 sec	B	10.2 sec	B
19	Sierra College Boulevard/King Road [1] (Loomis)	0.390	A	0.465	A	0.301	A
20	Sierra College Boulevard/English Colony Way [1] (Placer County)	10.9 sec	B	13.4 sec	B	10.5 sec	B
21	Taylor Road/King Road [1] (Loomis)	0.600	A	0.602	B	0.407	A

Notes:

ICU V/C ratio is used for signalized intersections. HCM delay in seconds is used for unsignalized intersections.

[1] LOS C required for these intersections. LOS D acceptable for all other intersections.

☐ Exceeds level of service criteria

Table B: Existing Daily Roadway Segment Level of Service Summary

Roadway	Segment	Configuration	Capacity	Weekday			Saturday		
				Volume	V/C	LOS	Volume	V/C	LOS
Taylor Road	King Road and Horseshoe Bar Road [1] (Loomis)	Two-lane Collector	15,000	17,060	1.14	F	11,370	0.76	C
	Horseshoe Bar Road and Sierra College Boulevard[1] (Loomis)	Two-lane Collector	15,000	10,673	0.71	B	3,500	0.23	A
Pacific Street	Sierra College Boulevard and Dominguez Road [1]	Two-lane Collector	15,000	11,578	0.77	C	5,880	0.39	A
	Dominguez Road and Rocklin Road [1]	Four-lane Undivided Arterial	30,000	15,889	0.53	A	6,820	0.23	A
Rocklin Road	Pacific Street and Granite Drive	Four-lane Undivided Arterial	30,000	21,211	0.71	B	11,040	0.37	A
	I-80 and Sierra College Boulevard	Four-lane Undivided Arterial	30,000	9,989	0.33	A	13,090	0.44	A
	Sierra College Boulevard and Barton Road [1] (Loomis)	Two-lane Collector	15,000	5,176	0.35	A	4,060	0.27	A
Barton Road	Rocklin Road and Brace Road [1] (Loomis)	Two-lane Collector	15,000	3,354	0.22	A	2,040	0.14	A
Horseshoe Bar Road	I-80 and Brace Road (Loomis)	Two-lane Collector	15,000	6,101	0.41	A	6,460	0.43	A
Brace Road	I-80 and Barton Road [1] (Loomis)	Two-lane Collector	15,000	4,006	0.27	A	1,940	0.13	A
	I-80 and Sierra College Boulevard [1] (Loomis)	Two-lane Collector	15,000	3,408	0.23	A	560	0.04	A
Sierra College Boulevard	English Colony Way and King Road [1] (Placer County)	Two-lane Collector	15,000	9,600	0.64	B	6,570	0.44	A
	King Road and Taylor Road [1] (Loomis)	Two-lane Collector	15,000	10,560	0.70	B	7,080	0.47	A
	Taylor Road and I-80	Two-lane Collector	15,000	17,566	1.17	F	8,610	0.57	A
	I-80 and Dominguez Road	Two-lane Collector	15,000	13,275	0.88	D	10,400	0.69	B
	Dominguez Road and Rocklin Road [1]	Two-lane Collector	15,000	13,275	0.88	D	10,840	0.72	C
Granite Drive	Dominguez Road and Sierra College Boulevard [1]	Four-lane Undivided Arterial	30,000	6,178	0.21	A	4,350	0.15	A
	Dominguez Road and Rocklin Road [1]	Four-lane Undivided Arterial	30,000	8,258	0.28	A	7,850	0.26	A
Dominguez Road	Taylor Road and Granite Drive [1]	Two-lane Collector	15,000	2,382	0.16	A	510	0.03	A
King Road	Sierra College Boulevard and Taylor Road [1] (Loomis)	Two-lane Collector	15,000	5,610	0.37	A	3,460	0.23	A

Notes:

[1] LOS C required for these segments. LOS D acceptable for all other segments.

☐ Exceeds level of service criteria

Table C: Rocklin Crossings Trip Generation

Land Use	Size	Units	ADT	A.M. Peak Hour			P.M. Peak Hour			Saturday		
				In	Out	Total	In	Out	Total	In	Out	Total
Discount Superstore	231.353	TSF										
Trip Rate [1]			49.21	0.94	0.90	1.84	2.75	2.75	5.50	2.56	2.45	5.01
Trip Generation			11,385	217	209	426	636	636	1,272	591	568	1,159
Home Improvement Store [2]	141.038	TSF										
Trip Rate [3]			29.80	0.65	0.55	1.20	1.15	1.30	2.45	2.86	2.54	5.40
Trip Generation			3,065	67	57	123	118	134	252	294	261	555
Shopping Center	171.109	TSF										
Trip Rate [4,5]			37.55	0.49	0.31	0.80	1.69	1.83	3.52	2.49	2.30	4.79
Trip Generation			6,425	83	53	136	289	313	602	426	393	819
Total Site Gross Trips			20,875	367	318	685	1,044	1,083	2,127	1,311	1,222	2,533
Total Site Pass-by Trips [6]	10.0%		-2088	-37	-32	-69	-104	-108	-213	-131	-122	-253
Total Site Trip Generation	**543.500**	**TSF**	**18,788**	**330**	**287**	**617**	**939**	**975**	**1,914**	**1,180**	**1,100**	**2,280**

Note: volumes shown rounded to nearest integer

[1] Trip generation based on rates documented in *Trip Generation Characteristics of Free-Standing Discount Superstores* , ITE Journal, August 2006.

[2] Trip generation of Home Improvement Store does not include garden center (34,760 sq. ft) and vestibules (3,411 sq. ft) per description of land use in ITE Trip Generation (7th Edition).

[3] Trip generation based on rates for Land Use 862 - Home Improvement Superstore from *ITE Trip Generation (7th Edition)*

[4] Average rate derived from total site generation (543.5 TSF) using fitted curve equations for Land Use 820 - Shopping Center from *ITE Trip Generation (7th Edition)*

[5] ADT: Ln(T) = 0.65 Ln(X) + 5.83; AM: Ln(T) = 0.60 Ln(X) + 2.29; PM: Ln(T) = 0.66 Ln(X) +3.40; Saturday: Ln(T) = 0.63 Ln(T) + 6.23

[6] Pass-by trip percentages from ITE *Trip Generation Handbook,* 2004 vary between 28% and 48% for various land uses.
However, a 10% estimate has been used as a conservative average pass-by trip reduction rate for the entire retail center.

TSF = Thousand square feet

Specifically, the ITE Journal article focused on a small sample of five Wal-Mart Supercenters in Texas and Oklahoma, and found that p.m. trip generation for the five stores ranges from 4.16 to 6.67, with an average of 5.5 trips per 1,000 square feet (compared to the *Trip Generation* p.m. peak-hour trip generation rate of 3.87 per thousand square feet). There are at least three reasons why this result may not be immediately applicable to the proposed project. First, the sample stores are located in Texas and Oklahoma and do not necessarily reflect conditions in Northern California. Demographics, proximity to the stores, and other factors assumed in the ITE Journal Study have not been demonstrated to be the same as in Northern California. In contrast, information contained in *Trip Generation*, 7th edition, is comprised of a blend of locations throughout the U.S., including California. Second, the survey data are incomplete and did not include information regarding a.m. peak or daily trip characteristics. Third, the average rate of the sample stores has not been officially accepted by ITE as the rate that should be applied to discount supercenters from now on; and given the small sample size used for the ITE Journal article, the rate recommended in the article may not be widely accepted as reliable until additional survey information becomes available. If the five-store Texas/Oklahoma data were officially accepted and incorporated into the existing ITE manual data for Free Standing Discount Superstore, the data would be added to the existing data points from the previous field studies, with a new average derived from the augmented data set. The resulting average might well yield a trip generation rate considerably lower than the article found to occur in Texas and Oklahoma.

It should be noted that the trip rates contained in *Trip Generation, 7th Edition*, for Home Improvement Store include the vehicle trips generated by an adjacent garden center. Calculation of trip generation involves taking the product of the trip generation rate (from ITE) and the square footage of the Home Improvement Store building only, not including the garden center. As noted in the description of the land use code for Home Improvement Store, the garden center should not be included in the building's overall gross floor area for the purpose of calculating the vehicle trip generation. The vehicle trip generation shown in Table C for the home improvement store is based on the floor area without the garden center. However, trips generated by the garden center are still included in the trip generation because they are inherent in the trip rate per thousand square feet.

For further clarification the ITE trip rate are calculated as follows:

- All trips coming into and out of the Home Improvement Store are counted.
- These trips are then divided by the building square footage (in thousand square feet) only, deducting the garden center.
- The resultant trips per thousand square feet are the trip generation factors; while the factor is only applied to the building square footage, it does reflect the trips generated by the garden center.

Many of the trips generated by a retail shopping center such as the Rocklin Crossings project would be pass-by trips, or trips whose primary destination is not the shopping center. These would include trips such as a work-to-home trip that stops at a retail center on the way. These trips would not be new trips generated by the project; rather, they are trips that are already on the roadway network that would make a stopover at the proposed shopping center. ITE's *Trip Generation Handbook* (2004) provides estimates of pass-by trip percentages for various types of land uses. The *Trip Generation Handbook* estimates pass-by trips to vary between 28 percent and 48 percent for the land uses shown in Table C. Rather than apply the more aggressive trip reduction of 28 to 48 percent, a conservative

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estimate of 10 percent average pass-by trip reduction rate was applied to the trips generated by the entire retail center.

Project trips were distributed throughout the study area using the City's traffic analysis model. The select zone model assignments for the proposed project were used to obtain the trip distribution. The regional trip distribution percentages from the traffic model and the resulting project trips at each intersection are illustrated in Figures 7 and 8. It should be noted that the distribution percentages shown in the figures are the generalized distribution for illustration only and do not reflect all project trips that may be destined within the study area. This interaction between land uses in the study area is reflected in the actual trip assignment volumes.

EXISTING PLUS PROJECT

Traffic volumes generated by the proposed project were added to the existing traffic volumes and LOS were calculated for the existing plus project scenario. Because construction of the project will follow construction of other previously approved projects in the study area, the existing plus project conditions are not the real-world physical condition that the project will affect. However, an existing plus project condition has nevertheless been analyzed for disclosure purposes. The existing plus project weekday and Saturday peak-hour traffic volumes are illustrated in Figures 9 and 10. The LOS for study area intersections and roadway segments in the existing plus project scenario is shown in Tables D and E. The existing plus project LOS worksheets are provided in Appendix C. The short-term geometrics and traffic control for project scenarios are illustrated in Figure 11.

As shown in Table D, the two intersections, Sierra College Boulevard/I-80 Eastbound Ramp and Taylor Road/Horseshoe Bar Road that operate at LOS E in the existing condition would operate at LOS A and LOS F respectively, with the addition of project traffic. The project would add more than 0.05 to the intersection of Sierra College Boulevard/I-80 Eastbound Ramp. However, as will be discussed later in this report, the City's Traffic Fee Program has a project to improve the I-80/Sierra College Boulevard interchange, which would mitigate this unsatisfactory LOS. The Rocklin Crossings project would be subject to the City's Traffic Fee and thus would contribute its fair share towards mitigating this impact. The intersection of Taylor Road/Horseshoe Bar Road is forecast to operate at LOS F (v/c = 1.029) in the existing plus project condition. The project would have a significant impact on the intersection of Taylor Road/Horseshoe Bar Road in the existing plus project condition.

As shown in Table E, most of the study area roadway segments are forecast to operate within their daily roadway capacities in the existing plus project condition except for the following four segments:

- Taylor Road between King Road and Horseshoe Bar Road (Loomis)
- Taylor Road between Sierra College Boulevard and Dominguez Road
- Sierra College Boulevard between Taylor Road and I-80
- Sierra College Boulevard between Dominguez Road and Rocklin Road

A directional peak-hour roadway segment analysis was prepared for these four segments and is shown in Table F. In both a.m. and p.m. peak hours, the four affected roadway segments will operate

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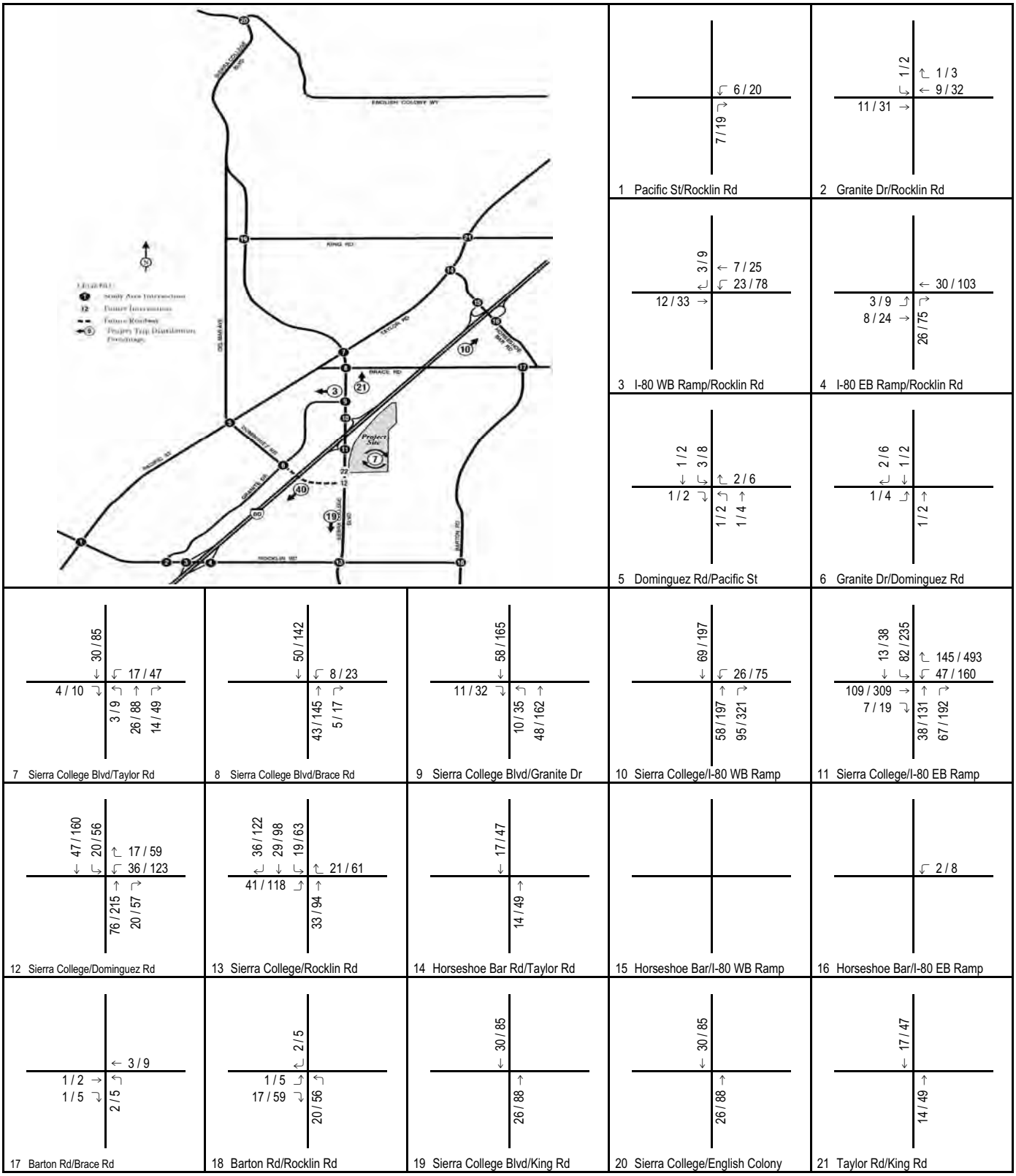


FIGURE 7

123 / 456 AM / PM Peak Hour Volume

Rocklin Crossings

Project Trip Distribution and Peak Hour Project Trips

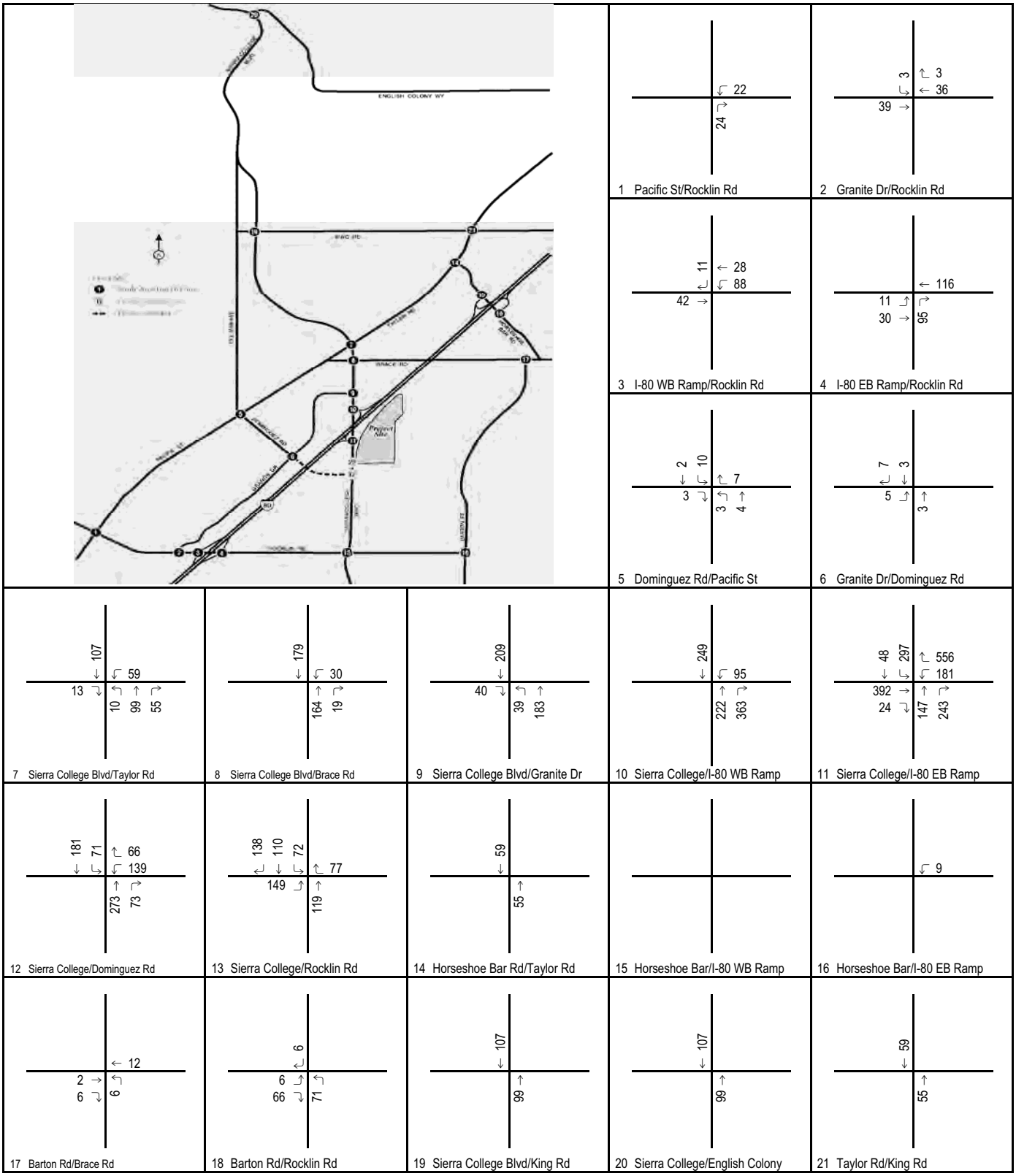
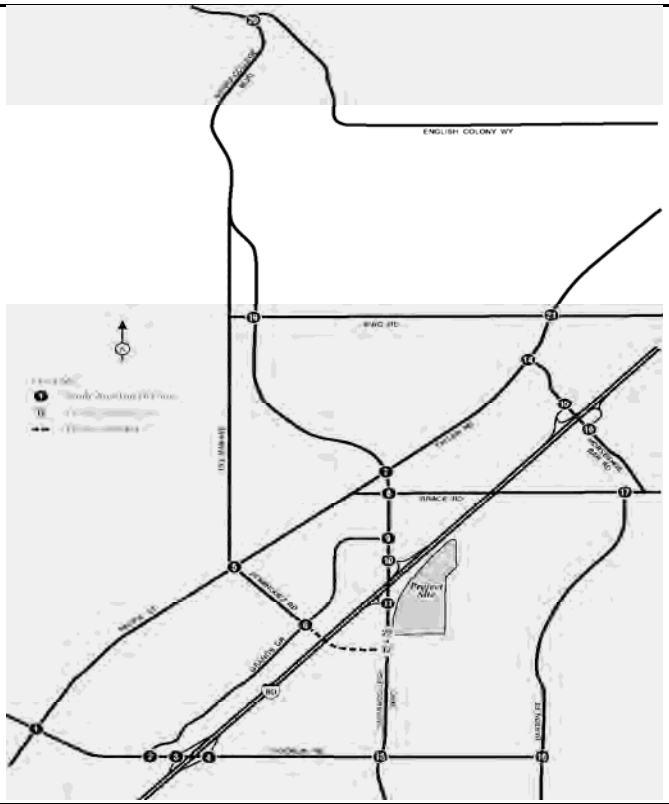


FIGURE 8

Rocklin Crossings

Saturday Peak Hour Project Trips



1 Pacific St/Rocklin Rd

19 / 21	404 / 514	183 / 122
22 / 34	153 / 113	43 / 23
25 / 41	289 / 443	503 / 528
99 / 221	71 / 148	376 / 615

2 Granite Dr/Rocklin Rd

104 / 357	7 / 16	305 / 491
128 / 233	724 / 707	12 / 23
17 / 23	12 / 14	11 / 35
568 / 589	537 / 777	6 / 40

3 I-80 WB Ramp/Rocklin Rd

247 / 267	2 / 2	157 / 52
632 / 719	412 / 516	
869 / 1127	362 / 581	

4 I-80 EB Ramp/Rocklin Rd

211 / 220	577 / 551	
570 / 548	2 / 1	761 / 677
47 / 119	661 / 1160	

5 Dominguez Rd/Pacific St

50 / 129	17 / 48	26 / 46
71 / 27	318 / 401	37 / 22
24 / 27	69 / 23	59 / 46
63 / 24	292 / 460	66 / 28

6 Granite Dr/Dominguez Rd

49 / 30	256 / 199	
37 / 64	70 / 63	
86 / 30	91 / 295	

7 Sierra College Blvd/Taylor Rd

167 / 109	456 / 426	23 / 26
65 / 152	171 / 305	71 / 107
156 / 129	269 / 639	156 / 302
31 / 36	232 / 266	189 / 254

8 Sierra College Blvd/Brace Rd

604 / 656	68 / 84	
58 / 87		
423 / 712	41 / 116	
76 / 92	75 / 98	

9 Sierra College Blvd/Granite Dr

63 / 67	534 / 669	103 / 70
61 / 131	25 / 32	45 / 210
162 / 131	416 / 688	74 / 72
41 / 35	30 / 20	126 / 112

10 Sierra College/I-80 WB Ramp

527 / 773	206 / 213	
518 / 757	130 / 359	
211 / 159	401 / 395	

11 Sierra College/I-80 EB Ramp

122 / 224	724 / 710	82 / 235
206 / 211	109 / 309	122 / 50
597 / 852	67 / 192	
103 / 349	47 / 160	

12 Sierra College/Dominguez Rd

878 / 851	20 / 56	
674 / 1020	20 / 57	
17 / 59	36 / 123	

13 Sierra College/Rocklin Rd

83 / 200	461 / 603	69 / 130
110 / 289	114 / 235	242 / 404
390 / 298	496 / 698	58 / 52
87 / 91	173 / 139	67 / 30

14 Horseshoe Bar Rd/Taylor Rd

6 / 10	376 / 456	457 / 409
14 / 7	67 / 12	22 / 8
6 / 8	283 / 525	66 / 104
406 / 572	14 / 13	45 / 77

15 Horseshoe Bar/I-80 WB Ramp

419 / 387	233 / 202	17 / 48
74 / 75	33 / 46	76 / 67
162 / 88	433 / 373	68 / 177
30 / 72	80 / 50	39 / 140

16 Horseshoe Bar/I-80 EB Ramp

245 / 245	98 / 98	
353 / 353	50 / 50	
312 / 312	57 / 63	

17 Barton Rd/Brace Rd

80 / 66	125 / 155	
135 / 148	155 / 72	
113 / 66	105 / 114	

18 Barton Rd/Rocklin Rd

100 / 60	72 / 43	
84 / 66	104 / 301	
260 / 209	55 / 68	

19 Sierra College Blvd/King Rd

17 / 3	455 / 383	100 / 63
3 / 21	16 / 14	4 / 4
2 / 2	216 / 575	18 / 39
65 / 88	11 / 4	41 / 15

20 Sierra College/English Colony

548 / 399	71 / 47	
283 / 647	1 / 4	
37 / 57	4 / 3	

21 Taylor Rd/King Rd

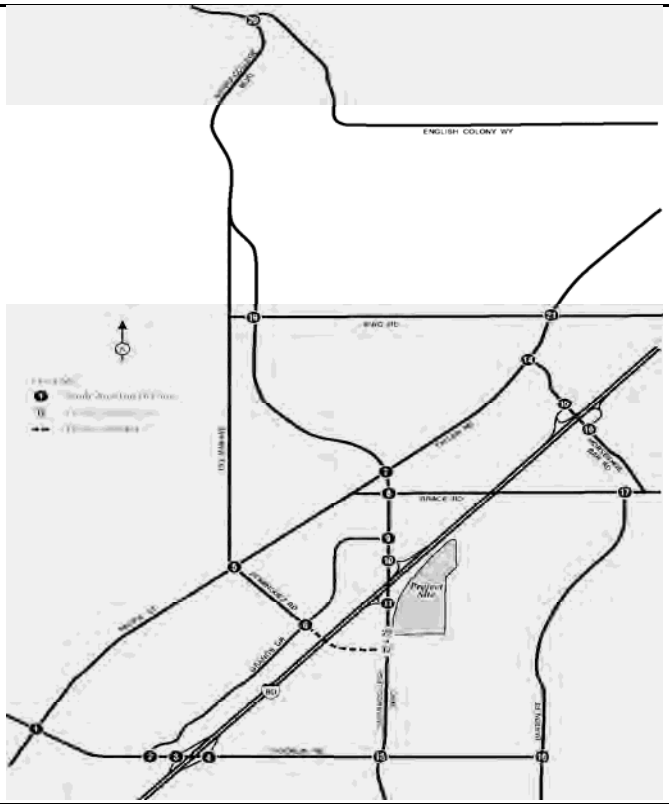
340 / 286	60 / 28	
211 / 67	96 / 91	242 / 317
229 / 362	390 / 331	67 / 114
119 / 32	102 / 83	103 / 95

FIGURE 9

123 / 456 AM / PM Peak Hour Volume

Rocklin Crossings

Existing Plus Project Peak Hour Traffic Volumes



1 Pacific St/Rocklin Rd

16	304	110	114	48	326
22	56	22	15	276	421

2 Granite Dr/Rocklin Rd

129	22	451	298	416	35
212	417	11	32	16	29

3 I-80 WB Ramp/Rocklin Rd

368	1	301	407	233
687	72			

4 I-80 EB Ramp/Rocklin Rd

261	614	
214	787	26 209

5 Dominguez Rd/Pacific St

20	12	15	12	245	15
13	286	11	8	13	7

6 Granite Dr/Dominguez Rd

17	246		
14	19	8	167

7 Sierra College Blvd/Taylor Rd

60	374	29	24	202	142
25	220	41	38	423	124

8 Sierra College Blvd/Brace Rd

553	31	35	73	
14		547	30	

9 Sierra College Blvd/Granite Dr

98	487	56	25	18	119
107	19	118	185	481	94

10 Sierra College/I-80 WB Ramp

572	113	28	257	
		711	432	

11 Sierra College/I-80 EB Ramp

78	455	297	394	181	
247	392	216	609	243	

12 Sierra College/Dominguez Rd

780	71	66	139	
	714	73		

13 Sierra College/Rocklin Rd

206	438	111	102	167	44
233	152	188	203	495	34

14 Horseshoe Bar Rd/Taylor Rd

6	371	300	273	12	102
6	16	8	14	388	99

15 Horseshoe Bar/I-80 WB Ramp

202	172	40	60	58	125
48	43	39	103	288	80

16 Horseshoe Bar/I-80 EB Ramp

256	88	206	55	
		257	45	

17 Barton Rd/Brace Rd

		68	60	
54	27	28	90	

18 Barton Rd/Rocklin Rd

102	38		
81	239	156	48

19 Sierra College Blvd/King Rd

2	396	50	47	10	38
2	14	8	6	366	19

20 Sierra College/English Colony

395	31	21	3	
		377	4	

21 Taylor Rd/King Rd

49	303	19	176	55	110
54	47	171	159	329	110

FIGURE 10

Rocklin Crossings

Existing Plus Project Saturday Peak Hour Traffic Volumes

Table D: Existing Plus Project Peak Hour Intersection Level of Service Summary

		Existing Condition						Existing Plus Project Condition					
		AM Peak Hour		PM Peak Hour		Saturday		AM Peak Hour		PM Peak Hour		Saturday	
	Intersection	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS
1	Rocklin Road/Pacific Street [1]	0.734	C	0.709	C	0.453	A	0.741	C	0.728	C	0.475	A
2	Rocklin Road/Granite Drive	0.389	A	0.637	B	0.452	A	0.392	A	0.648	B	0.465	A
3	Rocklin Road/I-80 Westbound Ramps	0.663	B	0.834	D	0.534	A	0.680	B	0.891	D	0.614	B
4	Rocklin RoadI-80 Eastbound Ramps	0.716	C	0.757	C	0.433	A	0.729	C	0.815	D	0.504	A
5	Dominguez Road/Pacific Street [1]	0.391	A	0.454	A	0.230	A	0.395	A	0.462	A	0.242	A
6	Dominguez Road/Granite Drive [1]	11.7 sec	B	11.9 sec	B	9.9 sec	A	11.8 sec	B	12.1 sec	B	10.2 sec	B
7	Sierra College Boulevard/Taylor Road (Loomis)	0.614	B	0.728	C	0.423	A	0.647	B	0.818	D	0.525	A
8	Sierra College Boulevard/Brace Road (Loomis)	0.440	A	0.522	A	0.295	A	0.477	A	0.630	B	0.416	A
9	Sierra College Boulevard/Granite Drive	0.521	A	0.534	A	0.384	A	0.566	A	0.681	B	0.561	A
10	Sierra College Boulevard/I-80 Westbound Ramps	0.740	C	0.747	C	0.575	A	0.320	A	0.360	A	0.254	A
11	Sierra College Boulevard/I-80 Eastbound Ramps	0.892	D	0.970	E	0.639	B	0.402	A	0.574	A	0.736	C
12	Sierra College Boulevard/Dominguez Road	-	-	-	-	-	-	-	-	-	-	-	-
13	Sierra College Boulevard/Rocklin Road [1]	0.591	A	0.660	B	0.443	A	0.650	B	0.786	C	0.672	B
14	Taylor Road/Horseshoe Bar Road (Loomis)	0.837	D	0.998	E	0.626	B	0.846	D	1.029	F	0.660	B
15	Horseshoe Bar Road/I-80 Westbound Ramps (Loomis)	0.392	A	0.369	A	0.310	A	0.392	A	0.369	A	0.310	A
16	Horseshoe Bar Road/I-80 Eastbound Ramps (Loomis)	16.4 sec	C	16.0 sec	C	12.1 sec	B	16.4 sec	C	16.1 sec	C	12.3 sec	B
17	Barton Road/Brace Road [1] (Loomis)	16.1 sec	C	15.0 sec	C	9.5 sec	A	16.4 sec	C	15.5 sec	C	9.7 sec	A
18	Barton Road/Rocklin Road [1] (Loomis)	15.6 sec	C	10.9 sec	B	10.2 sec	B	16.3 sec	C	11.8 sec	B	11.1 sec	B
19	Sierra College Boulevard/King Road [1] (Loomis)	0.390	A	0.465	A	0.301	A	0.410	A	0.521	A	0.366	A
20	Sierra College Boulevard/English Colony Way [1] (Placer County)	10.9 sec	B	13.4 sec	B	10.5 sec	B	11.2 sec	B	14.8 sec	B	11.5 sec	B
21	Taylor Road/King Road [1] (Loomis)	0.600	A	0.602	B	0.407	A	0.606	B	0.618	B	0.428	A

Notes:

ICU V/C ratio is used for signalized intersections. HCM delay in seconds is used for unsignalized intersections.

[1] LOS C required for these intersections. LOS D acceptable for all other intersections.

Exceeds level of service criteria

(Shade) = Significant Impact

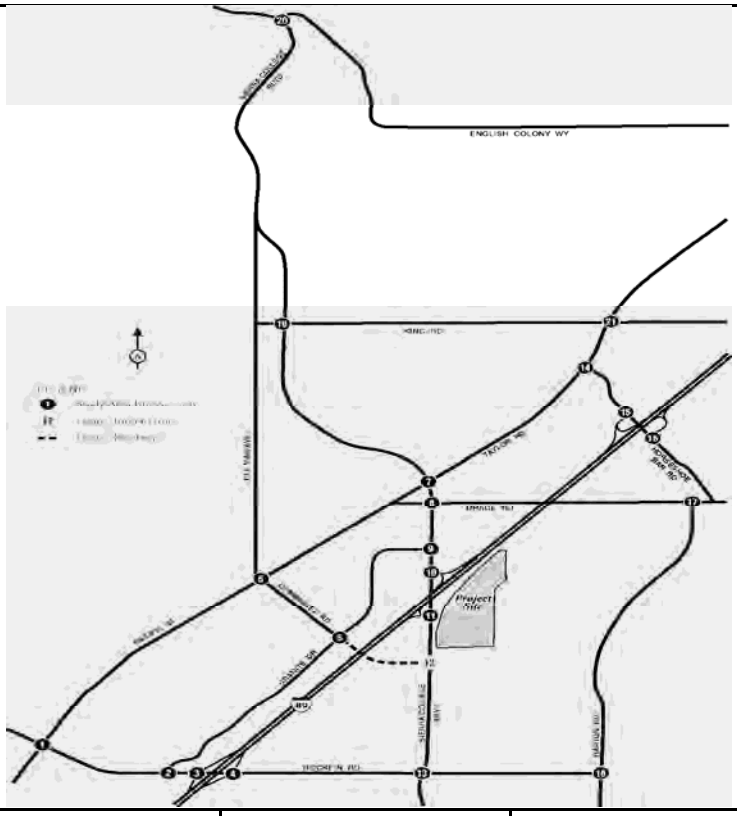
Table E: Existing Plus Project Daily Roadway Segment Level of Service Summary

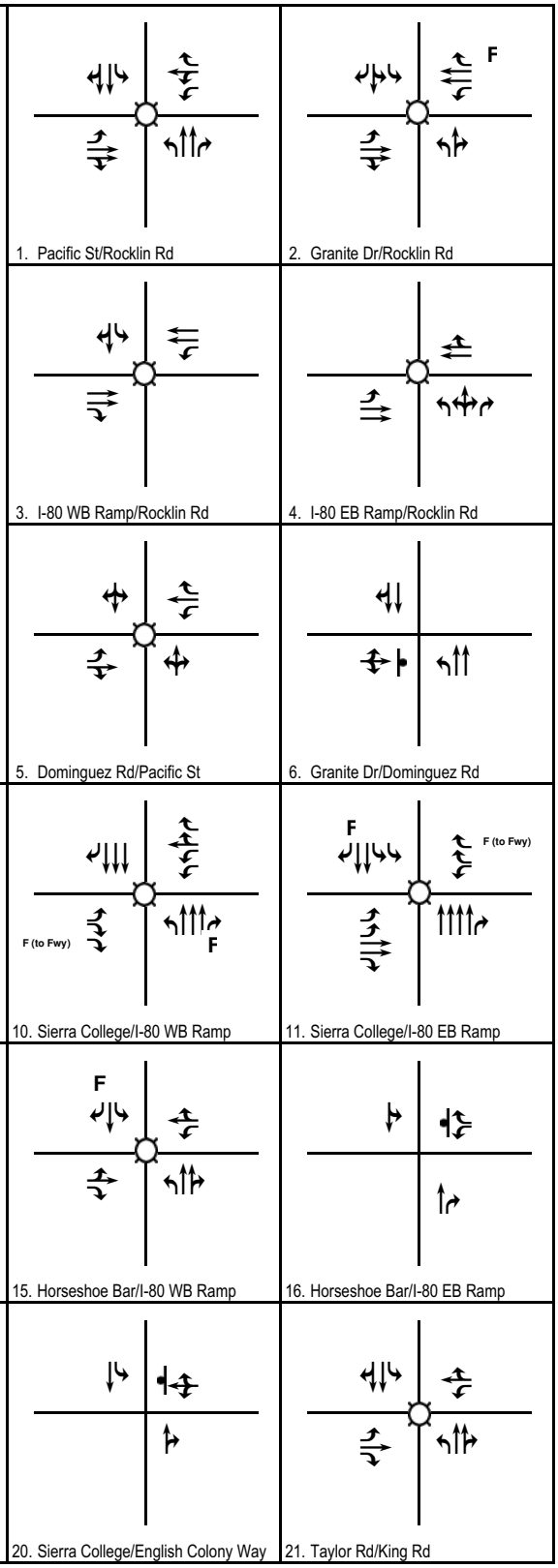
Roadway	Segment	Configuration	Capacity	Weekday			Saturday		
				Volume	V/C	LOS	Volume	V/C	LOS
Taylor Road	King Road and Horseshoe Bar Road [1] (Loomis)	Two-lane Collector	15,000	18,020	1.20	F	12,510	0.83	D
	Horseshoe Bar Road and Sierra College Boulevard [1] (Loomis)	Two-lane Collector	15,000	11,253	0.75	C	4,150	0.28	A
Pacific Street	Sierra College Boulevard and Dominguez Road [1]	Two-lane Collector	15,000	12,088	0.81	D	6,460	0.43	A
	Dominguez Road and Rocklin Road [1]	Four-lane Undivided Arterial	30,000	16,169	0.54	A	7,140	0.24	A
Rocklin Road	Pacific Street and Granite Drive	Four-lane Undivided Arterial	30,000	21,541	0.72	C	11,460	0.38	A
	I-80 and Sierra College Boulevard	Four-lane Undivided Arterial	30,000	11,649	0.39	A	14,970	0.50	A
	Sierra College Boulevard and Barton Road [1] (Loomis)	Two-lane Collector	15,000	6,396	0.43	A	5,440	0.36	A
Barton Road	Rocklin Road and Brace Road [1] (Loomis)	Two-lane Collector	15,000	3,944	0.26	A	2,700	0.18	A
Horseshoe Bar Road	I-80 and Brace Road (Loomis)	Two-lane Collector	15,000	6,151	0.41	A	6,520	0.43	A
Brace Road	I-80 and Barton Road [1] (Loomis)	Two-lane Collector	15,000	4,116	0.27	A	2,080	0.14	A
	I-80 and Sierra College Boulevard [1] (Loomis)	Two-lane Collector	15,000	3,408	0.23	A	560	0.04	A
Sierra College Boulevard	English Colony Way and King Road [1] (Placer County)	Two-lane Collector	15,000	11,330	0.76	C	8,630	0.58	A
	King Road and Taylor Road [1] (Loomis)	Two-lane Collector	15,000	12,860	0.86	D	9,860	0.66	B
	Taylor Road and I-80	Two-lane Collector	15,000	20,986	1.40	F	12,740	0.85	D
	I-80 and Dominguez Road	Four-lane Undivided Arterial	30,000	22,345	0.74	C	20,630	0.69	B
	Dominguez Road and Rocklin Road [1]	Two-lane Collector	15,000	16,995	1.13	F	15,330	1.02	F
Granite Drive	Dominguez Road and Sierra College Boulevard [1]	Four-lane Undivided Arterial	30,000	6,198	0.21	A	4,380	0.15	A
	Dominguez Road and Rocklin Road [1]	Four-lane Undivided Arterial	30,000	8,318	0.28	A	7,930	0.26	A
Dominguez Road	Taylor Road and Granite Drive [1]	Two-lane Collector	15,000	2,482	0.17	A	620	0.04	A
King Road	Sierra College Boulevard and Taylor Road [1] (Loomis)	Two-lane Collector	15,000	5,610	0.37	A	3,460	0.23	A

Notes:

[1] LOS C required for these segments. LOS D acceptable for all other segments.

☐ Exceeds level of service criteria





1. Pacific St/Rocklin Rd
2. Granite Dr/Rocklin Rd
3. I-80 WB Ramp/Rocklin Rd
4. I-80 EB Ramp/Rocklin Rd
5. Dominguez Rd/Pacific St
6. Granite Dr/Dominguez Rd
7. Sierra College Blvd/Taylor Rd
8. Sierra College Blvd/Brace Rd
9. Sierra College Blvd/Granite Dr
10. Sierra College/I-80 WB Ramp
11. Sierra College/I-80 EB Ramp
12. Sierra College/Dominguez Rd
13. Sierra College Blvd/Rocklin Rd
14. Horseshoe Bar Rd/Taylor Rd
15. Horseshoe Bar/I-80 WB Ramp
16. Horseshoe Bar/I-80 EB Ramp
17. Barton Rd/Brace Rd
18. Barton Rd/Rocklin Rd
19. Sierra College Blvd/King Rd
20. Sierra College/English Colony Way
21. Taylor Rd/King Rd

LSA

FIGURE 11

Legend

Signal

Stop Sign

F Free Right Turn

Rocklin Crossings

Short Term Geometrics and Traffic Control

Table F: Existing plus Project Peak Hour Roadway Segment Level of Service Summary

Roadway	Segment	Capacity	Existing			Existing + Project		
			Volume	V/C	LOS	Volume	V/C	LOS
Taylor Road	King Rd and Horseshoe Bar Rd (Loomis)							
	A.M. Peak Hour Northbound	1,650	426	0.26	A	443	0.27	A
	A.M. Peak Hour Southbound	1,650	706	0.43	A	720	0.44	A
	Total A.M. Peak Hour	3,300	1,132	0.34	A	1,163	0.35	A
	P.M Peak Hour Northbound	1,650	494	0.30	A	541	0.33	A
	P.M Peak Hour Southbound	1,650	588	0.36	A	637	0.39	A
	Total P.M. Peak Hour	3,300	1,082	0.33	A	1,178	0.36	A
	SAT Peak Hour Northbound	1,650	422	0.26	A	481	0.29	A
	SAT Peak Hour Southbound	1,650	504	0.31	A	559	0.34	A
	Total SAT Peak Hour	3,300	926	0.28	A	1,040	0.32	A
Pacific Street	Sierra College Blvd and Dominguez Rd							
	A.M. Peak Hour Northbound	1,650	435	0.26	A	452	0.27	A
	A.M. Peak Hour Southbound	1,650	425	0.26	A	426	0.26	A
	Total A.M. Peak Hour	3,300	860	0.26	A	878	0.27	A
	P.M Peak Hour Northbound	1,650	614	0.37	A	616	0.37	A
	P.M Peak Hour Southbound	1,650	584	0.35	A	633	0.38	A
	Total P.M. Peak Hour	3,300	1,198	0.36	A	1,249	0.38	A
	SAT Peak Hour Northbound	1,650	309	0.19	A	368	0.22	A
	SAT Peak Hour Southbound	1,650	318	0.19	A	373	0.23	A
	Total SAT Peak Hour	3,300	627	0.19	A	741	0.22	A
Sierra College Boulevard	English Colony Way and King Rd (Placer County)							
	A.M. Peak Hour Northbound	1,650	294	0.18	A	619	0.38	A
	A.M. Peak Hour Southbound	1,650	589	0.36	A	320	0.19	A
	Total A.M. Peak Hour	3,300	883	0.27	A	939	0.28	A
	P.M Peak Hour Northbound	1,650	361	0.22	A	446	0.27	A
	P.M Peak Hour Southbound	1,650	616	0.37	A	704	0.43	A
	Total P.M. Peak Hour	3,300	977	0.30	A	1,150	0.35	A
	SAT Peak Hour Northbound	1,650	335	0.20	A	442	0.27	A
	SAT Peak Hour Southbound	1,650	299	0.18	A	398	0.24	A
	Total SAT Peak Hour	3,300	634	0.19	A	840	0.25	A
Sierra College Boulevard	King Rd and Taylor Rd (Loomis)							
	A.M. Peak Hour Northbound	1,650	665	0.40	A	716	0.43	A
	A.M. Peak Hour Southbound	1,650	538	0.33	A	581	0.35	A
	Total A.M. Peak Hour	3,300	1,203	0.36	A	1,297	0.39	A
	P.M Peak Hour Northbound	1,650	645	0.39	A	787	0.48	A
	P.M Peak Hour Southbound	1,650	924	0.56	A	1,070	0.65	B
	Total P.M. Peak Hour	3,300	1,569	0.48	A	1,857	0.56	A
	SAT Peak Hour Northbound	1,650	378	0.23	A	557	0.34	A
	SAT Peak Hour Southbound	1,650	421	0.26	A	585	0.35	A
	Total SAT Peak Hour	3,300	799	0.24	A	1,142	0.35	A
Sierra College Boulevard	Taylor Rd and I-80							
	A.M. Peak Hour Northbound	1,650	594	0.36	A	705	0.43	A
	A.M. Peak Hour Southbound	1,650	636	0.39	A	652	0.40	A
	Total A.M. Peak Hour	3,300	1,230	0.37	A	1,357	0.41	A
	P.M Peak Hour Northbound	1,650	794	0.48	A	991	0.60	A
	P.M Peak Hour Southbound	1,650	694	0.42	A	891	0.54	A
	Total P.M. Peak Hour	3,300	1,488	0.45	A	1,882	0.57	A
	SAT Peak Hour Northbound	1,650	475	0.29	A	760	0.46	A
	SAT Peak Hour Southbound	1,650	538	0.33	A	724	0.44	A
	Total SAT Peak Hour	3,300	1,013	0.31	A	1,484	0.45	A
Sierra College Boulevard	Dominguez Rd and Rocklin Rd							
	A.M. Peak Hour Northbound	1,650	831	0.50	A	944	0.57	A
	A.M. Peak Hour Southbound	1,650	911	0.55	A	770	0.47	A
	Total A.M. Peak Hour	3,300	1,742	0.53	A	1,714	0.52	A
	P.M Peak Hour Northbound	1,650	939	0.57	A	1,037	0.63	A
	P.M Peak Hour Southbound	1,650	954	0.58	A	1,079	0.65	A
	Total P.M. Peak Hour	3,300	1,893	0.57	A	2,116	0.64	A
	SAT Peak Hour Northbound	1,650	599	0.36	A	851	0.52	A
	SAT Peak Hour Southbound	1,650	613	0.37	A	780	0.47	A
	Total SAT Peak Hour	3,300	1,212	0.37	A	1,631	0.49	A

at LOS A or B. Because the roadway segments will operate with satisfactory LOS during the peak hour of roadway traffic, they are not considered impacted by the project.

EXISTING PLUS APPROVED PROJECTS (BASELINE)

Existing plus Approved Projects (Baseline) Traffic Volumes

To identify traffic conditions that could be expected at the time of project opening, an existing plus approved projects (baseline) scenario was developed. The City provided a list of approved projects in the vicinity of the project. The approved projects include interchange improvements at I-80 and Sierra College Boulevard, as the interchange improvements have CEQA approval and are fully funded. The approved projects do not include the proposed Dominguez Road extension. The approved projects list is provided in Appendix D. Traffic volumes for approved projects were determined by applying the trip generation rates from the ITE *Trip Generation*, 7th Edition, to the approved land uses. Vehicle trips from approved projects were distributed to the study area intersections based on the location of the approved projects in relation to other land uses and local and regional transportation networks. The locations of the approved projects and trip distribution are illustrated in Figure 12. The approved projects and their respective trip generation are shown in Table G.

Existing Plus Approved Projects (Baseline) Levels of Service

Traffic from the approved projects was added to the existing traffic counts and LOS were calculated for the existing plus approved projects scenario. Existing plus approved projects weekday peak-hour and Saturday traffic volumes are illustrated in Figures 13 and 14. The LOS for study area intersections and roadway segments in the existing plus approved projects scenario are shown in Tables H and I. The existing plus approved projects LOS worksheets are provided in Appendix E.

As shown in Table H, the following five intersections are operating at an unsatisfactory LOS in the existing plus approved projects condition:

- Rocklin Road/Pacific Street
- Rocklin Road/I-80 westbound ramps
- Rocklin Road/I-80 eastbound ramps
- Sierra College Boulevard/Rocklin Road
- Taylor Road/Horseshoe Bar Road (Loomis)

As shown in Table I, most of the study area roadway segments are forecast to operate within their daily roadway capacities except for the following three segments:

- Taylor Road between King Road and Horseshoe Bar Road (Loomis)
- Sierra College Boulevard between Taylor Road and I-80
- Sierra College Boulevard between Dominguez Road and Rocklin Road

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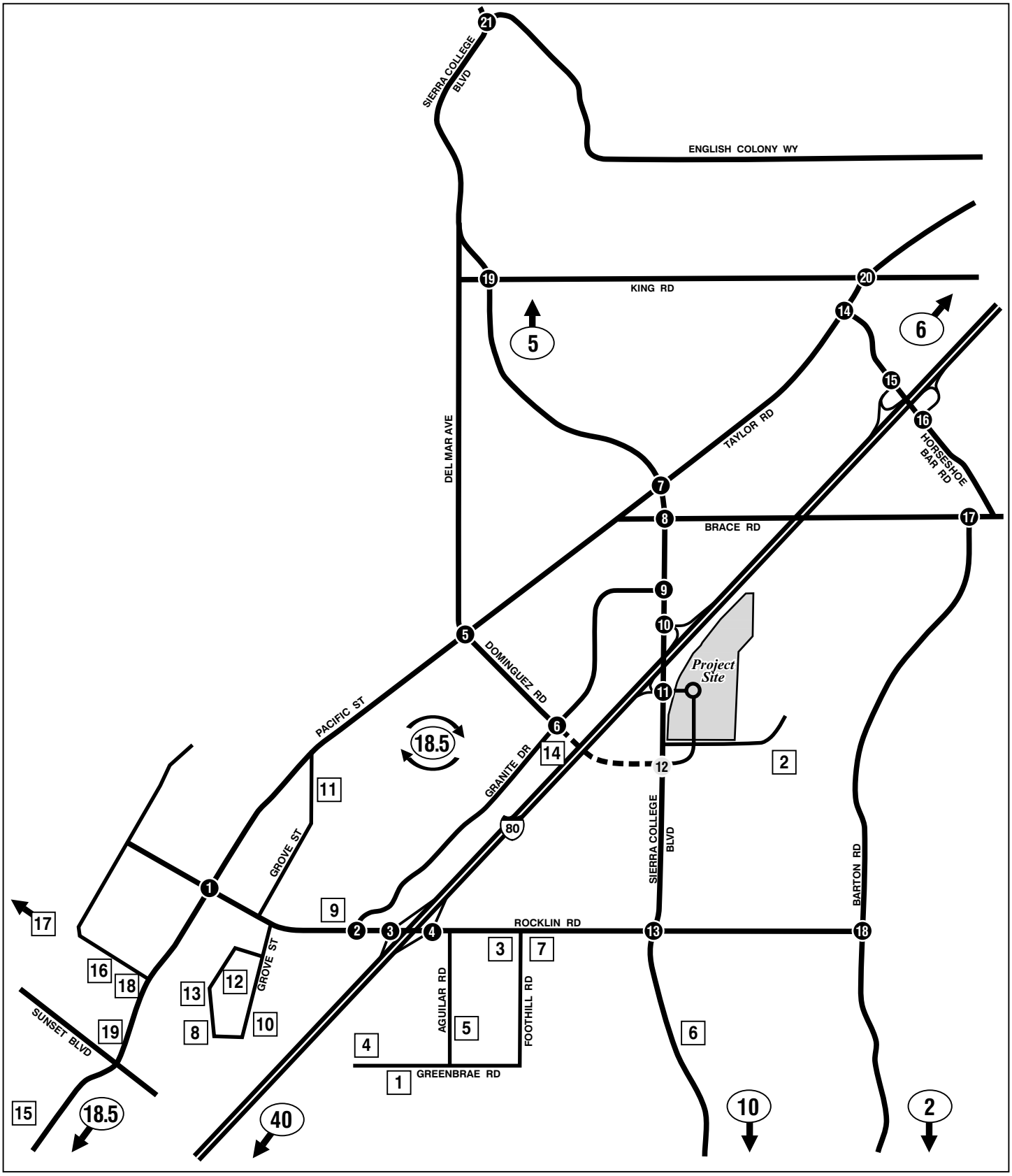


LSA

LEGEND

- 1 - Study Area Intersection
- 12 - Future Intersection
- - Future Roadway
- 10 - Approved Projects*
- XX - Trip Distribution Percentage
- 18.5 - Internal Trips

*Refer to Table G for Project Identification

N

FIGURE 12

Rocklin Crossings

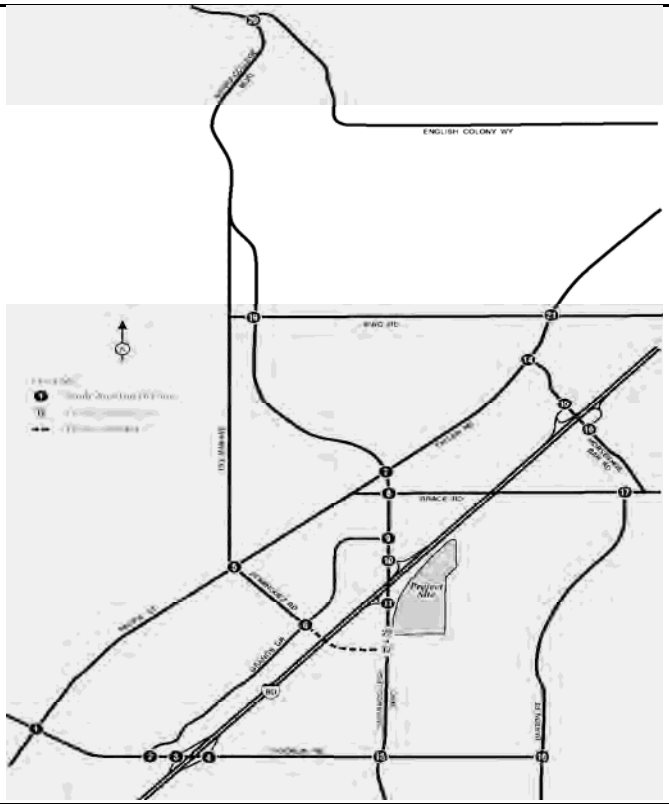
Location of Approved Projects

SCHEMATIC - NOT TO SCALE

I:\DSR330\Appvd Projects.cdr (1/19/07)

Table G: Trip Generation of Approved Projects

Project No.	Description	Landuse (ITE Code)	Size	AM Peak Hour			PM Peak Hour			Saturday Peak Hour		
				In	Out	Total	In	Out	Total	In	Out	Total
1	Granite Lake Estates	Single Family Detached Housing (210)	119 du	23	70	93	79	46	125	60	51	112
2	Croftwood, Unit 1	Single Family Detached Housing (210)	156 du	30	89	119	101	59	160	79	67	147
3	Rocklin Sierra Plaza	Shopping Center (820)	31.60 ksf	78	30	108	140	153	293	82	75	157
4	Bender Insurance Offic Building	Bender Insurance Office Building	14.75 ksf	10	31	41	60	35	95	3	3	6
5	Bramblewood Estates	Single Family Detached Housing (210)	2 du	3	8	11	2	1	3	1	1	2
6	Sunrise Assisted Living	Sunrise Assissted Living	48 ksf	6	3	9	7	7	14	12	14	26
7	Rocklin Executive Office Park	Office Park (710)	21 ksf	27	27	54	51	51	102	5	4	9
8	Villages	Single Family Detached Housing (210)	65 du	14	41	55	46	27	73	33	28	61
9	Granite Business Center	General Office Building (710)	16.60 ksf	39	6	45	17	80	97	4	3	7
10	Rocklin Mobile Home Park Addition	Mobile Home Park (240)	21 du	4	14	18	9	5	14	6	5	11
11	Holy Cross Lutheran Church	Church (560)	40.63 ksf	16	13	29	14	13	27	102	42	144
12	Winding Lane Estates	Single Family Detached Housing (210)	26 du	7	21	28	20	12	32	13	11	24
13	Samoylovich Estates	Single Family Detached Housing (210)	4 du	7	5	12	3	3	6	2	2	4
14	Granite Drive Retail/Office	Office (710)	22 ksf	14	42	56	65	38	103	5	4	9
15	Rocklin 94	Residential Condominium (230)	94 du	8	41	49	38	19	57	24	20	44
16	Colish Subdivision	Single Family Detached Housing (210)	8 du	4	11	15	7	4	11	4	3	8
17	Community Covenant Church	Church (560)	11.78 ksf	1	0	1	1	0	1	30	12	42
18	Rocklin Retail Center	Shopping Center (820)	19.5 ksf	36	23	59	102	111	213	50	47	97
19	Pacific Center Retail Center	Shopping Center (820)	32.2 ksf	48	31	79	142	154	296	83	77	160
	Total			375	506	881	904	818	1,722	598	470	1,068



1 Pacific St/Rocklin Rd

19 / 21	429 / 588	183 / 122
↲	↓	↳
22 / 34 ↱		↰ 99 / 221
153 / 113 →		← 71 / 148
43 / 23 ↴		↶ 498 / 856
	25 / 41 ↰	315 / 517 ↑ 608 / 784 ↱

2 Granite Dr/Rocklin Rd

117 / 370	7 / 16	355 / 579
↲	↓	↳
137 / 259 ↱		↰ 614 / 681
865 / 1002 →		← 684 / 1037
12 / 23 ↴		↶ 6 / 40
	17 / 23 ↰	12 / 14 ↑ 11 / 35 ↱

3 I-80 WB Ramp/Rocklin Rd

267 / 299	2 / 2	169 / 78
↲	↓	↳
		← 1041 / 1448
		↶ 402 / 597
732 / 955 →		
503 / 663 ↴		

4 I-80 EB Ramp/Rocklin Rd

		↰ 59 / 145
		← 807 / 1349
226 / 258 ↱		
676 / 776 →		
	637 / 697 ↰	2 / 1 ↑ 783 / 719 ↱

5 Dominguez Rd/Pacific St

51 / 132	17 / 47	23 / 38
↲	↓	↳
		↰ 61 / 18
		← 300 / 481
		↶ 66 / 28
72 / 30 ↱		
327 / 423 →		
36 / 20 ↴		
	23 / 25 ↰	68 / 20 ↑ 59 / 46 ↱

6 Granite Dr/Dominguez Rd

47 / 24	265 / 211	
↲	↓	
36 / 60 ↱		
71 / 64 ↴		
	86 / 31 ↰	102 / 313 ↑

7 Sierra College Blvd/Taylor Rd

174 / 125	437 / 368	23 / 26
↲	↓	↳
		↰ 31 / 36
		← 233 / 270
		↶ 172 / 208
73 / 169 ↱		
172 / 309 →		
67 / 98 ↴		
	153 / 121 ↰	261 / 579 ↑ 142 / 254 ↱

8 Sierra College Blvd/Brace Rd

565 / 541	68 / 85	
↓	↳	
		↰ 76 / 93
		↶ 71 / 84
58 / 87 ↴		
	398 / 596 ↑	38 / 109 ↱

9 Sierra College Blvd/Granite Dr

64 / 71	490 / 536	103 / 70
↲	↓	↳
		↰ 41 / 35
		← 30 / 20
		↶ 126 / 112
68 / 139 ↱		
25 / 32 →		
39 / 189 ↴		
	161 / 105 ↰	381 / 556 ↑ 74 / 72 ↱

10 Sierra College/I-80 WB Ramp

477 / 619	206 / 213	
↓	↳	
		↰ 215 / 179
		↶ 377 / 326
	477 / 580 ↑	79 / 67 ↱

11 Sierra College/I-80 EB Ramp

122 / 224	723 / 704	
↲	↓	
206 / 211 ↱		
130 / 81 ↴		
	270 / 334 ↰	355 / 439 ↑

12 Sierra College/Dominguez Rd

837 / 704	21 / 69	
↓	↳	
		↰ 24 / 16
		↶ 28 / 18
	607 / 828 ↑	6 / 20 ↱

13 Sierra College/Rocklin Rd

70 / 101	442 / 512	52 / 68
↓	↳	↳
		↰ 67 / 32
		← 182 / 159
		↶ 67 / 30
80 / 201 ↱		
123 / 254 →		
292 / 505 ↴		
	434 / 402 ↰	466 / 615 ↑ 58 / 52 ↱

14 Horseshoe Bar Rd/Taylor Rd

6 / 10	359 / 410	460 / 416
↲	↓	↳
		↰ 408 / 580
		← 14 / 13
		↶ 45 / 77
14 / 7 ↱		
67 / 12 →		
22 / 8 ↴		
	6 / 8 ↰	269 / 477 ↑ 66 / 104 ↱

15 Horseshoe Bar/I-80 WB Ramp

422 / 394	233 / 202	17 / 48
↲	↓	↳
		↰ 30 / 72
		← 80 / 50
		↶ 39 / 140
76 / 83 ↱		
33 / 46 →		
76 / 67 ↴		
	163 / 90 ↰	433 / 373 ↑ 68 / 177 ↱

16 Horseshoe Bar/I-80 EB Ramp

245 / 245	98 / 98	
↓	↳	
		↰ 312 / 312
		↶ 55 / 57
	354 / 355 ↑	50 / 50 ↱

17 Barton Rd/Brace Rd

		← 110 / 58
		↶ 106 / 115
79 / 65 →		
124 / 151 ↴		
	133 / 144 ↰	155 / 73 ↱

18 Barton Rd/Rocklin Rd

100 / 59	72 / 43	
↲	↓	
84 / 65 ↱		
97 / 258 ↴		
	248 / 171 ↰	55 / 68 ↑

19 Sierra College Blvd/King Rd

17 / 3	443 / 341	100 / 63
↲	↓	↳
		↰ 65 / 88
		← 11 / 4
		↶ 41 / 15
3 / 21 ↱		
16 / 14 →		
4 / 4 ↴		
	2 / 2 ↰	211 / 527 ↑ 18 / 39 ↱

20 Sierra College/English Colony

536 / 357	71 / 47	
↓	↳	
		↰ 37 / 57
		↶ 4 / 3
	278 / 599 ↑	1 / 4 ↱

21 Taylor Rd/King Rd

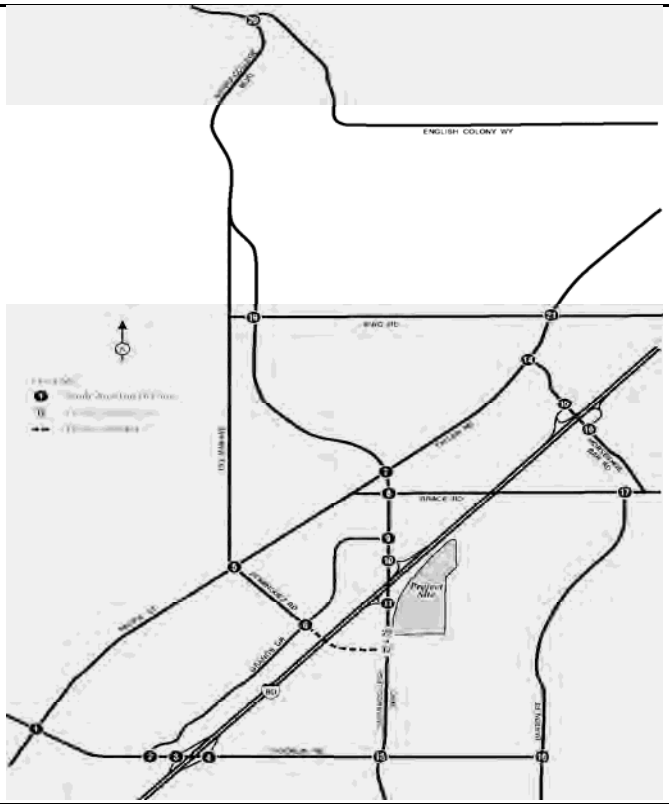
326 / 247	60 / 28	
↓	↳	
		↰ 119 / 32
		← 102 / 83
		↶ 103 / 95
211 / 67 ↱		
96 / 91 →		
242 / 317 ↴		
	229 / 362 ↰	378 / 290 ↑ 67 / 114 ↱

FIGURE 13

123 / 456 AM / PM Peak Hour Volume

Rocklin Crossings

Existing Plus Approved Projects (Baseline) Peak Hour Traffic Volumes



1 Pacific St/Rocklin Rd

16	352	110	114	48	469
22	56	22	15	316	562

2 Granite Dr/Rocklin Rd

133	22	486	331	622	35
217	567	11	32	16	29

3 I-80 WB Ramp/Rocklin Rd

390	1	313	624	193
789	155			

4 I-80 EB Ramp/Rocklin Rd

273	668	
231	885	148 168

5 Dominguez Rd/Pacific St

22	11	5	5	263	15
14	299	8	5	10	7

6 Granite Dr/Dominguez Rd

10	250		
9	20	9	175

7 Sierra College Blvd/Taylor Rd

75	281	29	24	204	83
36	222	28	28	339	69

8 Sierra College Blvd/Brace Rd

388	31	35	48	
14		398	16	

9 Sierra College Blvd/Granite Dr

99	296	56	25	18	119
110	19	85	152	314	94

10 Sierra College/I-80 WB Ramp

348	113	35	167
		504	102

11 Sierra College/I-80 EB Ramp

78	429		
247	231	151	364

12 Sierra College/Dominguez Rd

606	54	18	21	
		457	16	

13 Sierra College/Rocklin Rd

87	336	40	27	179	44
104	162	246	275	385	34

14 Horseshoe Bar Rd/Taylor Rd

6	312	304	277	12	102
6	16	8	14	333	99

15 Horseshoe Bar/I-80 WB Ramp

206	172	40	60	58	125
52	43	39	104	288	80

16 Horseshoe Bar/I-80 EB Ramp

256	88	206	47	
		258	45	

17 Barton Rd/Brace Rd

		56	61	
52	22	23	91	

18 Barton Rd/Rocklin Rd

98	38		
77	182	97	48

19 Sierra College Blvd/King Rd

2	318	50	47	10	38
2	14	8	6	290	19

20 Sierra College/English Colony

317	31	21	3
		301	4

21 Taylor Rd/King Rd

49	248	19	176	55	110
54	47	171	159	278	110

FIGURE 14

Rocklin Crossings

Existing Plus Approved Projects (Baseline) Saturday Peak Hour Traffic Volumes

Table H: Existing Plus Approved Projects (Baseline) Condition Intersection Level of Service Summary

	Intersection	Existing Plus Approved Condition					
		AM Peak Hour		PM Peak Hour		Saturday	
		V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS
1	Rocklin Road/Pacific Street [1]	0.866	D	0.978	E	0.610	B
2	Rocklin Road/Granite Drive	0.465	A	0.757	C	0.547	A
3	Rocklin Road/I-80 Westbound Ramps	0.780	C	1.018	F	0.633	B
4	Rocklin RoadI-80 Eastbound Ramps	0.823	D	0.946	E	0.549	A
5	Dominguez Road/Pacific Street [1]	0.397	A	0.472	A	0.241	A
6	Dominguez Road/Granite Drive [1]	11.8 sec	B	12.2 sec	B	9.9 sec	A
7	Sierra College Boulevard/Taylor Road (Loomis)	0.622	B	0.750	C	0.434	A
8	Sierra College Boulevard/Brace Road (Loomis)	0.449	A	0.547	A	0.307	A
9	Sierra College Boulevard/Granite Drive	0.536	A	0.568	A	0.402	A
10	Sierra College Boulevard/I-80 Westbound Ramps	0.299	A	0.301	A	0.179	A
11	Sierra College Boulevard/I-80 Eastbound Ramps	0.335	A	0.315	A	0.323	A
12	Sierra College Boulevard/Dominguez Road	-	-	-	-	-	-
13	Sierra College Boulevard/Rocklin Road [1]	0.661	B	0.802	D	0.521	A
14	Taylor Road/Horseshoe Bar Road (Loomis)	0.840	D	1.008	F	0.631	B
15	Horseshoe Bar Road/I-80 Westbound Ramps (Loomis)	0.394	A	0.375	A	0.313	A
16	Horseshoe Bar Road/I-80 Eastbound Ramps (Loomis)	16.4 sec	C	16.1 sec	C	12.2 sec	B
17	Barton Road/Brace Road [1] (Loomis)	16.2 sec	C	15.2 sec	C	9.5 sec	A
18	Barton Road/Rocklin Road [1] (Loomis)	15.9 sec	C	11.2 sec	B	10.3 sec	B
19	Sierra College Boulevard/King Road [1] (Loomis)	0.402	A	0.490	A	0.316	A
20	Sierra College Boulevard/English Colony Way [1] (Placer County)	11.1 sec	B	14.0 sec	B	10.7 sec	B
21	Taylor Road/King Road [1] (Loomis)	0.601	B	0.604	B	0.409	A

Notes:

ICU V/C ratio is used for signalized intersections. HCM delay in seconds is used for unsignalized intersections.

[1] LOS C required for these intersections. LOS D acceptable for all other intersections.

☐ Exceeds level of service criteria

Table I: Existing Plus Approved Projects (Baseline) Daily Roadway Segment Level of Service Summary

Roadway	Segment	Configuration	Capacity	Weekday			Saturday		
				Volume	V/C	LOS	Volume	V/C	LOS
Taylor Road	King Road and Horseshoe Bar Road [1] (Loomis)	Two-lane Collector	15,000	17,150	1.14	F	11,410	0.76	C
	Horseshoe Bar Road and Sierra College Boulevard[1] (Loomis)	Two-lane Collector	15,000	10,973	0.73	C	3,710	0.25	A
Pacific Street	Sierra College Boulevard and Dominguez Road [1]	Two-lane Collector	15,000	11,868	0.79	C	6,100	0.41	A
	Dominguez Road and Rocklin Road [1]	Four-lane Undivided Arterial	30,000	19,459	0.65	B	9,080	0.30	A
Rocklin Road	Pacific Street and Granite Drive	Four-lane Undivided Arterial	30,000	25,371	0.85	D	13,310	0.44	A
	I-80 and Sierra College Boulevard	Four-lane Undivided Arterial	30,000	14,599	0.49	A	16,120	0.54	A
	Sierra College Boulevard and Barton Road [1] (Loomis)	Two-lane Collector	15,000	6,646	0.44	A	5,090	0.34	A
Barton Road	Rocklin Road and Brace Road [1] (Loomis)	Two-lane Collector	15,000	3,514	0.23	A	2,130	0.14	A
Horseshoe Bar Road	I-80 and Brace Road (Loomis)	Two-lane Collector	15,000	6,141	0.41	A	6,490	0.43	A
Brace Road	I-80 and Barton Road [1] (Loomis)	Two-lane Collector	15,000	4,046	0.27	A	1,960	0.13	A
	I-80 and Sierra College Boulevard [1] (Loomis)	Two-lane Collector	15,000	3,408	0.23	A	560	0.04	A
Sierra College Boulevard	English Colony Way and King Road [1] (Placer County)	Two-lane Collector	15,000	10,430	0.70	B	7,090	0.47	A
	King Road and Taylor Road [1] (Loomis)	Two-lane Collector	15,000	11,250	0.75	C	7,450	0.50	A
	Taylor Road and I-80	Two-lane Collector	15,000	18,296	1.22	F	9,010	0.60	B
	I-80 and Dominguez Road	Four-lane Undivided Arterial	30,000	14,105	0.47	A	11,210	0.37	A
	Dominguez Road and Rocklin Road [1]	Two-lane Collector	15,000	14,745	0.98	E	11,840	0.79	C
Granite Drive	Dominguez Road and Sierra College Boulevard [1]	Four-lane Undivided Arterial	30,000	6,328	0.21	A	4,430	0.15	A
	Dominguez Road and Rocklin Road [1]	Four-lane Undivided Arterial	30,000	8,458	0.28	A	7,960	0.27	A
Dominguez Road	Taylor Road and Granite Drive [1]	Two-lane Collector	15,000	2,422	0.16	A	530	0.04	A
King Road	Sierra College Boulevard and Taylor Road [1] (Loomis)	Two-lane Collector	15,000	5,610	0.37	A	3,460	0.23	A

Notes:

[1] LOS C required for these segments. LOS D acceptable for all other segments.

☐ Exceeds level of service criteria

These segments will exceed the threshold of daily capacity in the existing plus approved projects (baseline) scenario. However, in both a.m. and p.m. peak hours, all affected segments are forecast to operate with satisfactory v/c ratios, as shown in Table J.

EXISTING PLUS APPROVED PROJECTS (BASELINE) PLUS PROJECT

Existing plus Approved Projects (Baseline) plus Project Levels of Service

Traffic volumes generated by the proposed project were added to the existing plus approved projects (baseline) traffic volumes and LOS were calculated for the existing plus approved projects (baseline) plus project scenario. The existing plus approved projects (baseline) plus project weekday and Saturday peak-hour traffic volumes are illustrated in Figures 15 and 16. The LOS for study area intersections and roadway segments in the existing plus approved projects plus project scenario are shown in Tables K and L. The existing plus approved projects plus project LOS worksheets are provided in Appendix F. The LOS for the existing plus approved projects (baseline) plus project condition assumes the reconstruction of the I-80/Sierra College Boulevard interchange (Figure 11), as the interchange improvements have CEQA approval and are fully funded.

- As shown in Table K, the following five intersections are forecast to operate at unsatisfactory LOS in the existing plus approved projects (baseline) plus project scenario:
- Rocklin Road/Pacific Street
- Rocklin Road/I-80 westbound ramps
- Rocklin Road/I-80 eastbound ramps
- Sierra College Boulevard/Rocklin Road
- Taylor Road/Horseshoe Bar Road (Loomis)

As shown in Table L, most of the study area roadway segments are forecast to operate within their daily roadway capacities except for the following six roadway segments:

- Taylor Road between King Road and Horseshoe Bar Road (Loomis)
- Taylor Road between Sierra College Boulevard and Dominguez Road
- Sierra College Boulevard between English Colony Way and King Road (Placer County)
- Sierra College Boulevard between King Road and Taylor Road (Loomis)
- Sierra College Boulevard between Taylor Road and I-80
- Sierra College Boulevard between Dominguez Road and Rocklin Road

Similar to the previous scenarios, these segments will exceed the threshold of daily capacity in the existing plus approved projects (baseline) plus project scenario. However, in both the a.m. and p.m. peak hours, the traffic on all six roadway segments are forecast to operate with satisfactory v/c ratios in both peak hours with project conditions, as shown in Table J. Therefore, the project does not cause a significant impact on the roadway segments.

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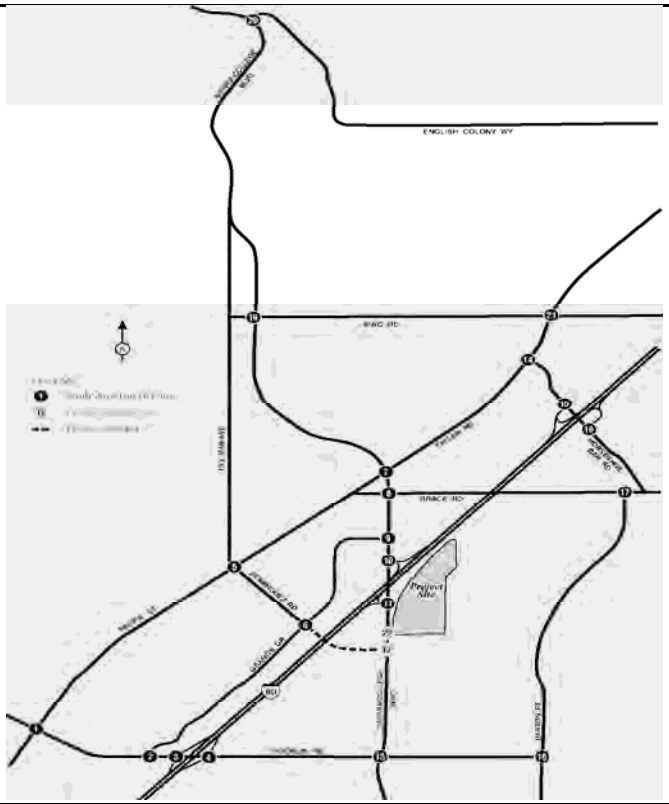
Table J: Existing Plus Approved Projects (Baseline) Peak Hour Roadway Segment Level of Service Summary

Roadway	Segment	Capacity	Existing + Approved			Existing + Approved + Project		
			Volume	V/C	LOS	Volume	V/C	LOS
Taylor Road	King Rd and Horseshoe Bar Rd (Loomis)							
	A.M. Peak Hour Northbound	1,650	426	0.26	A	443	0.27	A
	A.M. Peak Hour Southbound	1,650	708	0.43	A	722	0.44	A
	Total A.M. Peak Hour	3,300	1,134	0.34	A	1,165	0.35	A
	P.M Peak Hour Northbound	1,650	495	0.30	A	638	0.39	A
	P.M Peak Hour Southbound	1,650	589	0.36	A	542	0.33	A
	Total P.M. Peak Hour	3,300	1,084	0.33	A	1,180	0.36	A
	SAT Peak Hour Northbound	1,650	422	0.26	A	482	0.29	A
	SAT Peak Hour Southbound	1,650	508	0.31	A	563	0.34	A
	Total SAT Peak Hour	3,300	930	0.28	A	1,045	0.32	A
Pacific Street	Sierra College Blvd and Dominguez Rd							
	A.M. Peak Hour Northbound	1,650	436	0.26	A	453	0.27	A
	A.M. Peak Hour Southbound	1,650	435	0.26	A	436	0.26	A
	Total A.M. Peak Hour	3,300	871	0.26	A	889	0.27	A
	P.M Peak Hour Northbound	1,650	638	0.39	A	640	0.39	A
	P.M Peak Hour Southbound	1,650	514	0.31	A	638	0.39	A
	Total P.M. Peak Hour	3,300	1,152	0.35	A	1,278	0.39	A
	SAT Peak Hour Northbound	1,650	321	0.19	A	371	0.22	A
	SAT Peak Hour Southbound	1,650	311	0.19	A	375	0.23	A
	Total SAT Peak Hour	3,300	632	0.19	A	746	0.23	A
Sierra College Boulevard	English Colony Way and King Rd (Placer County)							
	A.M. Peak Hour Northbound	1,650	607	0.37	A	636	0.39	A
	A.M. Peak Hour Southbound	1,650	315	0.19	A	341	0.21	A
	Total A.M. Peak Hour	3,300	922	0.28	A	977	0.30	A
	P.M Peak Hour Northbound	1,650	404	0.24	A	489	0.30	A
	P.M Peak Hour Southbound	1,650	656	0.40	A	744	0.45	A
	Total P.M. Peak Hour	3,300	1,060	0.32	A	1,233	0.37	A
	SAT Peak Hour Northbound	1,650	364	0.22	A	471	0.29	A
	SAT Peak Hour Southbound	1,650	322	0.20	A	421	0.26	A
	Total SAT Peak Hour	3,300	686	0.21	A	892	0.27	A
Sierra College Boulevard	King Rd and Taylor Rd (Loomis)							
	A.M. Peak Hour Northbound	1,650	676	0.41	A	726	0.44	A
	A.M. Peak Hour Southbound	1,650	556	0.34	A	600	0.36	A
	Total A.M. Peak Hour	3,300	1,232	0.37	A	1,326	0.40	A
	P.M Peak Hour Northbound	1,650	674	0.41	A	815	0.49	A
	P.M Peak Hour Southbound	1,650	954	0.58	A	1,099	0.67	B
	Total P.M. Peak Hour	3,300	1,628	0.49	A	1,914	0.58	A
	SAT Peak Hour Northbound	1,650	392	0.24	A	571	0.35	A
	SAT Peak Hour Southbound	1,650	436	0.26	A	600	0.36	A
	Total SAT Peak Hour	3,300	828	0.25	A	1,171	0.35	A
Sierra College Boulevard	Taylor Rd and I-80							
	A.M. Peak Hour Northbound	1,650	655	0.40	A	724	0.44	A
	A.M. Peak Hour Southbound	1,650	616	0.37	A	674	0.41	A
	Total A.M. Peak Hour	3,300	1,271	0.39	A	1,398	0.42	A
	P.M Peak Hour Northbound	1,650	837	0.51	A	1,034	0.63	B
	P.M Peak Hour Southbound	1,650	733	0.44	A	930	0.56	A
	Total P.M. Peak Hour	3,300	1,570	0.48	A	1,964	0.60	A
	SAT Peak Hour Northbound	1,650	500	0.30	A	749	0.45	A
	SAT Peak Hour Southbound	1,650	560	0.34	A	783	0.47	A
	Total SAT Peak Hour	3,300	1,060	0.32	A	1,532	0.46	A
Sierra College Boulevard	Dominguez Rd and Rocklin Rd							
	A.M. Peak Hour Northbound	1,650	865	0.52	A	924	0.56	A
	A.M. Peak Hour Southbound	1,650	958	0.58	A	991	0.60	A
	Total A.M. Peak Hour	3,300	1,823	0.55	A	1,915	0.58	A
	P.M Peak Hour Northbound	1,650	1,047	0.63	B	1,144	0.69	B
	P.M Peak Hour Southbound	1,650	1,069	0.65	B	1,163	0.70	C
	Total P.M. Peak Hour	3,300	2,116	0.64	B	2,307	0.70	B
	SAT Peak Hour Northbound	1,650	660	0.40	A	482	0.29	A
	SAT Peak Hour Southbound	1,650	694	0.42	A	501	0.30	A
	Total SAT Peak Hour	3,300	1,354	0.41	A	983	0.30	A



1 Pacific St/Rocklin Rd

19 / 21	429 / 588	183 / 122
22 / 34	153 / 113	43 / 23
25 / 41	315 / 517	614 / 802
99 / 221	71 / 148	504 / 875

2 Granite Dr/Rocklin Rd

117 / 370	7 / 16	356 / 581
137 / 259	876 / 1033	12 / 23
17 / 23	12 / 14	11 / 35
615 / 683	693 / 1069	6 / 40

3 I-80 WB Ramp/Rocklin Rd

270 / 308	2 / 2	169 / 78
744 / 988	503 / 663	
1049 / 1473	425 / 675	

4 I-80 EB Ramp/Rocklin Rd

229 / 267	684 / 800	
637 / 697	2 / 1	810 / 794
59 / 145	837 / 1452	

5 Dominguez Rd/Pacific St

51 / 132	17 / 49	26 / 46
72 / 30	327 / 423	37 / 22
24 / 27	69 / 24	59 / 46
63 / 24	300 / 481	66 / 28

6 Granite Dr/Dominguez Rd

49 / 30	266 / 213	
37 / 64	71 / 64	
86 / 31	103 / 315	

7 Sierra College Blvd/Taylor Rd

174 / 125	466 / 452	23 / 26
73 / 169	172 / 309	71 / 108
156 / 129	287 / 667	157 / 303
31 / 36	233 / 270	189 / 255

8 Sierra College Blvd/Brace Rd

615 / 683	68 / 85	
58 / 87		
441 / 741	43 / 125	
76 / 93	79 / 108	

9 Sierra College Blvd/Granite Dr

64 / 71	548 / 701	103 / 70
68 / 139	25 / 32	50 / 221
171 / 140	429 / 718	74 / 72
41 / 35	30 / 20	126 / 112

10 Sierra College/I-80 WB Ramp

546 / 816	206 / 213	
535 / 776	173 / 388	
215 / 179	403 / 401	

11 Sierra College/I-80 EB Ramp

122 / 224	736 / 742	82 / 235
206 / 211	109 / 309	137 / 100
664 / 904	67 / 192	
103 / 349	47 / 160	

12 Sierra College/Dominguez Rd

884 / 864	40 / 126	
682 / 1044	26 / 78	
41 / 74	64 / 141	

13 Sierra College/Rocklin Rd

106 / 224	470 / 609	70 / 132
121 / 319	123 / 254	292 / 505
434 / 402	499 / 709	58 / 52
88 / 93	182 / 159	67 / 30

14 Horseshoe Bar Rd/Taylor Rd

6 / 10	376 / 457	460 / 416
14 / 7	67 / 12	22 / 8
6 / 8	284 / 526	66 / 104
408 / 580	14 / 13	45 / 77

15 Horseshoe Bar/I-80 WB Ramp

422 / 394	233 / 202	17 / 48
76 / 83	33 / 46	76 / 67
163 / 90	433 / 373	68 / 177
30 / 72	80 / 50	39 / 140

16 Horseshoe Bar/I-80 EB Ramp

245 / 245	98 / 98	
354 / 355	50 / 50	
312 / 312	58 / 65	

17 Barton Rd/Brace Rd

80 / 67	126 / 156	
135 / 149	155 / 73	
114 / 67	106 / 115	

18 Barton Rd/Rocklin Rd

101 / 63	72 / 43	
85 / 70	114 / 317	
267 / 227	55 / 68	

19 Sierra College Blvd/King Rd

17 / 3	472 / 426	100 / 63
3 / 21	16 / 14	4 / 4
2 / 2	237 / 615	18 / 39
65 / 88	11 / 4	41 / 15

20 Sierra College/English Colony

565 / 442	71 / 47	
304 / 687	1 / 4	
37 / 57	4 / 3	

21 Taylor Rd/King Rd

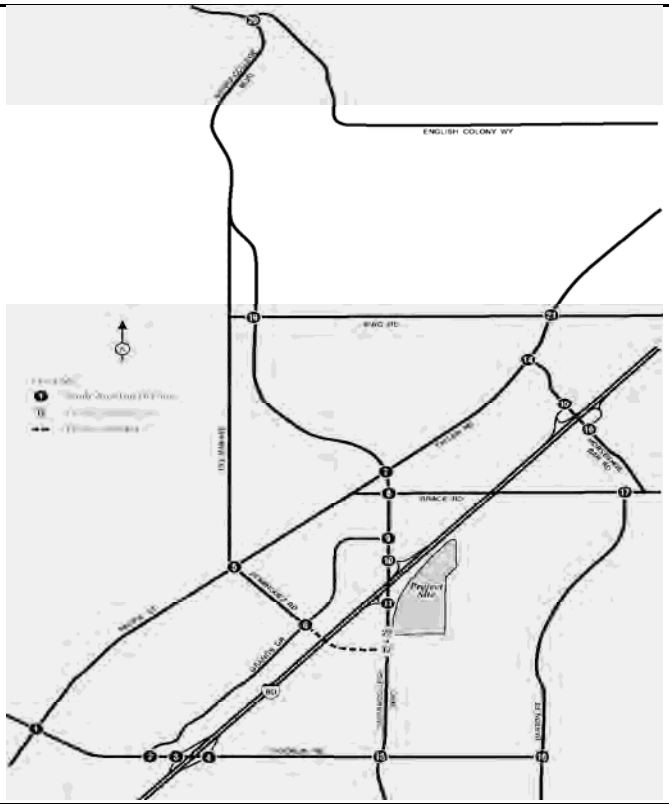
343 / 294	60 / 28	
211 / 67	96 / 91	242 / 317
229 / 362	392 / 339	67 / 114
119 / 32	102 / 83	103 / 95

FIGURE 15

123 / 456 AM / PM Peak Hour Volume

Rocklin Crossings

Existing Plus Approved Projects (Baseline) Plus Project Peak Hour Traffic Volumes



1 Pacific St/Rocklin Rd

16	352	110	↱ 114	← 48	↳ 491
↲ 22	↓ 56	↳ 22	↰ 15	↑ 316	↱ 585

2 Granite Dr/Rocklin Rd

133	22	489	↱ 334	← 658	↳ 35
↲ 217	↓ 606	↳ 11	↰ 32	↑ 16	↱ 29

3 I-80 WB Ramp/Rocklin Rd

401	1	313	← 652	↳ 281
↲ 831	↓ 155	↳		

4 I-80 EB Ramp/Rocklin Rd

		↱ 273
		← 785
242 ↱	↰ 148	↱ 263
916 →		

5 Dominguez Rd/Pacific St

22	13	15	↱ 12	← 263	↳ 15
↲ 14	↓ 299	↳ 11	↰ 8	↑ 14	↱ 7

6 Granite Dr/Dominguez Rd

17	253	
↲ 14	↓ 20	↳
↱ 9	↰ 178	↑

7 Sierra College Blvd/Taylor Rd

75	387	29	↱ 24	← 204	↳ 143
↲ 36	↓ 222	↳ 41	↰ 38	↑ 438	↱ 124

8 Sierra College Blvd/Brace Rd

567	31	↱ 35	← 78	
↓	↳	↰ 562	↑ 34	↱
14 ↲				

9 Sierra College Blvd/Granite Dr

99	505	56	↱ 25	← 18	↳ 119
↲ 110	↓ 19	↳ 125	↰ 192	↑ 497	↱ 94

10 Sierra College/I-80 WB Ramp

598	113	↱ 35	↳ 262
↓	↳	↑ 726	↱ 464

11 Sierra College/I-80 EB Ramp

78	477	297	↱ 394	↳ 181
↲ 247	↓ 392	↳ 255	↰ 662	↱ 243

12 Sierra College/Dominguez Rd

787	126	↱ 84	↳ 160	
↓	↳	↑ 729	↱ 88	

13 Sierra College/Rocklin Rd

225	446	112	↱ 104	← 179	↳ 44
↲ 254	↓ 162	↳ 246	↰ 275	↑ 504	↱ 34

14 Horseshoe Bar Rd/Taylor Rd

6	372	304	↱ 277	← 12	↳ 102
↲ 6	↓ 16	↳ 8	↰ 14	↑ 388	↱ 99

15 Horseshoe Bar/I-80 WB Ramp

206	172	40	↱ 60	← 58	↳ 125
↲ 52	↓ 43	↳ 39	↰ 104	↑ 288	↱ 80

16 Horseshoe Bar/I-80 EB Ramp

256	88	↱ 206	↳ 56
↓	↳	↑ 258	↱ 45

17 Barton Rd/Brace Rd

		← 68	↳ 61	
55 →	27 ↲	↰ 29	↱ 91	

18 Barton Rd/Rocklin Rd

104	38		
↲ 82	↓ 248	↳	
↰ 168	↑ 48		

19 Sierra College Blvd/King Rd

2	425	50	↱ 47	← 10	↳ 38
↲ 2	↓ 14	↳ 8	↰ 6	↑ 389	↱ 19

20 Sierra College/English Colony

424	31	↱ 21	↳ 3
↓	↳	↑ 400	↱ 4

21 Taylor Rd/King Rd

49	308	19	↱ 176	← 55	↳ 110
↲ 54	↓ 47	↳ 171	↰ 159	↑ 333	↱ 110

FIGURE 16

Rocklin Crossings

Existing Plus Approved Projects (Baseline) Plus Project Saturday Peak Hour Traffic Volumes

Table K: Existing Plus Approved Projects (Baseline) Plus Project Condition Intersection Level of Service Summary

		Existing Plus Approved Condition						Existing Plus Approved Plus Project Condition					
		AM Peak Hour		PM Peak Hour		Saturday		AM Peak Hour		PM Peak Hour		Saturday	
	Intersection	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS
1	Rocklin Road/Pacific Street [1]	0.866	D	0.978	E	0.610	B	0.872	D	0.997	E [2]	0.632	B
2	Rocklin Road/Granite Drive	0.465	A	0.757	C	0.547	A	0.469	A	0.767	C	0.559	A
3	Rocklin Road/I-80 Westbound Ramps	0.780	C	1.018	F	0.633	B	0.797	C	1.075	F	0.711	C
4	Rocklin RoadI-80 Eastbound Ramps	0.823	D	0.946	E	0.549	A	0.843	D	1.000	F	0.619	B
5	Dominguez Road/Pacific Street [1]	0.397	A	0.472	A	0.241	A	0.401	A	0.479	A	0.253	A
6	Dominguez Road/Granite Drive [1]	11.8 sec	B	12.2 sec	B	9.9 sec	A	11.9 sec	B	12.4 sec	B	10.3 sec	B
7	Sierra College Boulevard/Taylor Road (Loomis)	0.622	B	0.750	C	0.434	A	0.655	B	0.840	D	0.537	A
8	Sierra College Boulevard/Brace Road (Loomis)	0.449	A	0.547	A	0.307	A	0.487	A	0.655	B	0.429	A
9	Sierra College Boulevard/Granite Drive	0.536	A	0.568	A	0.402	A	0.583	A	0.713	C	0.580	A
10	Sierra College Boulevard/I-80 Westbound Ramps	0.299	A	0.301	A	0.179	A	0.325	A	0.372	A	0.267	A
11	Sierra College Boulevard/I-80 Eastbound Ramps	0.335	A	0.315	A	0.323	A	0.414	A	0.589	A	0.764	C
12	Sierra College Boulevard/Dominguez Road	-	-	-	-	-	-	-	-	-	-	-	-
13	Sierra College Boulevard/Rocklin Road [1]	0.661	B	0.802	D	0.521	A	0.701	C	0.896	D	0.751	C
14	Taylor Road/Horseshoe Bar Road (Loomis)	0.840	D	1.008	F	0.631	B	0.850	D	1.040	F [2]	0.665	B
15	Horseshoe Bar Road/I-80 Westbound Ramps (Loomis)	0.394	A	0.375	A	0.313	A	0.394	A	0.375	A	0.313	A
16	Horseshoe Bar Road/I-80 Eastbound Ramps (Loomis)	16.4 sec	C	16.1 sec	C	12.2 sec	B	16.5 sec	C	16.2 sec	C	12.3 sec	B
17	Barton Road/Brace Road [1] (Loomis)	16.2 sec	C	15.2 sec	C	9.5 sec	A	16.5 sec	C	15.7 sec	C	9.7 sec	A
18	Barton Road/Rocklin Road [1] (Loomis)	15.9 sec	C	11.2 sec	B	10.3 sec	B	16.5 sec	C	12.2 sec	B	11.3 sec	B
19	Sierra College Boulevard/King Road [1] (Loomis)	0.402	A	0.490	A	0.316	A	0.422	A	0.546	A	0.381	A
20	Sierra College Boulevard/English Colony Way [1] (Placer County)	11.1 sec	B	14.0 sec	B	10.7 sec	B	11.4 sec	B	15.6 sec	C	11.8 sec	B
21	Taylor Road/King Road [1] (Loomis)	0.601	B	0.604	B	0.409	A	0.607	B	0.620	B	0.429	A

Notes:

ICU V/C ratio is used for signalized intersections. HCM delay in seconds is used for unsignalized intersections.

[1] LOS C required for these intersections. LOS D acceptable for all other intersections.

[2] Project impact is less than 5% of total intersection V/C or delay and therefore not a significant impact.

Exceeds level of service criteria

(Shade) = Significant Impact

Table L: Existing Plus Approved Projects (Baseline) Plus Project - Daily Roadway Segment Level of Service Summary

Roadway	Segment	Configuration	Capacity	Weekday			Saturday		
				Volume	V/C	LOS	Volume	V/C	LOS
Taylor Road	King Road and Horseshoe Bar Road [1] (Loomis)	Two-lane Collector	15,000	18,110	1.21	F	12,550	0.84	D
	Horseshoe Bar Road and Sierra College Boulevard [1] (Loomis)	Two-lane Collector	15,000	11,553	0.77	C	4,360	0.29	A
Pacific Street	Sierra College Boulevard and Dominguez Road [1]	Two-lane Collector	15,000	12,378	0.83	D	6,680	0.45	A
	Dominguez Road and Rocklin Road [1]	Four-lane Undivided Arterial	30,000	19,739	0.66	B	9,400	0.31	A
Rocklin Road	Pacific Street and Granite Drive	Four-lane Undivided Arterial	30,000	25,701	0.86	D	13,730	0.46	A
	I-80 and Sierra College Boulevard	Four-lane Undivided Arterial	30,000	16,259	0.54	A	18,000	0.60	B
	Sierra College Boulevard and Barton Road [1] (Loomis)	Two-lane Collector	15,000	7,866	0.52	A	6,470	0.43	A
Barton Road	Rocklin Road and Brace Road [1] (Loomis)	Two-lane Collector	15,000	4,104	0.27	A	2,790	0.19	A
Horseshoe Bar Road	I-80 and Brace Road (Loomis)	Two-lane Collector	15,000	6,191	0.41	A	6,550	0.44	A
Brace Road	I-80 and Barton Road [1] (Loomis)	Two-lane Collector	15,000	4,156	0.28	A	2,100	0.14	A
	I-80 and Sierra College Boulevard [1] (Loomis)	Two-lane Collector	15,000	3,408	0.23	A	560	0.04	A
Sierra College Boulevard	English Colony Way and King Road [1] (Placer County)	Two-lane Collector	15,000	12,160	0.81	D	9,150	0.61	B
	King Road and Taylor Road [1] (Loomis)	Two-lane Collector	15,000	13,550	0.90	E	10,230	0.68	B
	Taylor Road and I-80	Two-lane Collector	15,000	21,716	1.45	F	13,140	0.88	D
	I-80 and Dominguez Road	Four-lane Undivided Arterial	30,000	23,175	0.77	C	21,440	0.71	C
	Dominguez Road and Rocklin Road [1]	Two-lane Collector	15,000	18,465	1.23	F	16,330	1.09	F
Granite Drive	Dominguez Road and Sierra College Boulevard [1]	Four-lane Undivided Arterial	30,000	6,348	0.21	A	4,460	0.15	A
	Dominguez Road and Rocklin Road [1]	Four-lane Undivided Arterial	30,000	8,518	0.28	A	8,040	0.27	A
Dominguez Road	Taylor Road and Granite Drive [1]	Two-lane Collector	15,000	2,522	0.17	A	640	0.04	A
King Road	Sierra College Boulevard and Taylor Road [1] (Loomis)	Two-lane Collector	15,000	5,610	0.37	A	3,460	0.23	A

Notes:

[1] LOS C required for these segments. LOS D acceptable for all other segments.

☐ Exceeds level of service criteria

Recommended Mitigation: Existing Plus Approved Projects (Baseline) Plus Project

Rocklin Road/I-80 Westbound Ramps. The project would add traffic to this already deficient location, which is operating at LOS F during the p.m. peak hour in the existing plus approved projects condition. The City has proposed improvement at the intersection of Rocklin Road/I-80 westbound ramps that provides a flyover from westbound Rocklin Road to the I-80 westbound on ramp. This improvement will mitigate the impact at this location. The project applicant will pay a traffic impact fee (on a fair-share basis) that has been set up by the City for this proposed improvement.

Rocklin Road/I-80 Eastbound Ramps. The proposed improvement at the intersection of Rocklin Road/I-80 westbound ramps (discussed above) will reduce westbound through traffic at the intersection of Rocklin Road/I-80 eastbound ramps; therefore, the intersection will not have a cumulative impact. The project applicant will pay a traffic impact fee (on a fair-share basis) that has been set up by the City for the proposed interchange improvements.

Sierra College Boulevard/Rocklin Road. The project would add traffic to this already deficient location, which is operating at LOS D during the p.m. peak hour in the existing plus approved projects condition. Adding a northbound left-turn lane (resulting in dual left-turn lanes) would result in a satisfactory LOS at this location. The project applicant should participate in this improvement on a fair-share basis.

The proposed mitigations for the existing plus approved projects (baseline) plus project are shown in Figure 17. Proposed new features or proposed changes to the phasing of improvements can be identified by comparing the diagrams in Figure 17 to the corresponding diagrams found in Figure 4 (Existing Geometrics and Traffic Control).

CUMULATIVE (YEAR 2025) CONDITIONS

Development of Future Traffic Volumes

Traffic volume data for 2025 conditions were developed using forecasts from the City of Rocklin traffic model. The traffic model is based on the land use and circulation system shown in the City's General Plan. The 2025 projected volume for this analysis is based on the summary of projections method contained in the adopted General Plan. Base-year and future-year p.m. peak-hour arterial segment volumes were forecast using the City's model. Turn movements for the p.m. peak hour were postprocessed according to the methodology described below.

Intersection Turning Movements

For passenger vehicles, the base-year scenario in the City's traffic model is 2001, and the future-year scenario is 2025. The following describes the methodology used to postprocess traffic model volumes to develop a.m. and p.m. peak-hour intersection turn volumes for 2025 conditions:

1. The difference between the modeled 2001 and 2025 peak-hour directional arterial traffic volumes (for each intersection approach and departure) was identified from loaded highway network plots. This difference defines growth in traffic over the 24-year period. The incremental growth in peak-

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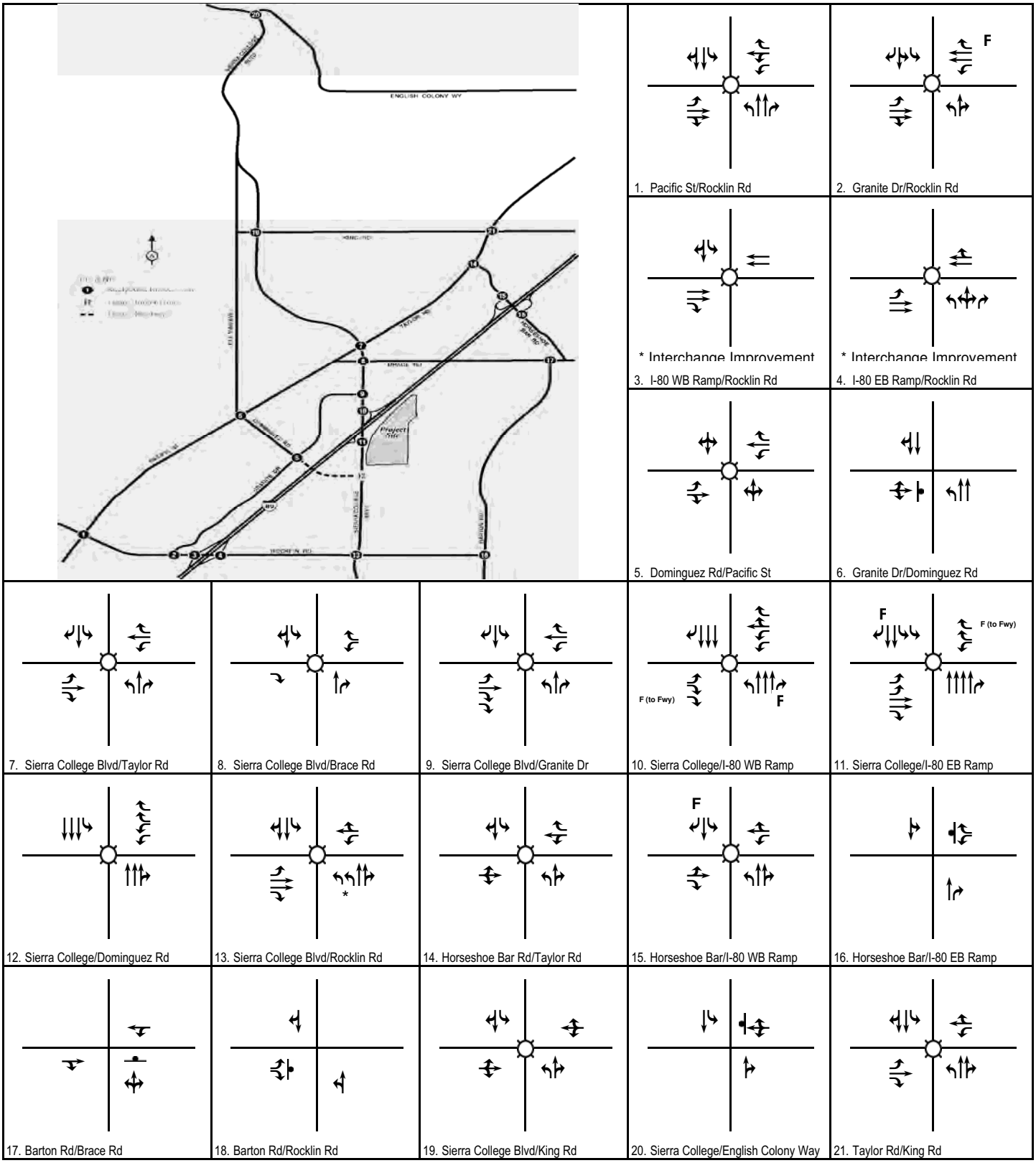

LSA

FIGURE 17

Legend

Signal

Stop Sign

F Free Right Turn

* Proposed Mitigation

Rocklin Crossings

Existing Plus Approved Projects (Baseline) Plus Project Conditions - Mitigation

period approach and departure volumes between 2001 and 2025 was factored to develop the incremental change in peak-hour volumes.

2. The forecast growth in approach and departure volumes from 2006 to future-year 2025 was added to the existing approach and departure volumes, resulting in postprocessed forecast-year 2025 approach and departure volumes. Volume development worksheets summarizing the steps are included in Appendix G.
3. Forecast year 2025 turn volumes were developed using existing turn volumes and the future approach and departure volumes, based on the methodologies contained in the National Cooperative Highway Research Program Report (NCHRP) 255: *Highway Traffic Data for Urbanized Area Project Planning and Design* (Transportation Research Board, December 1982). NCHRP 255 worksheets are included in Appendix G.

The City's current traffic model is not validated for the a.m. peak hour and does not have forecasting capability for the Saturday peak hour. To validate the 2025 model a.m. peak-hour traffic volumes, the existing a.m. peak-hour traffic volumes were compared to the existing p.m. peak-hour traffic volumes and ratios between existing a.m. and p.m. peak volume were calculated. These ratios were then applied to the 2025 a.m. peak model numbers. These adjusted 2025 a.m. peak directional arterial traffic volumes were then used in the methodology described above in Step 1 to obtain the growth in traffic during the a.m. peak hour. Similarly, to develop future intersection turn movements for the Saturday peak hours, the ratios of the existing p.m. peak to Saturday peak hours were used. These ratios were applied to the postprocessed year 2025 no project p.m. peak hour traffic volumes to determine the 2025 no project Saturday peak-hour traffic volumes. Project trips were then manually added to the study area intersections to determine the 2025 plus project traffic volumes. Year 2025 traffic volumes were forecast for two roadway networks. The network used for project impact analysis assumes that Dominguez Road terminates at Granite Drive, as in the existing condition, and is referred to as "without Dominguez Road." The alternative network assumes that Dominguez Road is extended east to Sierra College Boulevard. This alternative network is referred to as "with Dominguez Road" and is intended to provide a sensitivity analysis of the effects of extending Dominguez Road. The Dominguez Road extension is in the City's Traffic Impact Fee and Capital Improvement Program and is included in the City's current General Plan although no schedule exists for construction of the new segment. The analysis of "with Dominguez Road" conditions is provided in the Special Issues section.

2025 No Project without Dominguez Road

Weekday and Saturday peak-hour forecast traffic volumes for the 2025 no project without Dominguez Road scenario are shown in Figures 18 and 19. The LOS for study area intersections and roadway segments are shown in Tables M and N. The 2025 no project without Dominguez Road traffic volume development and LOS worksheets are provided in Appendix G. All 2025 LOS include the roadway improvements assumed in the baseline condition as well as implementation of the City's General Plan roadway system as documented in the City General Plan Circulation Element. The LOS also includes the following improvements to the intersection of Sierra College Boulevard/Rocklin Road, which is planned as part of the Sierra College Boulevard widening project: (1) Northbound – addition of a second left, third through, and exclusive right-turn lanes; (2) Southbound – addition of a

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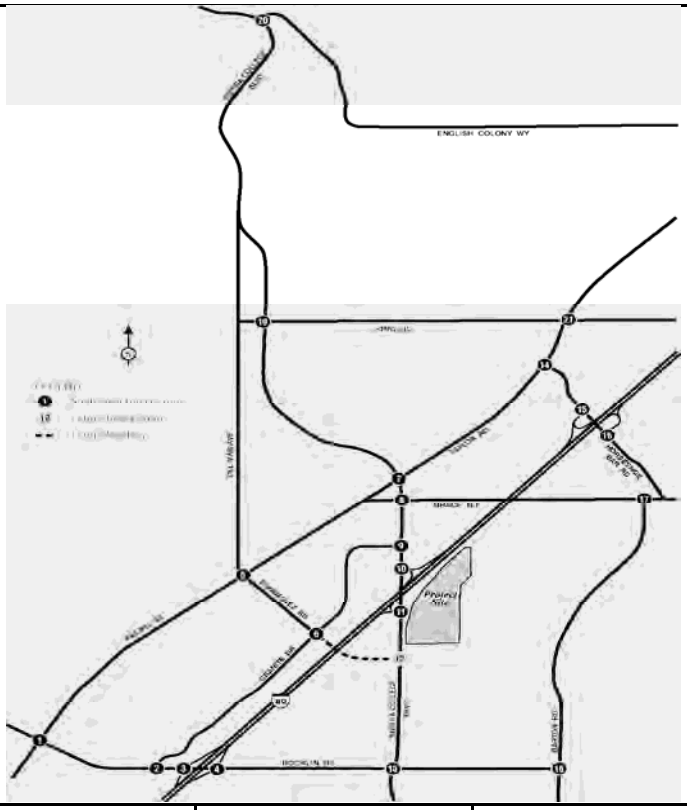


1 Pacific St/Rocklin Rd

60 / 30	403 / 509	168 / 100
94 / 181	215 / 198	347 / 537
31 / 86	198 / 271	60 / 67
81 / 65	295 / 431	459 / 448

2 Granite Dr/Rocklin Rd

191 / 431	7 / 14	382 / 657
752 / 682	1061 / 969	6 / 38
168 / 334	965 / 1212	12 / 27
21 / 22	10 / 12	9 / 38

3 I-80 WB Ramp/Rocklin Rd

402 / 410	2 / 3	241 / 110
1417 / 1274	349 / 514	
917 / 1202	442 / 711	

4 I-80 EB Ramp/Rocklin Rd

83 / 134	1087 / 1262	
335 / 314	824 / 998	
679 / 526	2 / 1	763 / 565

5 Dominguez Rd/Pacific St

119 / 226	33 / 126	40 / 103
165 / 45	536 / 513	109 / 49
143 / 78	338 / 750	43 / 34
30 / 25	138 / 48	63 / 82

6 Granite Dr/Dominguez Rd

55 / 48	381 / 369
46 / 102	116 / 131
158 / 70	161 / 489

7 Sierra College Blvd/Taylor Rd

299 / 153	1069 / 761	34 / 28
46 / 46	302 / 275	306 / 330
90 / 313	175 / 388	114 / 276
346 / 203	601 / 1110	257 / 291

8 Sierra College Blvd/Brace Rd

1262 / 995	188 / 321	
274 / 284	256 / 172	
58 / 87		
850 / 1063	102 / 290	

9 Sierra College Blvd/Granite Dr

190 / 191	1185 / 983	130 / 90
56 / 49	30 / 22	110 / 97
126 / 358	16 / 31	34 / 270
269 / 124	865 / 954	57 / 54

10 Sierra College/I-80 WB Ramp

53 / 52	1346 / 1290	
198 / 128	19 / 16	804 / 617
22 / 82	23 / 152	
65 / 55	1039 / 941	146 / 86

11 Sierra College/I-80 EB Ramp

392 / 558	1383 / 1239	
386 / 261	272 / 50	
1278 / 1511		

12 Sierra College/Dominguez Rd

1536 / 1164	126 / 204	
23 / 83	142 / 336	
1214 / 1408	40 / 65	

13 Sierra College/Rocklin Rd

230 / 71	999 / 1143	129 / 265
218 / 58	522 / 300	85 / 64
244 / 245	206 / 538	350 / 465
594 / 346	812 / 1193	46 / 119

14 Horseshoe Bar Rd/Taylor Rd

5 / 10	484 / 484	659 / 467
584 / 667	15 / 12	84 / 93
11 / 7	70 / 11	22 / 9
6 / 8	325 / 536	112 / 116

15 Horseshoe Bar/I-80 WB Ramp

623 / 431	279 / 257	16 / 31
34 / 51	82 / 50	32 / 161
205 / 89	53 / 45	153 / 130
183 / 169	543 / 502	49 / 195

16 Horseshoe Bar/I-80 EB Ramp

358 / 359	104 / 125	
359 / 363	192 / 101	
419 / 532	131 / 112	

17 Barton Rd/Brace Rd

381 / 206	158 / 203	
159 / 348	126 / 218	
208 / 134	209 / 121	

18 Barton Rd/Rocklin Rd

272 / 169	146 / 81	
164 / 209	151 / 562	
490 / 230	88 / 103	

19 Sierra College Blvd/King Rd

76 / 10	863 / 707	231 / 371
353 / 227	36 / 5	63 / 15
10 / 54	16 / 31	4 / 4
4 / 2	561 / 969	17 / 72

20 Sierra College/English Colony

1134 / 690	202 / 265	
188 / 174	114 / 52	
531 / 1133	15 / 114	

21 Taylor Rd/King Rd

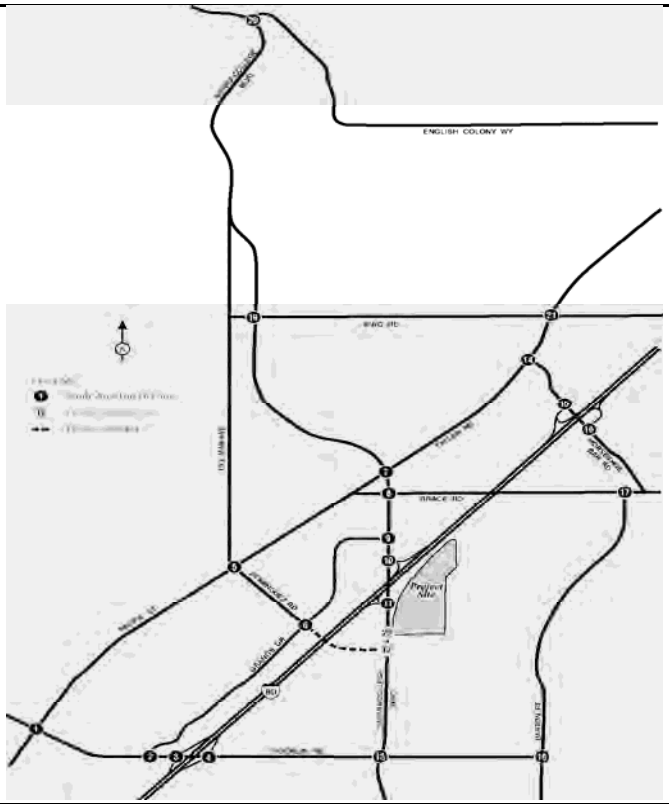
525 / 249	134 / 97	
216 / 79	260 / 133	170 / 99
268 / 135	148 / 216	279 / 269
316 / 347	355 / 366	79 / 198

FIGURE 18

123 / 456 AM / PM Peak Hour Volume

Rocklin Crossings

Year 2025 No Project Peak Hour Traffic Volumes - Without Dominguez Road



1 Pacific St/Rocklin Rd

23	304	110	114	64	304
56	134	64	24	276	397

2 Granite Dr/Rocklin Rd

156	22	602	343	494	35
304	678	13	32	16	31

3 I-80 WB Ramp/Rocklin Rd

567	2	636	473	148
1130	99			

4 I-80 EB Ramp/Rocklin Rd

294	595	
302	1464	26
		114

5 Dominguez Rd/Pacific St

35	27	14	13	273	26
38	535	14	5	23	12

6 Granite Dr/Dominguez Rd

20	455	
15	40	19
		274

7 Sierra College Blvd/Taylor Rd

84	596	31	31	209	132
51	280	80	47	653	79

8 Sierra College Blvd/Brace Rd

724	118	108	99	
14	718	32		

9 Sierra College Blvd/Granite Dr

279	542	72	35	20	119
292	19	118	189	540	94

10 Sierra College/I-80 WB Ramp

91	1014	89	24	411	
144	257	123	982	207	

11 Sierra College/I-80 EB Ramp

170	1001		
632	190	25	
		1147	

12 Sierra College/Dominguez Rd

1043	212	43	404	
		1036	130	

13 Sierra College/Rocklin Rd

68	742	154	48	360	94	
120	348	216	236	743	78	

14 Horseshoe Bar Rd/Taylor Rd

6	369	343	318	12	123	
6	16	9	14	375	110	

15 Horseshoe Bar/I-80 WB Ramp

225	219	40	60	58	144	
57	43	76	198	388	88	

16 Horseshoe Bar/I-80 EB Ramp

375	112	240	84	
		387	101	

17 Barton Rd/Brace Rd

		202	107	
283	31	22	151	

18 Barton Rd/Rocklin Rd

295	72		
257	402	128	73

19 Sierra College Blvd/King Rd

7	686	294	121	13	38	
5	31	8	6	531	35	

20 Sierra College/English Colony

633	175	64	52
		563	114

21 Taylor Rd/King Rd

49	254	66	435	88	115	
109	112	171	159	356	191	

FIGURE 19

Rocklin Crossings

Year 2025 No Project Saturday Peak Hour Traffic Volumes - Without Dominguez Road

Table M: 2025 No Project without Dominguez Road Condition Peak Hour Intersection Level of Service Summary

		2025 No Project without Dominguez Road Condition					
		AM Peak Hour		PM Peak Hour		Saturday	
	Intersection	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS
1	Rocklin Road/Pacific Street [1]	0.639	B	0.674	B	0.488	A
2	Rocklin Road/Granite Drive	0.564	A	0.771	C	0.570	A
3	Rocklin Road/I-80 Westbound Ramps	0.734	C	0.993	E	0.818	D
4	Rocklin RoadI-80 Eastbound Ramps	0.878	D	0.856	D	0.490	A
5	Dominguez Road/Pacific Street [1]	0.502	A	0.657	B	0.368	A
6	Dominguez Road/Granite Drive [1]	13.0 sec	B	15.1 sec	C	11.1 sec	B
7	Sierra College Boulevard/Taylor Road (Loomis)	0.825	D	0.788	C	0.466	A
8	Sierra College Boulevard/Brace Road (Loomis)	0.497	A	0.640	B	0.288	A
9	Sierra College Boulevard/Granite Drive	0.551	A	0.559	A	0.482	A
10	Sierra College Boulevard/I-80 Westbound Ramps	0.593	A	0.592	A	0.572	A
11	Sierra College Boulevard/I-80 Eastbound Ramps	0.584	A	0.462	A	0.529	A
12	Sierra College Boulevard/Dominguez Road	0.377	A	0.533	A	0.499	A
13	Sierra College Boulevard/Rocklin Road [1]	0.705	C	0.649	B	0.392	A
14	Taylor Road/Horseshoe Bar Road (Loomis)	1.025	F	1.087	F	0.698	B
15	Horseshoe Bar Road/I-80 Westbound Ramps (Loomis)	0.475	A	0.437	A	0.401	A
16	Horseshoe Bar Road/I-80 Eastbound Ramps [2] (Loomis)	29.8 sec	D	26.9 sec	D	16.7 sec	C
17	Barton Road/Brace Road [12] (Loomis)	81.4 sec	F	59.9 sec	F	12.4 sec	B
18	Barton Road/Rocklin Road [12] (Loomis)	261.4 sec	F	20.4 sec	C	17.0 sec	C
19	Sierra College Boulevard/King Road [1] (Loomis)	0.607	B	0.744	C	0.481	A
20	Sierra College Boulevard/English Colony Way [12] (Placer County)	266.4 sec	F	593.7 sec	F	32.9 sec	D
21	Taylor Road/King Road [1] (Loomis)	0.802	D	0.509	A	0.589	A

Notes:

ICU V/C ratio is used for signalized intersections. HCM delay in seconds is used for unsignalized intersections.

[1] LOS C required for these intersections. LOS D acceptable for all other intersections.

[2] Peak Hour volumes meet Signal Warrant #3 of the MUTCD

☐ Exceeds level of service criteria

Table N: 2025 No Project Without Dominguez Road Daily Roadway Segment Level of Service Summary

Roadway	Segment	Capacity	Volume	Capacity Configuration	V/C	LOS
Taylor Road	King Road and Horseshoe Bar Road [1] (Loomis)	15,000	19,499	Two-lane Collector	1.30	F
	Horseshoe Bar Road and Sierra College Boulevard[1] (Loomis)	15,000	14,891	Two-lane Collector	0.99	E
Pacific Street	Sierra College Boulevard and Dominguez Road [1]	30,000	17,725	Four-lane Undivided Arterial	0.59	A
	Dominguez Road and Rocklin Road [1]	30,000	22,105	Four-lane Undivided Arterial	0.74	C
Rocklin Road	Pacific Street and Granite Drive	30,000	37,534	Four-lane Undivided Arterial	1.25	F
	I-80 and Sierra College Boulevard	30,000	16,346	Four-lane Undivided Arterial	0.54	A
	Sierra College Boulevard and Barton Road [1] (Loomis)	30,000	14,281	Four-lane Undivided Arterial	0.48	A
Barton Road	Rocklin Road and Brace Road [1] (Loomis)	15,000	6,372	Two-lane Collector	0.42	A
Horseshoe Bar Road	I-80 and Brace Road (Loomis)	15,000	9,983	Two-lane Collector	0.67	B
Brace Road	I-80 and Barton Road [1] (Loomis)	15,000	9,754	Two-lane Collector	0.65	B
	I-80 and Sierra College Boulevard [1] (Loomis)	15,000	9,202	Two-lane Collector	0.61	B
Sierra College Boulevard	English Colony Way and King Road [1] (Placer County)	30,000	22,994	Four-lane Undivided Arterial	0.77	C
	King Road and Taylor Road [1] (Loomis)	30,000	21,382	Four-lane Undivided Arterial	0.71	C
	Taylor Road and I-80	50,525	32,940	Six-lane Arterial	0.65	B
	I-80 and Dominguez Road	50,525	26,424	Six-lane Arterial	0.52	A
	Dominguez Road and Rocklin Road [1]	50,525	32,628	Six-lane Arterial	0.65	B
Granite Drive	Dominguez Road and Sierra College Boulevard [1]	30,000	11,367	Four-lane Undivided Arterial	0.38	A
	Dominguez Road and Rocklin Road [1]	30,000	14,008	Four-lane Undivided Arterial	0.47	A
Dominguez Road	Taylor Road and Granite Drive [1]	15,000	4,942	Two-lane Collector	0.33	A
King Road	Sierra College Boulevard and Taylor Road [1] (Loomis)	15,000	7,037	Two-lane Collector	0.47	A

Notes:

[1] LOS C required for these segments. LOS D acceptable for all other segments.

Exceeds level of service criteria

Roadway Improvements consistent with City of Rocklin General Plan, Town of Loomis General Plan, and the Horseshoe Bar/Penryn Community Plan

third through and exclusive right-turn lanes; and (3) Westbound – addition of a second left and second through lanes. The 2025 intersection geometrics and traffic control are shown in Figure 20.

As shown in Table M, the following six intersections are forecast to operate at unsatisfactory LOS in the 2025 No Project without Dominguez Road condition:

- Rocklin Road/I-80 Westbound Ramps
- Taylor Road/Horseshoe Bar Road (Loomis)
- Barton Road/Brace Road (Loomis)
- Barton Road/Rocklin Road (Loomis)
- Sierra College Boulevard/English Colony Way (Placer County)
- Taylor Road/King Road (Loomis)

The results of the roadway analysis as shown in Table N indicate that most of the study area roadway segments are forecast to operate within their daily roadway capacities with the exception of the following three segments:

- Taylor Road between King Road and Horseshoe Bar Road (Loomis)
- Taylor Road between Horseshoe Bar Road and Sierra College Boulevard (Loomis)
- Rocklin Road between Pacific Street and Granite Drive

2025 Plus Project without Dominguez Road

Traffic volumes generated by the proposed project were added to the 2025 no project traffic volumes, and LOS were calculated for the 2025 plus project scenario. Weekday and Saturday peak-hour forecast traffic volumes for the 2025 plus project without Dominguez Road scenario are shown in Figures 21 and 22. The LOS for study area intersections and roadway segments in the 2025 plus project without Dominguez Road scenario are shown in Tables O and P. The 2025 plus project without Dominguez Road LOS worksheets are provided in Appendix H.

As shown in Table O, the following five intersections operate at unsatisfactory LOS and are significantly impacted in the 2025 plus project without Dominguez Road scenario:

- Rocklin Road/I-80 Westbound Ramps
- Rocklin Road/I-80 Eastbound Ramps
- Barton Road/Brace Road (Loomis)
- Barton Road/Rocklin Road (Loomis)
- Sierra College Boulevard/English Colony Way (Placer County)

As shown in Table P, the results of the roadway segment analysis indicate that the following four roadway segments that were forecast to operate with unsatisfactory LOS in the without project scenario would continue to operate with unsatisfactory LOS in the 2025 plus project without Dominguez Road scenario:

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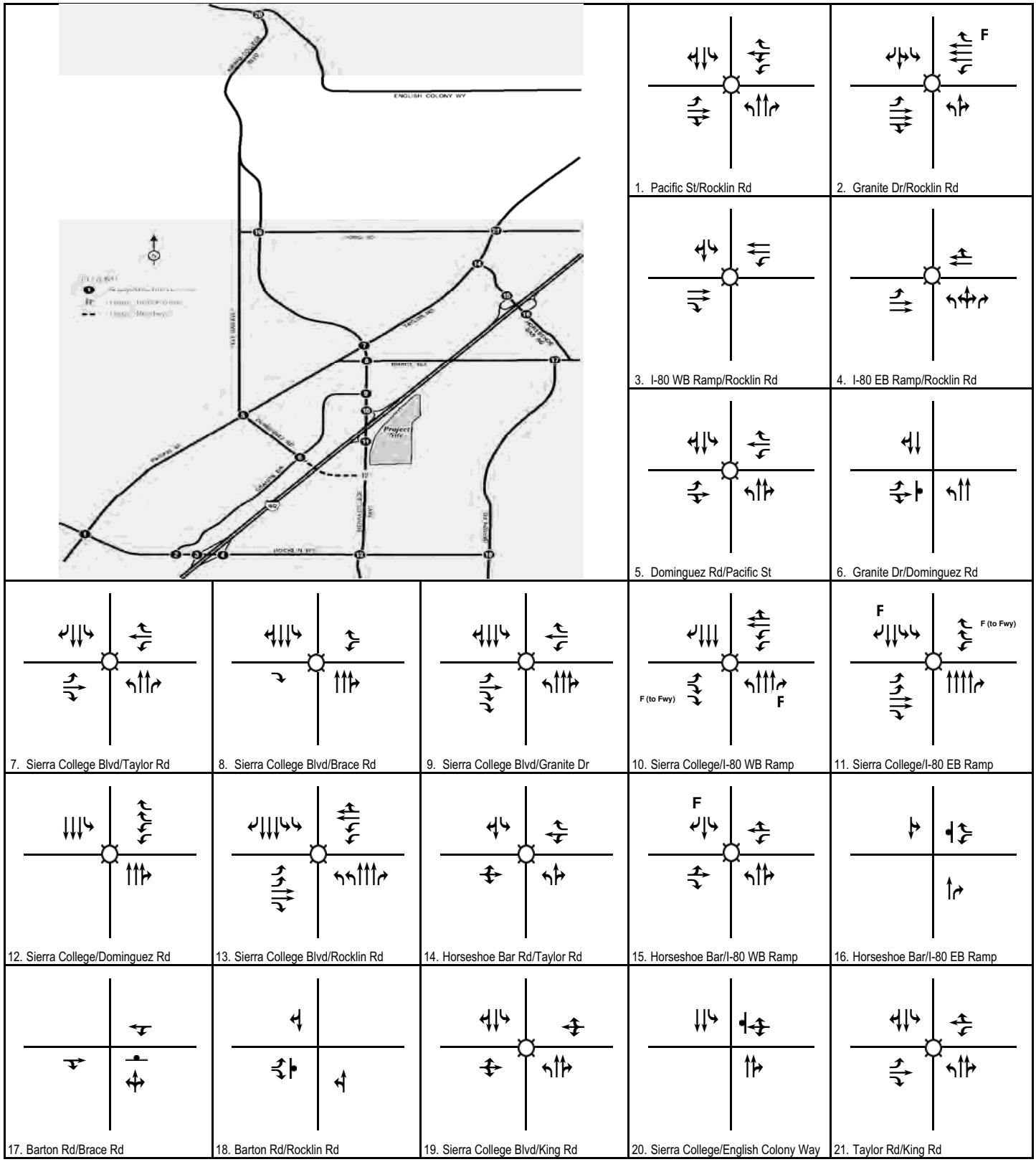


LSA

Legend

Signal

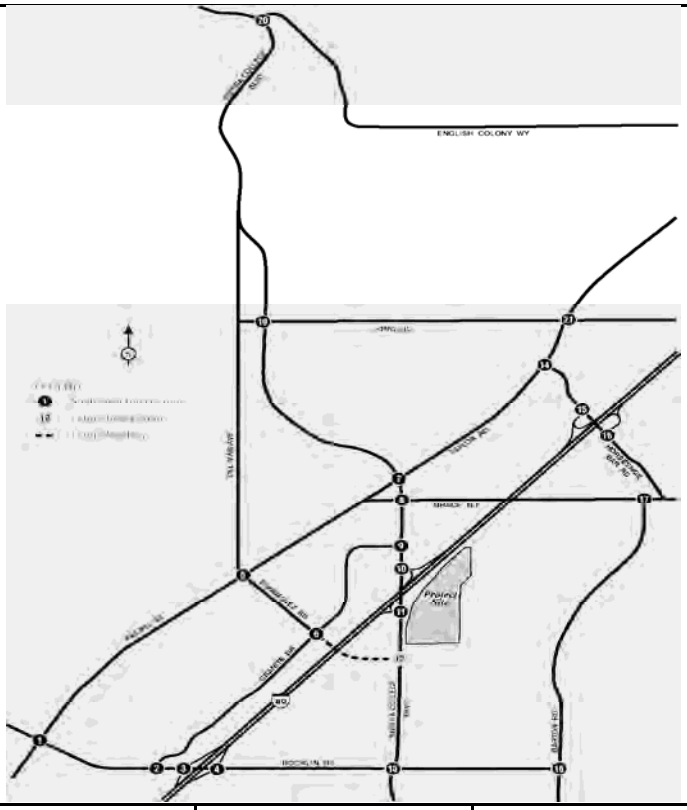
Stop Sign

F Free Right Turn

FIGURE 20

Rocklin Crossings

Year 2025 Geometrics and Traffic Control



1 Pacific St/Rocklin Rd

60 / 30	403 / 509	168 / 100	↱ 94 / 181		
			← 215 / 198		
			↰ 353 / 557		
31 / 86 ↱			↰	↑	↱
198 / 271 →			81 / 65	295 / 431	466 / 467
60 / 67 ↳					

2 Granite Dr/Rocklin Rd

191 / 431	7 / 14	383 / 659	↱ 753 / 685		
			← 1070 / 1001		
			↰ 6 / 38		
168 / 334 ↱			↰	↑	↱
976 / 1243 →			21 / 22	10 / 12	9 / 38
12 / 27 ↳					

3 I-80 WB Ramp/Rocklin Rd

405 / 419	2 / 3	241 / 110	← 1424 / 1299		
			↰ 372 / 592		
929 / 1235 →					
442 / 711 ↳					

4 I-80 EB Ramp/Rocklin Rd

			↱ 83 / 134		
			← 1117 / 1365		
338 / 323 ↱			↰	↑	↱
832 / 1022 →			679 / 526	2 / 1	789 / 640

5 Dominguez Rd/Pacific St

119 / 226	34 / 128	43 / 111	↱ 167 / 51		
			← 536 / 513		
			↰ 109 / 49		
143 / 78 ↱			↰	↑	↱
338 / 750 →			31 / 27	139 / 52	63 / 82
44 / 36 ↳					

6 Granite Dr/Dominguez Rd

57 / 54	382 / 371				
47 / 106 ↱			↰	↑	
116 / 131 ↳			158 / 70	162 / 491	

7 Sierra College Blvd/Taylor Rd

299 / 153	1099 / 846	34 / 28	↱ 46 / 46		
			← 302 / 275		
			↰ 323 / 377		
90 / 313 ↱			↰	↑	↱
175 / 388 →			349 / 212	627 / 1198	271 / 340
118 / 286 ↳					

8 Sierra College Blvd/Brace Rd

1312 / 1137	188 / 321		↱ 274 / 284		
			↰ 264 / 195		
58 / 87 ↳			↑	↱	
			893 / 1208	107 / 307	

9 Sierra College Blvd/Granite Dr

190 / 191	1243 / 1148	130 / 90	↱ 56 / 49		
			← 30 / 22		
			↰ 110 / 97		
126 / 358 ↱			↰	↑	↱
16 / 31 →			279 / 159	913 / 1116	57 / 54
45 / 302 ↳					

10 Sierra College/I-80 WB Ramp

53 / 52	1415 / 1487		↱ 198 / 128		
			← 19 / 16		
			↰ 830 / 692		
22 / 82 ↱			↰	↑	↱
23 / 152 ↳			65 / 55	1097 / 1138	241 / 407

11 Sierra College/I-80 EB Ramp

392 / 558	1396 / 1277	118 / 230	↱ 69 / 336		
			↰ 58 / 259		
386 / 261 ↱			↰	↑	↱
186 / 233 →			1316 / 1642	135 / 226	
279 / 69 ↳					

12 Sierra College/Dominguez Rd

1583 / 1324	146 / 260		↱ 40 / 142		
			↰ 178 / 459		
			↑	↱	
			1290 / 1623	60 / 122	

13 Sierra College/Rocklin Rd

266 / 193	1028 / 1241	148 / 328	↱ 239 / 119		
			← 522 / 300		
			↰ 85 / 64		
285 / 363 ↱			↰	↑	↱
206 / 538 →			594 / 346	845 / 1287	46 / 119
350 / 465 ↳					

14 Horseshoe Bar Rd/Taylor Rd

5 / 10	501 / 531	659 / 467	↱ 584 / 667		
			← 15 / 12		
			↰ 84 / 93		
11 / 7 ↱			↰	↑	↱
70 / 11 →			6 / 8	339 / 585	112 / 116
22 / 9 ↳					

15 Horseshoe Bar/I-80 WB Ramp

623 / 431	279 / 257	16 / 31	↱ 34 / 51		
			← 82 / 50		
			↰ 32 / 161		
205 / 89 ↱			↰	↑	↱
53 / 45 →			183 / 169	543 / 502	49 / 195
153 / 130 ↳					

16 Horseshoe Bar/I-80 EB Ramp

358 / 359	104 / 125				
			↱ 359 / 363		
			↰ 194 / 109		
			↑	↱	
			419 / 532	131 / 112	

17 Barton Rd/Brace Rd

			← 384 / 215		
			↰ 158 / 203		
160 / 350 →			↰	↑	↱
127 / 223 ↳			210 / 139	209 / 121	

18 Barton Rd/Rocklin Rd

274 / 174	146 / 81				
165 / 214 ↱			↰	↑	
168 / 621 ↳			510 / 286	88 / 103	

19 Sierra College Blvd/King Rd

76 / 10	893 / 792	231 / 371	↱ 353 / 227		
			← 36 / 5		
			↰ 63 / 15		
10 / 54 ↱			↰	↑	↱
16 / 31 →			4 / 2	587 / 1057	17 / 72
4 / 4 ↳					

20 Sierra College/English Colony

1164 / 775	202 / 265				
			↱ 188 / 174		
			↰ 114 / 52		
			↑	↱	
			557 / 1221	15 / 114	

21 Taylor Rd/King Rd

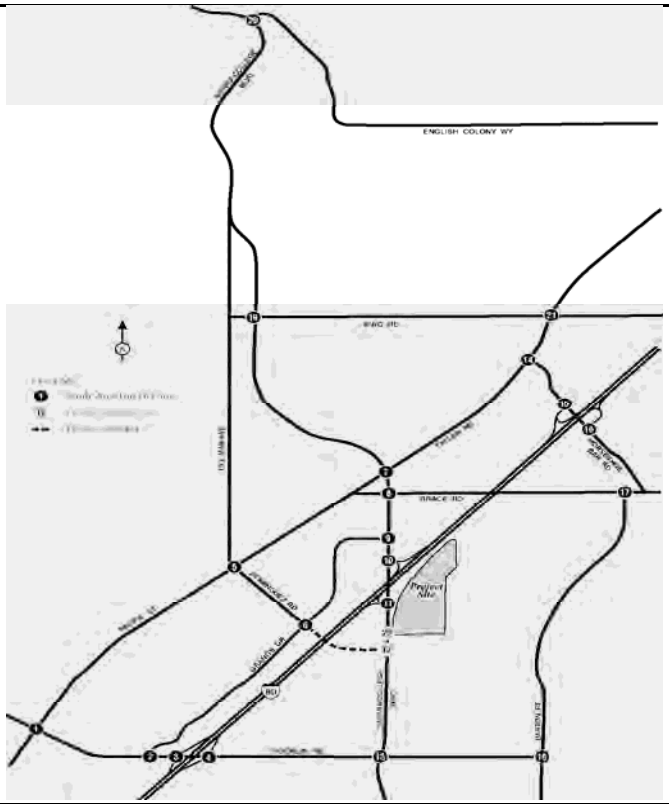
542 / 296	134 / 97		↱ 216 / 79		
			← 260 / 133		
			↰ 170 / 99		
268 / 135 ↱			↰	↑	↱
148 / 216 →			316 / 347	369 / 415	79 / 198
279 / 269 ↳					

FIGURE 21

123 / 456 AM / PM Peak Hour Volume

Rocklin Crossings

Year 2025 Plus Project Peak Hour Traffic Volumes - Without Dominguez Road



1 Pacific St/Rocklin Rd

23	304	110	114	64	326
56	134	64	24	276	421

2 Granite Dr/Rocklin Rd

156	22	605	346	530	35
304	717	13	32	16	31

3 I-80 WB Ramp/Rocklin Rd

578	2	636	501	236
1172	99			

4 I-80 EB Ramp/Rocklin Rd

294	711	
313	1494	26
		209

5 Dominguez Rd/Pacific St

35	29	24	20	273	26
38	535	17	8	27	12

6 Granite Dr/Dominguez Rd

27	458		
20	40	19	277

7 Sierra College Blvd/Taylor Rd

84	703	31	31	209	191
51	280	93	57	752	134

8 Sierra College Blvd/Brace Rd

903	118	108	129	
14		882	51	

9 Sierra College Blvd/Granite Dr

279	751	72	35	20	119
292	19	158	228	723	94

10 Sierra College/I-80 WB Ramp

91	1263	89	24	506	
144	257	123	1204	570	

11 Sierra College/I-80 EB Ramp

170	1049	297	394	181	
632	392	214	25	1294	243

12 Sierra College/Dominguez Rd

1224	283	109	543	
		1309	203	

13 Sierra College/Rocklin Rd

206	852	226	125	360	94
269	348	216	236	862	78

14 Horseshoe Bar Rd/Taylor Rd

6	428	343	318	12	123
6	16	9	14	430	110

15 Horseshoe Bar/I-80 WB Ramp

225	219	40	60	58	144
57	43	76	198	388	88

16 Horseshoe Bar/I-80 EB Ramp

375	112	240	93
		387	101

17 Barton Rd/Brace Rd

214	107		
285	37	28	151

18 Barton Rd/Rocklin Rd

301	72		
263	468	199	73

19 Sierra College Blvd/King Rd

7	793	294	121	13	38
5	31	8	6	630	35

20 Sierra College/English Colony

740	175	64	52
		662	114

21 Taylor Rd/King Rd

49	313	66	435	88	115
109	112	171	159	411	191

FIGURE 22

Rocklin Crossings

Year 2025 Plus Project Saturday Peak Hour Traffic Volumes - Without Dominguez Road

Table O: 2025 Plus Project without Dominguez Road Condition Peak Hour Intersection Level of Service Summary

		2025 No Project without Dominguez Road Condition						2025 Plus Project without Dominguez Road Condition					
		AM Peak Hour		PM Peak Hour		Saturday		AM Peak Hour		PM Peak Hour		Saturday	
	Intersection	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS
1	Rocklin Road/Pacific Street [1]	0.639	B	0.674	B	0.488	A	0.645	B	0.692	B	0.510	A
2	Rocklin Road/Granite Drive	0.564	A	0.771	C	0.570	A	0.567	A	0.780	C	0.582	A
3	Rocklin Road/I-80 Westbound Ramps	0.734	C	0.993	E	0.818	D	0.754	C	1.045	F	0.884	D
4	Rocklin RoadI-80 Eastbound Ramps	0.878	D	0.856	D	0.490	A	0.895	D	0.909	E	0.564	A
5	Dominguez Road/Pacific Street [1]	0.502	A	0.657	B	0.368	A	0.502	A	0.659	B	0.377	A
6	Dominguez Road/Granite Drive [1]	13.0 sec	B	15.1 sec	C	11.1 sec	B	13.1 sec	B	15.5 sec	C	11.5 sec	B
7	Sierra College Boulevard/Taylor Road (Loomis)	0.825	D	0.788	C	0.466	A	0.846	D	0.848	D	0.532	A
8	Sierra College Boulevard/Brace Road (Loomis)	0.497	A	0.640	B	0.288	A	0.511	A	0.673	B	0.347	A
9	Sierra College Boulevard/Granite Drive	0.551	A	0.559	A	0.482	A	0.569	A	0.614	B	0.544	A
10	Sierra College Boulevard/I-80 Westbound Ramps	0.593	A	0.592	A	0.572	A	0.616	B	0.657	B	0.654	B
11	Sierra College Boulevard/I-80 Eastbound Ramps	0.584	A	0.462	A	0.529	A	0.634	B	0.678	B	0.782	C
12	Sierra College Boulevard/Dominguez Road	0.377	A	0.533	A	0.499	A	0.421	A	0.663	B	0.658	B
13	Sierra College Boulevard/Rocklin Road [1]	0.705	C	0.649	B	0.392	A	0.731	C	0.672	B	0.487	A
14	Taylor Road/Horseshoe Bar Road (Loomis)	1.025	F	1.087	F	0.698	B	1.033	F [2]	1.116	F [2]	0.732	C
15	Horseshoe Bar Road/I-80 Westbound Ramps (Loomis)	0.475	A	0.437	A	0.401	A	0.475	A	0.437	A	0.401	A
16	Horseshoe Bar Road/I-80 Eastbound Ramps [3] (Loomis)	29.8 sec	D	26.9 sec	D	16.7 sec	C	30.2 sec	D	27.7 sec	D	17.3 sec	C
17	Barton Road/Brace Road [13] (Loomis)	81.4 sec	F	59.9 sec	F	12.4 sec	B	85.2 sec	F [2]	68.0 sec	F	12.8 sec	B
18	Barton Road/Rocklin Road [13] (Loomis)	261.4 sec	F	20.4 sec	C	17.0 sec	C	304.7 sec	F	27.6 sec	D	23.9 sec	C
19	Sierra College Boulevard/King Road [1] (Loomis)	0.607	B	0.744	C	0.481	A	0.615	B	0.771	C	0.511	A
20	Sierra College Boulevard/English Colony Way [13] (Placer County)	266.4 sec	F	593.7 sec	F	32.9 sec	D	305.0 sec	F	840.9 sec	F	47.3 sec	E
21	Taylor Road/King Road [1] (Loomis)	0.802	D	0.509	A	0.589	A	0.807	D [2]	0.523	A	0.605	B

Notes:

ICU V/C ratio is used for signalized intersections. HCM delay in seconds is used for unsignalized intersections.

[1] LOS C required for these intersections. LOS D acceptable for all other intersections.

[2] Project impact is less than 5% of total intersection V/C or delay and therefore not a significant impact.

[3] Peak Hour volumes meet Signal Warrant #3 of the MUTCD

* Delay exceeds 1000 seconds

Exceeds level of service criteria

(Shade) = Significant Impact

Table P: 2025 Plus Project Without Dominguez Road Daily Roadway Segment Level of Service Summary

Roadway	Segment	Capacity	Volume	Capacity Configuration	V/C	LOS
Taylor Road	King Road and Horseshoe Bar Road [1] (Loomis)	15,000	20,459	Two-lane Collector	1.36	F
	Horseshoe Bar Road and Sierra College Boulevard[1] (Loomis)	15,000	15,471	Two-lane Collector	1.03	F
Pacific Street	Sierra College Boulevard and Dominguez Road [1]	30,000	18,235	Four-lane Undivided Arterial	0.61	B
	Dominguez Road and Rocklin Road [1]	30,000	22,385	Four-lane Undivided Arterial	0.75	C
Rocklin Road	Pacific Street and Granite Drive	30,000	37,864	Four-lane Undivided Arterial	1.26	F
	I-80 and Sierra College Boulevard	30,000	18,006	Four-lane Undivided Arterial	0.60	B
	Sierra College Boulevard and Barton Road [1] (Loomis)	30,000	15,501	Four-lane Undivided Arterial	0.52	A
Barton Road	Rocklin Road and Brace Road [1] (Loomis)	15,000	6,962	Two-lane Collector	0.46	A
Horseshoe Bar Road	I-80 and Brace Road (Loomis)	15,000	10,033	Two-lane Collector	0.67	B
Brace Road	I-80 and Barton Road [1] (Loomis)	15,000	9,864	Two-lane Collector	0.66	B
	I-80 and Sierra College Boulevard [1] (Loomis)	15,000	9,202	Two-lane Collector	0.61	B
Sierra College Boulevard	English Colony Way and King Road [1] (Placer County)	30,000	24,724	Four-lane Undivided Arterial	0.82	D
	King Road and Taylor Road [1] (Loomis)	30,000	23,682	Four-lane Undivided Arterial	0.79	C
	Taylor Road and I-80	50,525	36,360	Six-lane Arterial	0.72	C
	I-80 and Dominguez Road	50,525	35,494	Six-lane Arterial	0.70	B
	Dominguez Road and Rocklin Road [1]	50,525	36,348	Six-lane Arterial	0.72	C
Granite Drive	Dominguez Road and Sierra College Boulevard [1]	30,000	11,387	Four-lane Undivided Arterial	0.38	A
	Dominguez Road and Rocklin Road [1]	30,000	14,068	Four-lane Undivided Arterial	0.47	A
Dominguez Road	Taylor Road and Granite Drive [1]	15,000	5,042	Two-lane Collector	0.34	A
King Road	Sierra College Boulevard and Taylor Road [1] (Loomis)	15,000	7,037	Two-lane Collector	0.47	A

Notes:

[1] LOS C required for these segments. LOS D acceptable for all other segments.

Exceeds level of service criteria

Roadway Improvements consistent with City of Rocklin General Plan, Town of Loomis General Plan, and the Horseshoe Bar/Penryn Community Plan

- Taylor Road between King Road and Horseshoe Bar Road (Loomis)
- Taylor Road between Horseshoe Bar Road and Sierra College Boulevard (Loomis)
- Rocklin Road between Pacific Street and Granite Drive
- Sierra College Boulevard between English Colony Way and King Road (Placer County)

A peak-hour segment analysis was prepared for these four roadway segments and is shown in Table Q. As shown in Table Q, the segments along Sierra College Boulevard would operate with satisfactory LOS during the a.m. and p.m. peak hours. As a result, the project would not create a significant impact on these roadway segments.

Recommended Mitigation: 2025 Plus Project Without Dominguez Road

- **Rocklin Road/I-80 Westbound Ramps.** The project would add traffic to this already deficient location, which is operating at LOS F during the p.m. peak hour in the 2025 no project without Dominguez Road scenario. The City has proposed an improvement at the intersection of Rocklin Road/I-80 westbound ramps that provides a flyover from westbound Rocklin Road to the I-80 westbound on-ramp. This improvement will mitigate the impact at this location. The project applicant will pay a traffic impact fee (on a fair-share basis) that has been set up by the City for this proposed improvement.
- **Rocklin Road/I-80 Eastbound Ramps.** The proposed improvement at the intersection of Rocklin Road/I-80 westbound ramps (discussed above) will reduce westbound through traffic at the intersection of Rocklin Road/I-80 eastbound ramps; therefore, the intersection will not have a cumulative impact. The project applicant will pay a traffic impact fee (on a fair-share basis) that has been set up by the City for the proposed interchange improvement.
- **Barton Road/Brace Road.** This intersection is operating at an unsatisfactory LOS during the a.m. and p.m. peak hours in the no project condition. The intersection is forecast to meet the peak-hour traffic signal warrant in the 2025 no project without Dominguez Road extension scenario. The intersection would continue to meet the peak-hour traffic signal warrant with the addition of project traffic. Signalization of this intersection would result in a satisfactory LOS. To mitigate the project contribution of traffic at this intersection, the project should participate on a fair-share basis in the installation of a traffic signal at Barton Road/Brace Road.
- **Barton Road/Rocklin Road.** This intersection is operating at an unsatisfactory LOS during the a.m. peak hour in the no project condition. The intersection is forecast to meet the peak-hour traffic signal warrant in the 2025 no project without Dominguez Road extension scenario. The intersection would continue to meet the peak-hour traffic signal warrant with the addition of project traffic. Signalization of this intersection would result in a satisfactory LOS. To mitigate the project contribution of traffic at this intersection, the project should participate on a fair-share basis in the installation of a traffic signal at Barton Road/Rocklin Road.
- **Sierra College Boulevard/English Colony Way.** This intersection is operating at an unsatisfactory LOS during the a.m. peak hour in the no project condition. The intersection is forecast to meet the peak-hour traffic signal warrant in the 2025 no project without Dominguez

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Table Q: 2025 Without Dominguez Road - Peak Hour Roadway Segment Level of Service Summary

Roadway	Segment	Capacity	2025 No Project			2025 Plus Project		
			Volume	V/C	LOS	Volume	V/C	LOS
Taylor Road	King Rd and Horseshoe Bar Rd (Loomis)							
	A.M. Peak Hour Northbound	1,650	657	0.40	A	674	0.41	A
	A.M. Peak Hour Southbound	1,650	846	0.51	A	860	0.52	A
	Total A.M. Peak Hour	3,300	1,503	0.46	A	1,534	0.46	A
	P.M Peak Hour Northbound	1,650	586	0.36	A	633	0.38	A
	P.M Peak Hour Southbound	1,650	660	0.40	A	709	0.43	A
	Total P.M. Peak Hour	3,300	1,246	0.38	A	1,342	0.41	A
	SAT Peak Hour Northbound	1,650	501	0.30	A	560	0.34	A
	SAT Peak Hour Southbound	1,650	898	0.54	A	953	0.58	A
	Total SAT Peak Hour	3,300	1,399	0.42	A	1,513	0.46	A
Taylor Road	Horseshoe Bar Rd and Sierra College Blvd (Loomis)							
	A.M. Peak Hour Northbound	1,650	1,147	0.70	C	1,164	0.71	C
	A.M. Peak Hour Southbound	1,650	921	0.56	A	935	0.57	A
	Total A.M. Peak Hour	3,300	2,068	0.63	B	2,099	0.64	B
	P.M Peak Hour Northbound	1,650	961	0.58	A	1,008	0.61	B
	P.M Peak Hour Southbound	1,650	1,210	0.73	C	1,259	0.76	C
	Total P.M. Peak Hour	3,300	2,171	0.66	B	2,267	0.69	B
	SAT Peak Hour Northbound	1,650	718	0.44	A	777	0.47	A
	SAT Peak Hour Southbound	1,650	699	0.42	A	754	0.46	A
	Total SAT Peak Hour	3,300	1,417	0.43	A	1,531	0.46	A
Rocklin Road	Pacific St and Granit Dr							
	A.M. Peak Hour Eastbound	3,300	1,815	0.55	A	1,825	0.55	A
	A.M. Peak Hour Westbound	3,300	1,355	0.41	A	1,367	0.41	A
	Total A.M. Peak Hour	6,600	3,170	0.48	A	3,192	0.48	A
	P.M Peak Hour Eastbound	3,300	1,691	0.51	A	1,726	0.52	A
	P.M Peak Hour Westbound	3,300	1,907	0.58	A	1,940	0.59	A
	Total P.M. Peak Hour	6,600	3,598	0.55	A	3,666	0.56	A
	SAT Peak Hour Eastbound	3,300	870	0.26	A	911	0.28	A
	SAT Peak Hour Westbound	3,300	1,310	0.40	A	1,352	0.41	A
	Total SAT Peak Hour	6,600	2,180	0.33	A	2,263	0.34	A
Sierra College Boulevard	English Colony Way and King Rd (Placer County)							
	A.M. Peak Hour Northbound	3,300	1,333	0.40	A	1,363	0.41	A
	A.M. Peak Hour Southbound	3,300	718	0.22	A	744	0.23	A
	Total A.M. Peak Hour	6,600	2,051	0.31	A	2,107	0.32	A
	P.M Peak Hour Northbound	3,300	955	0.29	A	1,040	0.32	A
	P.M Peak Hour Southbound	3,300	1,307	0.40	A	1,395	0.42	A
	Total P.M. Peak Hour	6,600	2,262	0.34	A	2,435	0.37	A
	SAT Peak Hour Northbound	3,300	808	0.24	A	776	0.24	A
	SAT Peak Hour Southbound	3,300	627	0.19	A	915	0.28	A
	Total SAT Peak Hour	6,600	1,435	0.22	A	1,691	0.26	A

Road extension scenario. The intersection would continue to meet the peak-hour traffic signal warrant with the addition of project traffic. Signalization of this intersection would result in a satisfactory LOS. To mitigate the project contribution of traffic at this intersection, the project should participate on a fair-share basis.

Although the intersection of Taylor Road/King Road operates unsatisfactorily, in the 2025 plus project without Dominguez Road scenario the project would not increase the v/c ratio by 0.05 or more. As a result, the project contribution of traffic at this intersection is not considered a significant impact.

The proposed mitigations for the 2025 plus project without Dominguez Road scenario are shown in Figure 23. Per Town of Loomis[1] and Horseshoe Bar/Penryn Community Plan, Sierra College Boulevard is planned to be widened to a four-lane arterial between Taylor Road and SR-193. In addition, the Town of Loomis has a proposed signal installation at the intersection of Barton Road/Rocklin Road for the near future.

SPECIAL ISSUES

Dominguez Road Sensitivity Analysis

An analysis of forecast year 2025 traffic volumes was prepared assuming that Dominguez Road is extended east to Sierra College Boulevard. This alternative network is referred to as "with Dominguez Road" and is intended to provide a sensitivity analysis of the effects of extending Dominguez Road.

2025 No Project with Dominguez Road. Weekday and Saturday peak-hour forecast traffic volumes for the 2025 no project with Dominguez Road scenario are shown in Figures 24 and 25. The LOS for study area intersections and roadway segments are shown in Tables R and S. The 2025 no project with Dominguez Road traffic volume development and LOS worksheets are provided in Appendix I.

As shown in Table R, the following seven intersections are forecast to operate at unsatisfactory LOS in the 2025 no project with Dominguez Road condition:

- Rocklin Road/I-80 Westbound Ramps
- Dominguez Road/Granite Drive
- Taylor Road/Horseshoe Bar Road (Loomis) Barton Road/Brace Road (Loomis)
- Barton Road/Rocklin Road (Loomis)
- Sierra College Boulevard/English Colony Way (Placer County)
- Taylor Road/King Road (Loomis)

[1] Brian Fraggio, Town of Loomis. Personal communication, January 17, 2007.

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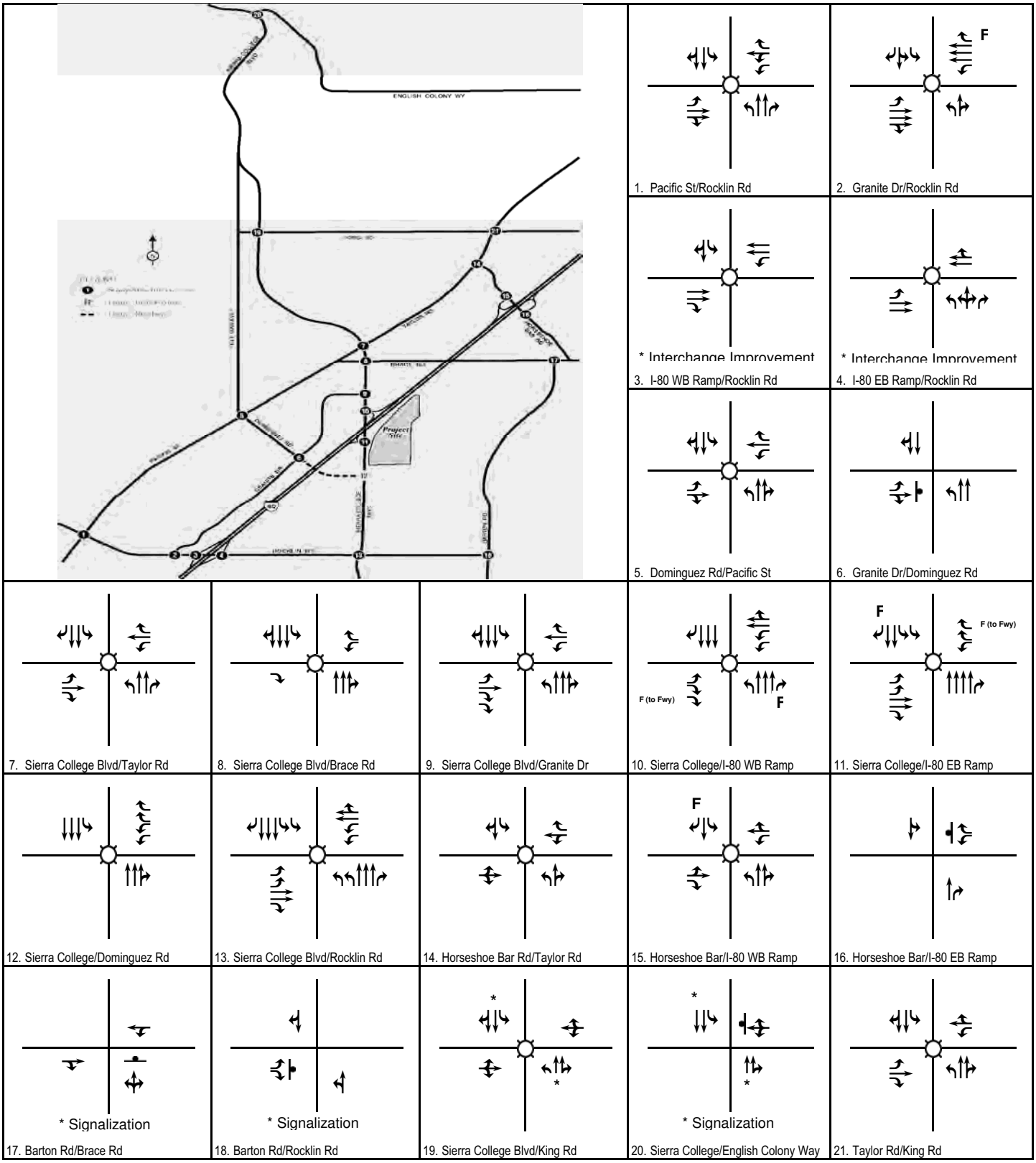


LSA

FIGURE 23

Legend

Signal

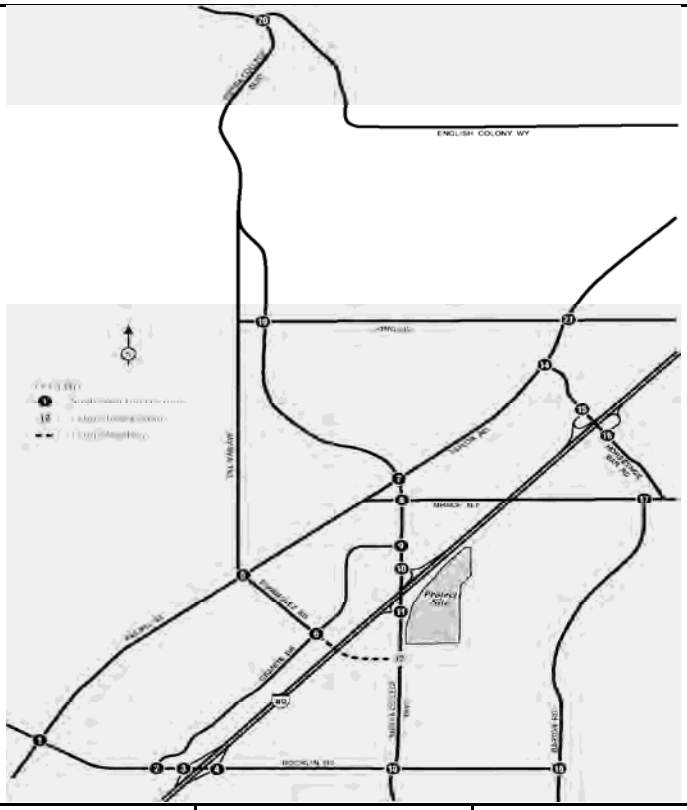
Stop Sign

F Free Right Turn

* Proposed Mitigation

Rocklin Crossings

Year 2025 Plus Project Without Dominguez Road - Mitigation



1 Pacific St/Rocklin Rd

62 / 29	405 / 507	167 / 100
30 / 89	197 / 281	61 / 69
85 / 64	292 / 428	462 / 448
91 / 181	220 / 196	345 / 536

2 Granite Dr/Rocklin Rd

214 / 487	7 / 14	359 / 552
177 / 404	932 / 1139	13 / 32
22 / 26	9 / 13	8 / 33
668 / 607	1027 / 901	5 / 33

3 I-80 WB Ramp/Rocklin Rd

395 / 374	2 / 3	237 / 100
857 / 1038	445 / 690	
1304 / 1159	344 / 520	

4 I-80 EB Ramp/Rocklin Rd

349 / 315	746 / 823	
629 / 533	3 / 1	808 / 556
102 / 145	1019 / 1146	

5 Dominguez Rd/Pacific St

117 / 224	38 / 187	28 / 51
140 / 79	328 / 714	67 / 93
57 / 66	188 / 72	86 / 111
118 / 23	522 / 498	123 / 72

6 Granite Dr/Dominguez Rd

32 / 63	354 / 296	15 / 78
61 / 45	71 / 183	76 / 155
168 / 48	132 / 450	33 / 206
33 / 45	119 / 113	157 / 146

7 Sierra College Blvd/Taylor Rd

297 / 149	1063 / 750	41 / 35
90 / 301	173 / 377	93 / 208
280 / 158	594 / 1117	252 / 296
55 / 57	298 / 267	302 / 325

8 Sierra College Blvd/Brace Rd

1238 / 926	182 / 307	
58 / 87		
783 / 1032	102 / 298	
262 / 278	267 / 174	

9 Sierra College Blvd/Granite Dr

176 / 181	1179 / 911	135 / 99
118 / 334	15 / 26	32 / 199
223 / 100	807 / 949	52 / 49
59 / 57	28 / 20	110 / 89

10 Sierra College/I-80 WB Ramp

96 / 61	1321 / 1128	
16 / 84	31 / 150	
34 / 55	923 / 916	146 / 35
211 / 113	5 / 13	811 / 640

11 Sierra College/I-80 EB Ramp

392 / 558	1370 / 1138	
366 / 265	279 / 59	
1125 / 1464		

12 Sierra College/Dominguez Rd

21 / 55	1530 / 1080	106 / 159
38 / 180	29 / 52	53 / 229
204 / 107	1061 / 1318	39 / 42
16 / 46	84 / 143	106 / 297

13 Sierra College/Rocklin Rd

201 / 44	1027 / 1231	138 / 303
212 / 182	191 / 487	315 / 403
557 / 300	873 / 1229	52 / 135
239 / 71	497 / 280	93 / 75

14 Horseshoe Bar Rd/Taylor Rd

5 / 11	489 / 488	665 / 460
11 / 8	70 / 11	22 / 9
6 / 8	327 / 541	111 / 110
575 / 656	15 / 12	82 / 88

15 Horseshoe Bar/I-80 WB Ramp

633 / 427	276 / 247	16 / 30
212 / 88	54 / 46	156 / 130
180 / 170	527 / 484	48 / 195
34 / 50	83 / 52	32 / 160

16 Horseshoe Bar/I-80 EB Ramp

358 / 357	102 / 117	
415 / 539	136 / 103	
341 / 338	192 / 90	

17 Barton Rd/Brace Rd

161 / 346	122 / 216	
208 / 134	211 / 122	
383 / 204	153 / 200	

18 Barton Rd/Rocklin Rd

271 / 166	145 / 81	
165 / 206	152 / 568	
494 / 239	88 / 105	

19 Sierra College Blvd/King Rd

99 / 10	934 / 701	264 / 360
58 / 51	1 / 29	0 / 4
0 / 2	-26 / 965	0 / 72
897 / 228	1 / 5	2 / 15

20 Sierra College/English Colony

1130 / 683	198 / 257	
530 / 1134	15 / 116	
187 / 172	112 / 54	

21 Taylor Rd/King Rd

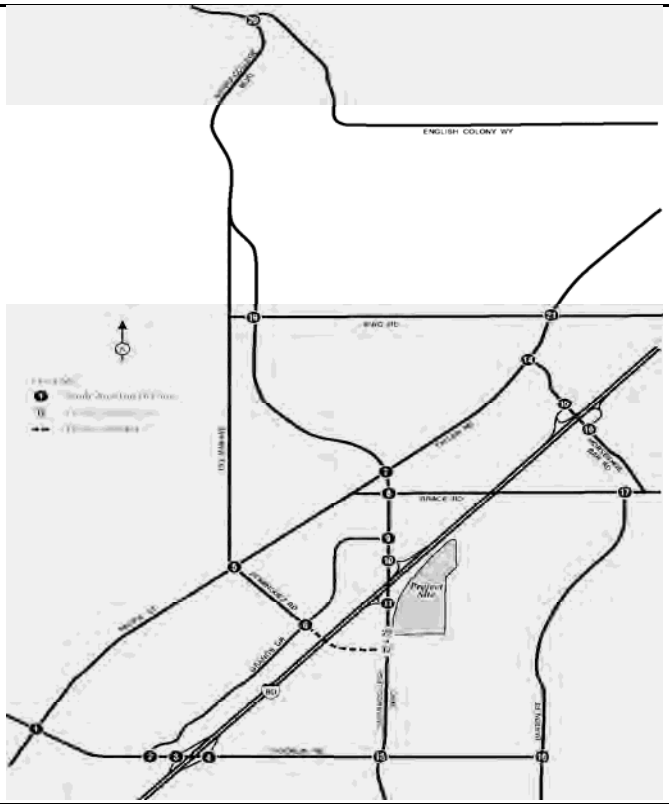
530 / 249	129 / 95	
275 / 130	148 / 209	292 / 266
311 / 347	349 / 365	76 / 199
214 / 78	258 / 132	172 / 100

FIGURE 24

123 / 456 AM / PM Peak Hour Volume

Rocklin Crossings

Year 2025 No Project Peak Hour Traffic Volumes - With Dominguez Road



1 Pacific St/Rocklin Rd

22	304	110	114	64	304
58	139	66	23	276	397

2 Granite Dr/Rocklin Rd

176	22	506	306	460	35
368	637	15	36	16	29

3 I-80 WB Ramp/Rocklin Rd

518	2	579	416	150
976	96			

4 I-80 EB Ramp/Rocklin Rd

318	540	
303	1252	26 114

5 Dominguez Rd/Pacific St

35	41	7	6	265	39
38	509	37	13	34	17

6 Granite Dr/Dominguez Rd

15	174	11	5	43	137
6	55	192	138	351	350

7 Sierra College Blvd/Taylor Rd

82	587	39	38	203	130
50	272	60	37	657	81

8 Sierra College Blvd/Brace Rd

674	113	106	100	
14		697	33	

9 Sierra College Blvd/Granite Dr

265	502	79	41	18	119
273	19	87	152	538	94

10 Sierra College/I-80 WB Ramp

103	987		74	17	430
140	255		115	973	204

11 Sierra College/I-80 EB Ramp

194	911	
605	216	1146

12 Sierra College/Dominguez Rd

63	582	426	27	187	182
276	415	368	173	950	157

13 Sierra College/Rocklin Rd

68	800	176	59	336	110
89	315	188	204	765	88

14 Horseshoe Bar Rd/Taylor Rd

7	372	337	313	12	117
7	16	9	14	378	105

15 Horseshoe Bar/I-80 WB Ramp

223	210	40	60	60	143
56	43	76	199	374	88

16 Horseshoe Bar/I-80 EB Ramp

373	105	223	
		75	
		392	93

17 Barton Rd/Brace Rd

		200	105	
281	30	22	153	

18 Barton Rd/Rocklin Rd

290	72			
253	406	133	74	

19 Sierra College Blvd/King Rd

7	680	286	122	13	38
5	29	8	6	529	35

20 Sierra College/English Colony

626	170	63	54	
		564	116	

21 Taylor Rd/King Rd

49	254	64	429	87	116
105	108	171	159	355	192

FIGURE 25

Rocklin Crossings

Year 2025 No Project Saturday Peak Hour Traffic Volumes - With Dominguez Road

Table R: 2025 No Project with Dominguez Road Condition Peak Hour Intersection Level of Service Summary

	Intersection	2025 No Project with Dominguez Road Condition					
		AM Peak Hour		PM Peak Hour		Saturday	
		V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS
1	Rocklin Road/Pacific Street [1]	0.641	B	0.676	B	0.490	A
2	Rocklin Road/Granite Drive	0.562	A	0.829	D	0.565	A
3	Rocklin Road/I-80 Westbound Ramps	0.719	C	0.962	E	0.738	C
4	Rocklin RoadI-80 Eastbound Ramps	0.871	D	0.824	D	0.482	A
5	Dominguez Road/Pacific Street [1]	0.507	A	0.708	C	0.385	A
6	Dominguez Road/Granite Drive [12]	48.8 sec	E	*	F	70.6 sec	F
7	Sierra College Boulevard/Taylor Road (Loomis)	0.780	C	0.785	C	0.466	A
8	Sierra College Boulevard/Brace Road (Loomis)	0.486	A	0.623	B	0.285	A
9	Sierra College Boulevard/Granite Drive	0.516	A	0.518	A	0.443	A
10	Sierra College Boulevard/I-80 Westbound Ramps	0.577	A	0.565	A	0.567	A
11	Sierra College Boulevard/I-80 Eastbound Ramps	0.584	A	0.433	A	0.478	A
12	Sierra College Boulevard/Dominguez Road	0.445	A	0.600	B	0.762	C
13	Sierra College Boulevard/Rocklin Road [1]	0.687	B	0.619	B	0.380	A
14	Taylor Road/Horseshoe Bar Road (Loomis)	1.024	F	1.076	F	0.691	B
15	Horseshoe Bar Road/I-80 Westbound Ramps (Loomis)	0.476	A	0.431	A	0.395	A
16	Horseshoe Bar Road/I-80 Eastbound Ramps [2] (Loomis)	29.0 sec	D	24.6 sec	C	16.0 sec	C
17	Barton Road/Brace Road [12] (Loomis)	78.4 sec	F	57.3 sec	F	12.3 sec	B
18	Barton Road/Rocklin Road [12] (Loomis)	272.1 sec	F	20.8 sec	C	17.0 sec	C
19	Sierra College Boulevard/King Road [1] (Loomis)	0.607	B	0.734	C	0.475	A
20	Sierra College Boulevard/English Colony Way [12] (Placer County)	246.7 sec	F	587.0 sec	F	33.2 sec	D
21	Taylor Road/King Road [1] (Loomis)	0.802	D	0.508	A	0.581	A

Notes:

ICU V/C ratio is used for signalized intersections. HCM delay in seconds is used for unsignalized intersections.

[1] LOS C required for these intersections. LOS D acceptable for all other intersections.

[2] Peak Hour volumes meet Signal Warrant #3 of the MUTCD

* Delay exceeds 1000 seconds

☐ Exceeds level of service criteria

Table S: 2025 No Project With Dominguez Road Daily Roadway Segment Level of Service Summary

Roadway	Segment	Capacity	Volume	Capacity Configuration	V/C	LOS
Taylor Road	King Road and Horseshoe Bar Road [1] (Loomis)	15,000	19,454	Two-lane Collector	1.30	F
	Horseshoe Bar Road and Sierra College Boulevard[1] (Loomis)	15,000	14,950	Two-lane Collector	1.00	E
Pacific Street	Sierra College Boulevard and Dominguez Road [1]	30,000	16,466	Four-lane Undivided Arterial	0.55	A
	Dominguez Road and Rocklin Road [1]	30,000	22,389	Four-lane Undivided Arterial	0.75	C
Rocklin Road	Pacific Street and Granite Drive	30,000	37,537	Four-lane Undivided Arterial	1.25	F
	I-80 and Sierra College Boulevard	30,000	13,176	Four-lane Undivided Arterial	0.44	A
	Sierra College Boulevard and Barton Road [1] (Loomis)	30,000	14,496	Four-lane Undivided Arterial	0.48	A
Barton Road	Rocklin Road and Brace Road [1] (Loomis)	15,000	6,292	Two-lane Collector	0.42	A
Horseshoe Bar Road	I-80 and Brace Road (Loomis)	15,000	9,908	Two-lane Collector	0.66	B
Brace Road	I-80 and Barton Road [1] (Loomis)	15,000	9,715	Two-lane Collector	0.65	B
	I-80 and Sierra College Boulevard [1] (Loomis)	15,000	9,161	Two-lane Collector	0.61	B
Sierra College Boulevard	English Colony Way and King Road [1] (Placer County)	30,000	23,002	Four-lane Undivided Arterial	0.77	C
	King Road and Taylor Road [1] (Loomis)	30,000	21,470	Four-lane Undivided Arterial	0.72	C
	Taylor Road and I-80	50,525	31,973	Six-lane Arterial	0.63	B
	I-80 and Dominguez Road	50,525	25,276	Six-lane Arterial	0.50	A
	Dominguez Road and Rocklin Road [1]	50,525	34,148	Six-lane Arterial	0.68	B
Granite Drive	Dominguez Road and Sierra College Boulevard [1]	30,000	9,210	Four-lane Undivided Arterial	0.31	A
	Dominguez Road and Rocklin Road [1]	30,000	13,319	Four-lane Undivided Arterial	0.44	A
Dominguez Road	Taylor Road and Granite Drive [1]	15,000	7,278	Two-lane Collector	0.49	A
King Road	Sierra College Boulevard and Taylor Road [1] (Loomis)	15,000	7,019	Two-lane Collector	0.47	A

Notes:

[1] LOS C required for these segments. LOS D acceptable for all other segments.

Exceeds level of service criteria

Roadway Improvements consistent with City of Rocklin General Plan, Town of Loomis General Plan, and the Horseshoe Bar/Penryn Community Plan

As shown in Table S, the results of the roadway segment analysis indicate that most of the study area roadway segments are forecast to operate within their daily roadway capacities except for the following three segments:

- Taylor Road between King Road and Horseshoe Bar Road (Loomis)
- Taylor Road between Horseshoe Bar Road and Sierra College Boulevard (Loomis)
- Rocklin Road between Pacific Street and Granite Drive

2025 plus Project with Dominguez Road. Traffic volumes generated by the proposed project were added to the 2025 no project traffic volumes, and LOS were calculated for the 2025 plus project with Dominguez Road scenario. Weekday and Saturday peak-hour forecast traffic volumes for the 2025 plus project with Dominguez Road scenario are shown in Figures 26 and 27. The LOS for study area intersections and roadway segments in the 2025 plus project with Dominguez Road scenario is shown in Tables T and U. The 2025 plus project with Dominguez Road LOS worksheets are provided in Appendix J.

As shown in Table T, the following six intersections are forecast to operate at unsatisfactory LOS and are significantly impacted in the 2025 plus project with Dominguez Road scenario:

- Rocklin Road/I-80 Westbound Ramps
- Dominguez Road/Granite Drive
- Sierra College Boulevard/Dominguez Road
- Barton Road/Brace Road (Loomis)
- Barton Road/Rocklin Road (Loomis)
- Sierra College Boulevard/English Colony Way (Placer County)

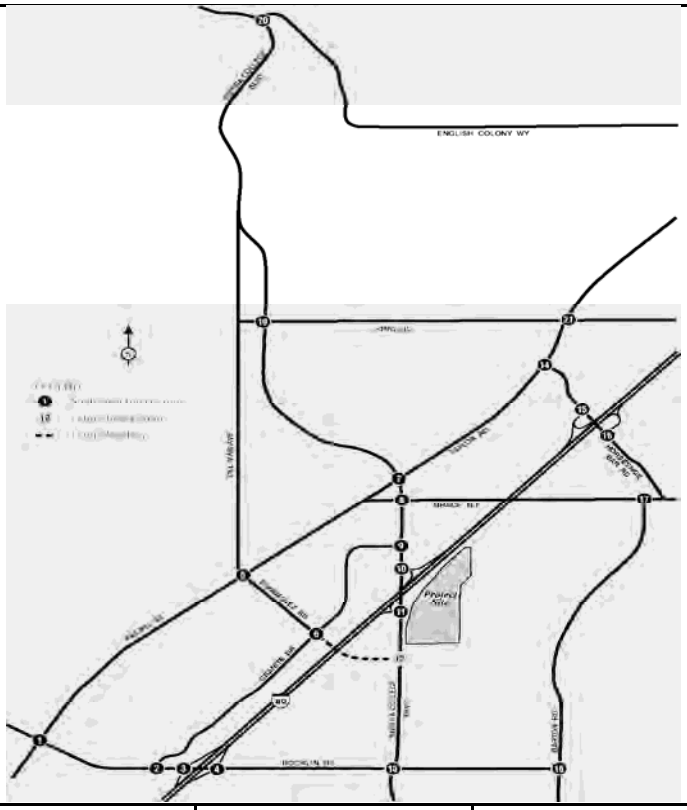
The results of the roadway segment analysis as shown in Table U indicate that most of the study area roadway segments are forecast to operate within their daily roadway capacities except for the following four roadway segments, which are forecast to operate with unsatisfactory LOS with the project:

- Taylor Road between King Road and Horseshoe Bar Road (Loomis)
- Taylor Road between Horseshoe Bar Road and Sierra College Boulevard (Loomis)
- Rocklin Road between Pacific Street and Granite Drive
- Sierra College Boulevard between English Colony Way and King Road (Placer County)

Recommended Mitigation: 2025 Plus Project With Dominguez Road

- **Rocklin Road/I-80 Westbound Ramps.** The project would add traffic to this already deficient location, which is operating at LOS F during the p.m. peak hour in the 2025 no project with Dominguez Road scenario. The City has proposed an improvement at the intersection of Rocklin Road/I-80 westbound ramps that provides a flyover from westbound Rocklin Road to the I-80

DRAFT



1 Pacific St/Rocklin Rd

62 / 29	405 / 507	167 / 100
30 / 89	197 / 281	61 / 69
85 / 64	292 / 428	469 / 467
91 / 181	220 / 196	351 / 556

2 Granite Dr/Rocklin Rd

214 / 487	7 / 14	360 / 554
177 / 404	943 / 1170	13 / 32
22 / 26	9 / 13	8 / 33
669 / 610	1036 / 933	5 / 33

3 I-80 WB Ramp/Rocklin Rd

398 / 383	2 / 3	237 / 100
869 / 1071	445 / 690	
1311 / 1184	367 / 598	

4 I-80 EB Ramp/Rocklin Rd

352 / 324	754 / 847	
629 / 533	3 / 1	834 / 631
102 / 145	1049 / 1249	

5 Dominguez Rd/Pacific St

117 / 224	39 / 189	31 / 59
140 / 79	328 / 714	68 / 95
58 / 68	189 / 76	86 / 111
120 / 29	522 / 498	123 / 72

6 Granite Dr/Dominguez Rd

33 / 67	354 / 296	17 / 84
62 / 47	72 / 185	76 / 155
168 / 48	132 / 450	34 / 208
35 / 51	120 / 115	158 / 148

7 Sierra College Blvd/Taylor Rd

297 / 149	1093 / 835	41 / 35
90 / 301	173 / 377	97 / 218
283 / 167	620 / 1205	266 / 345
55 / 57	298 / 267	319 / 372

8 Sierra College Blvd/Brace Rd

1288 / 1068	182 / 307	
58 / 87		
826 / 1177	107 / 315	
262 / 278	275 / 197	

9 Sierra College Blvd/Granite Dr

176 / 181	1237 / 1076	135 / 99
118 / 334	15 / 26	40 / 221
230 / 125	855 / 1111	52 / 49
59 / 57	28 / 20	110 / 89

10 Sierra College/I-80 WB Ramp

96 / 61	1387 / 1315	
16 / 84	31 / 150	
34 / 55	978 / 1103	241 / 356
211 / 113	5 / 13	837 / 715

11 Sierra College/I-80 EB Ramp

392 / 558	1381 / 1168	117 / 193
366 / 265	190 / 240	286 / 78
1161 / 1587	128 / 221	
65 / 320	61 / 277	

12 Sierra College/Dominguez Rd

21 / 55	1577 / 1240	123 / 208
38 / 180	32 / 62	53 / 229
204 / 107	1137 / 1533	59 / 99
31 / 49	87 / 153	142 / 420

13 Sierra College/Rocklin Rd

237 / 166	1056 / 1329	157 / 366
253 / 300	191 / 487	315 / 403
557 / 300	906 / 1323	52 / 135
260 / 132	497 / 280	93 / 75

14 Horseshoe Bar Rd/Taylor Rd

5 / 11	506 / 535	665 / 460
11 / 8	70 / 11	22 / 9
6 / 8	341 / 590	111 / 110
575 / 656	15 / 12	82 / 88

15 Horseshoe Bar/I-80 WB Ramp

633 / 427	276 / 247	16 / 30
212 / 88	54 / 46	156 / 130
180 / 170	527 / 484	48 / 195
34 / 50	83 / 52	32 / 160

16 Horseshoe Bar/I-80 EB Ramp

358 / 357	102 / 117	
415 / 539	136 / 103	
341 / 338	194 / 98	

17 Barton Rd/Brace Rd

162 / 348	123 / 221	
210 / 139	211 / 122	
386 / 213	153 / 200	

18 Barton Rd/Rocklin Rd

273 / 171	145 / 81	
166 / 211	169 / 627	
514 / 295	88 / 105	

19 Sierra College Blvd/King Rd

99 / 10	964 / 786	264 / 360
58 / 51	1 / 29	0 / 4
0 / 2	0 / 1053	0 / 72
897 / 228	1 / 5	2 / 15

20 Sierra College/English Colony

1160 / 768	198 / 257	
556 / 1222	15 / 116	
187 / 172	112 / 54	

21 Taylor Rd/King Rd

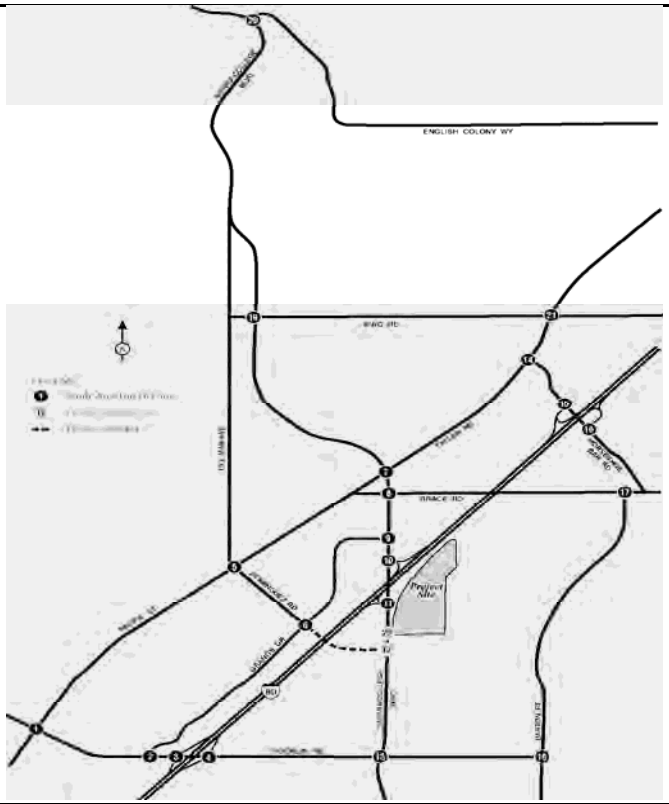
547 / 296	129 / 95	
275 / 130	148 / 209	292 / 266
311 / 347	363 / 414	76 / 199
214 / 78	258 / 132	172 / 100

FIGURE 26

123 / 456 AM / PM Peak Hour Volume

Rocklin Crossings

Year 2025 Plus Project Peak Hour Traffic Volumes - With Dominguez Road



1 Pacific St/Rocklin Rd

22	304	110	114	64	326
58	139	66	23	276	421

2 Granite Dr/Rocklin Rd

176	22	509	309	496	35
368	676	15	36	16	29

3 I-80 WB Ramp/Rocklin Rd

529	2	579	444	238
1018	96			

4 I-80 EB Ramp/Rocklin Rd

318	656	
314	1282	26 209

5 Dominguez Rd/Pacific St

35	43	17	13	265	39
38	509	40	16	38	17

6 Granite Dr/Dominguez Rd

20	174	18	12	45	140
9	57	192	138	351	353

7 Sierra College Blvd/Taylor Rd

82	694	39	38	203	189
50	272	73	47	756	136

8 Sierra College Blvd/Brace Rd

853	113	106	130	
14		861	52	

9 Sierra College Blvd/Granite Dr

265	711	79	41	18	119
273	19	115	180	721	94

10 Sierra College/I-80 WB Ramp

103	1224		74	17	525
140	255		115	1184	567

11 Sierra College/I-80 EB Ramp

194	949	294	392	181
605	392	240	1285	243

12 Sierra College/Dominguez Rd

63	763	488	84	198	321
276	427	368	173	1223	230

13 Sierra College/Rocklin Rd

206	910	248	136	336	110
238	315	188	204	884	88

14 Horseshoe Bar Rd/Taylor Rd

7	431	337	313	12	117
7	16	9	14	433	105

15 Horseshoe Bar/I-80 WB Ramp

223	210	40	60	60	143
56	43	76	199	374	88

16 Horseshoe Bar/I-80 EB Ramp

373	105	223	84
		392	93

17 Barton Rd/Brace Rd

		212	105	
283	36	28	153	

18 Barton Rd/Rocklin Rd

296	72		
259	472	204	74

19 Sierra College Blvd/King Rd

7	787	286	122	13	38
5	29	8	6	628	35

20 Sierra College/English Colony

733	170	63	54
		663	116

21 Taylor Rd/King Rd

49	313	64	429	87	116
105	108	171	159	410	192

FIGURE 27

Rocklin Crossings

Year 2025 Plus Project Saturday Peak Hour Traffic Volumes - With Dominguez Road

Table T: 2025 Plus Project with Dominguez Road Condition Peak Hour Intersection Level of Service Summary

		2025 No Project with Dominguez Road Condition						2025 Plus Project with Dominguez Road Condition					
		AM Peak Hour		PM Peak Hour		Saturday		AM Peak Hour		PM Peak Hour		Saturday	
	Intersection	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS
1	Rocklin Road/Pacific Street [1]	0.641	B	0.676	B	0.490	A	0.647	B	0.694	B	0.512	A
2	Rocklin Road/Granite Drive	0.562	A	0.829	D	0.565	A	0.564	A	0.838	D	0.577	A
3	Rocklin Road/I-80 Westbound Ramps	0.719	C	0.962	E	0.738	C	0.735	C	1.015	F	0.804	D
4	Rocklin RoadI-80 Eastbound Ramps	0.871	D	0.824	D	0.482	A	0.888	D	0.878	D	0.555	A
5	Dominguez Road/Pacific Street [1]	0.507	A	0.708	C	0.385	A	0.507	A	0.711	C	0.390	A
6	Dominguez Road/Granite Drive [13]	48.8 sec	E	*	F	70.6 sec	F	50.6 sec	F	*	F	81.3 sec	F
7	Sierra College Boulevard/Taylor Road (Loomis)	0.780	C	0.785	C	0.466	A	0.801	D	0.840	D	0.532	A
8	Sierra College Boulevard/Brace Road (Loomis)	0.486	A	0.623	B	0.285	A	0.501	A	0.656	B	0.340	A
9	Sierra College Boulevard/Granite Drive	0.516	A	0.518	A	0.443	A	0.532	A	0.567	A	0.497	A
10	Sierra College Boulevard/I-80 Westbound Ramps	0.577	A	0.565	A	0.567	A	0.599	A	0.628	B	0.647	B
11	Sierra College Boulevard/I-80 Eastbound Ramps	0.584	A	0.433	A	0.478	A	0.631	B	0.636	B	0.732	C
12	Sierra College Boulevard/Dominguez Road	0.445	A	0.600	B	0.762	C	0.466	A	0.715	C	0.909	E
13	Sierra College Boulevard/Rocklin Road [1]	0.687	B	0.619	B	0.380	A	0.713	C	0.659	B	0.484	A
14	Taylor Road/Horseshoe Bar Road (Loomis)	1.024	F	1.076	F	0.691	B	1.032	F [2]	1.105	F [2]	0.724	C
15	Horseshoe Bar Road/I-80 Westbound Ramps (Loomis)	0.476	A	0.431	A	0.395	A	0.476	A	0.431	A	0.395	A
16	Horseshoe Bar Road/I-80 Eastbound Ramps [3] (Loomis)	29.0 sec	D	24.6 sec	C	16.0 sec	C	29.4 sec	D	25.3 sec	D	16.5 sec	C
17	Barton Road/Brace Road [13] (Loomis)	78.4 sec	F	57.3 sec	F	12.3 sec	B	82.1 sec	F [2]	64.9 sec	F	12.8 sec	B
18	Barton Road/Rocklin Road [13] (Loomis)	272.1 sec	F	20.8 sec	C	17.0 sec	C	316.9 sec	F	28.5 sec	D	24.0 sec	C
19	Sierra College Boulevard/King Road [1] (Loomis)	0.607	B	0.734	C	0.475	A	0.615	B	0.760	C	0.505	A
20	Sierra College Boulevard/English Colony Way [13] (Placer County)	246.7 sec	F	587.0 sec	F	33.2 sec	D	283.5 sec	F	829.8 sec	F	47.9 sec	E
21	Taylor Road/King Road [1] (Loomis)	0.802	D	0.508	A	0.581	A	0.807	D [2]	0.522	A	0.598	A

Notes:

ICU V/C ratio is used for signalized intersections. HCM delay in seconds is used for unsignalized intersections.

[1] LOS C required for these intersections. LOS D acceptable for all other intersections.

[2] Project impact is less than 5% of total intersection V/C or delay and therefore not a significant impact.

[3] Peak Hour volumes meet Signal Warrant #3 of the MUTCD

* Delay exceeds 1000 seconds

☐ Exceeds level of service criteria

Table U: 2025 Plus Project With Dominguez Road Daily Roadway Segment Level of Service Summary

Roadway	Segment	Capacity	Volume	Capacity Configuration	V/C	LOS
Taylor Road	King Road and Horseshoe Bar Road [1] (Loomis)	15,000	20,414	Two-lane Collector	1.36	F
	Horseshoe Bar Road and Sierra College Boulevard[1] (Loomis)	15,000	15,530	Two-lane Collector	1.04	F
Pacific Street	Sierra College Boulevard and Dominguez Road [1]	30,000	16,976	Four-lane Undivided Arterial	0.57	A
	Dominguez Road and Rocklin Road [1]	30,000	22,669	Four-lane Undivided Arterial	0.76	C
Rocklin Road	Pacific Street and Granite Drive	30,000	37,867	Four-lane Undivided Arterial	1.26	F
	I-80 and Sierra College Boulevard	30,000	14,836	Four-lane Undivided Arterial	0.49	A
	Sierra College Boulevard and Barton Road [1] (Loomis)	30,000	15,716	Four-lane Undivided Arterial	0.52	A
Barton Road	Rocklin Road and Brace Road [1] (Loomis)	15,000	6,882	Two-lane Collector	0.46	A
Horseshoe Bar Road	I-80 and Brace Road (Loomis)	15,000	9,958	Two-lane Collector	0.66	B
Brace Road	I-80 and Barton Road [1] (Loomis)	15,000	9,825	Two-lane Collector	0.65	B
	I-80 and Sierra College Boulevard [1] (Loomis)	15,000	9,161	Two-lane Collector	0.61	B
Sierra College Boulevard	English Colony Way and King Road [1] (Placer County)	30,000	24,732	Four-lane Undivided Arterial	0.82	D
	King Road and Taylor Road [1] (Loomis)	30,000	23,770	Four-lane Undivided Arterial	0.79	C
	Taylor Road and I-80	50,525	35,393	Six-lane Arterial	0.70	B
	I-80 and Dominguez Road	50,525	34,346	Six-lane Arterial	0.68	B
	Dominguez Road and Rocklin Road [1]	50,525	37,868	Six-lane Arterial	0.75	C
Granite Drive	Dominguez Road and Sierra College Boulevard [1]	30,000	9,230	Four-lane Undivided Arterial	0.31	A
	Dominguez Road and Rocklin Road [1]	30,000	13,379	Four-lane Undivided Arterial	0.45	A
Dominguez Road	Taylor Road and Granite Drive [1]	15,000	7,378	Two-lane Collector	0.49	A
King Road	Sierra College Boulevard and Taylor Road [1] (Loomis)	15,000	7,019	Two-lane Collector	0.47	A

Notes:

[1] LOS C required for these segments. LOS D acceptable for all other segments.

Exceeds level of service criteria

Roadway Improvements consistent with City of Rocklin General Plan, Town of Loomis General Plan, and the Horseshoe Bar/Penryn Community Plan

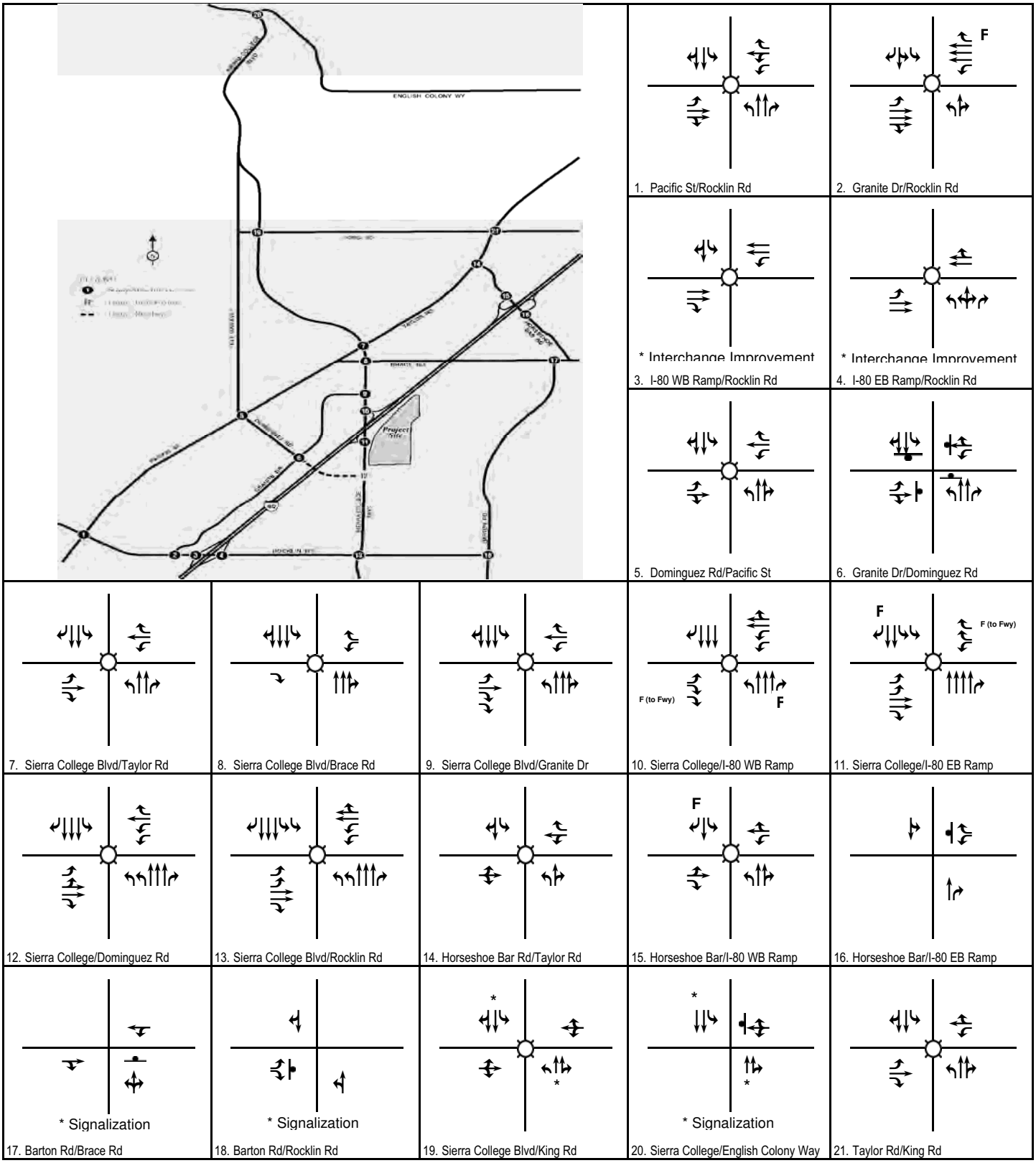
westbound on-ramp. This improvement will mitigate the impact at this location. The project applicant will pay a traffic impact fee (on a fair-share basis) that has been set up by the City for this proposed improvement.

- **Dominguez Road/Granite Drive.** The proposed extension of Dominguez Road will create a deficiency at this intersection in the 2025 no project with Dominguez scenario. The project would add traffic to this already deficient location. Changing the stop control from a two-way stop to a four-way stop would result in a satisfactory LOS at this location. The project applicant will pay a traffic impact fee (on a fair-share basis) for the proposed improvement.
- **Sierra College Boulevard/Dominguez Road.** The proposed intersection striping will not be sufficient to accommodate project traffic in the 2025 with Dominguez Road scenario. However, if the currently proposed lane configuration were restriped to accommodate one exclusive left turn lane, one shared left/through lane, one exclusive through lane, and one exclusive right turn lane at the time of its construction, then the intersection will operate at a satisfactory LOS.
- **Barton Road/Brace Road.** This intersection is operating at an unsatisfactory LOS during the a.m. and p.m. peak hours in the no project condition. The intersection is forecast to meet the peak-hour traffic signal warrant in the 2025 no project with Dominguez Road extension scenario. The intersection would continue to meet the peak-hour traffic signal warrant with the addition of project traffic. Signalization of this intersection would result in a satisfactory LOS. To mitigate the project contribution of traffic at this intersection, the project should participate on a fair-share basis in the installation of a traffic signal at Barton Road/Brace Road.
- **Barton Road/Rocklin Road.** This intersection is operating at an unsatisfactory LOS during the a.m. peak hour in the no project condition. The intersection is forecast to meet the peak-hour traffic signal warrant in the 2025 no project with Dominguez Road extension scenario. The intersection would continue to meet the peak-hour traffic signal warrant with the addition of project traffic. Signalization of this intersection would result in a satisfactory LOS. To mitigate the project contribution of traffic at this intersection, the project should participate on a fair-share basis in the installation of a traffic signal at Barton Road/Rocklin Road.
- **Sierra College Boulevard/English Colony Way.** This intersection is operating at an unsatisfactory LOS during the a.m. peak hour in the no project condition. The intersection is forecast to meet the peak-hour traffic signal warrant in the 2025 no project with Dominguez Road extension scenario. The intersection would continue to meet the peak-hour traffic signal warrant with the addition of project traffic. Signalization of this intersection would result in a satisfactory LOS. To mitigate the project contribution of traffic at this intersection, the project should participate on a fair-share basis.

Although the intersection of Taylor Road/King Road operates unsatisfactorily, in the 2025 plus project with Dominguez Road scenario the project would not increase the v/c ratio by 0.05 or more. As a result, the project contribution of traffic at this intersection is not considered a significant impact.

The proposed mitigations for the 2025 plus project with Dominguez Road scenario are shown in Figure 28. Per Town of Loomis[1] and Horseshoe Bar/Penryn Community Plan, Sierra College Boulevard is planned to be widened to a four-lane arterial between Taylor Road and SR-193. In

[1] Brian Fraggio, Town of Loomis. Personal communication, January 17, 2007.



LSA

FIGURE 28

Legend

Signal

Stop Sign

F Free Right Turn

* Proposed Mitigation

Rocklin Crossings

Year 2025 Plus Project With Dominguez Road - Mitigation

addition, the Town of Loomis has a proposed signal installation at the intersection of Barton Road/Rocklin Road for the near future.

I-80/Sierra College Interchange

Environmental documentation, including a traffic operations analysis, was previously completed for the I-80/Sierra College interchange project. The traffic operations analysis was completed using the Highway Capacity Manual (HCM) methodology for signalized intersections. Traffic volumes for the previous analysis were forecast using the Sacramento Metropolitan (SACMET-2001) traffic model developed by the Sacramento Area Council of Governments (SACOG). As discussed previously, 2025 forecasts for this traffic impact analysis were prepared using the City's traffic model. A LOS analysis using the HCM methodology has been prepared at the interchange ramp intersections using the traffic forecasts developed for this traffic impact analysis. The purpose of this analysis was to demonstrate that the intersection would still operate satisfactorily with the planned improvements when analyzed using the City's traffic model.

The LOS were analyzed at the freeway ramp intersections in the year 2025 plus project with and without Dominguez Road scenarios. The LOS calculation sheets are provided in Appendices K and L. Table V summarizes the results of the freeway interchange analysis.

As shown in Table V, the interchange would operate at LOS D or better during both peak hours when the Rocklin Traffic Model with and without Dominguez Road traffic volumes are analyzed using the HCM methodology.

Table V: I-80/Sierra College Boulevard Freeway Ramp Intersection Analysis (2025 Plus Project)

Intersection	AM Peak Hour			PM Peak Hour		
	Delay (sec)	LOS	Off-ramp Queue (ft)	Delay (sec)	LOS	Off-ramp Queue (ft)
10. I-80 Westbound/Sierra College Boulevard						
Rocklin Traffic Model with Dominguez Road	38.5	D	631	45.7	D	475
Rocklin Traffic Model without Dominguez Road	36.4	D	533	46.3	D	393
SACMET-2001 Model[1]	18.7	B		14.3	B	
11. I-80 Eastbound/Sierra College Boulevard						
Rocklin Traffic Model with Dominguez Road	18.0	B	205	32.4	C	160
Rocklin Traffic Model without Dominguez Road	21.3	C	194	32.7	C	137
SACMET-2001 Model[1]	30.9	C		96.6	F	

[1] *Traffic Operations Analysis*, I-80/Sierra College Boulevard Interchange, Table 4, Alternative A. OMNI-MEANS, January 8, 2003

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Freeway Mainline Analysis

In order to assess the operation of the highway system in the vicinity of the project in 2025 without and with project conditions, the I-80 freeway mainline between the Horseshoe Bar Road and Atlantic Avenue interchanges and the SR-65 mainline between the I-80 junction and Blue Oaks Boulevard were analyzed for both without and with Dominguez Road extension scenarios. The Caltrans I-80 freeway improvement project[1] between Riverside Avenue/Auburn Boulevard and SR-65, proposes to increase freeway capacity by adding HOV lane and auxiliary lanes by 2009. Since the proposed project has CEQA clearance and funding, the improvements are used in the baseline conditions. Therefore the I-80 freeway mainline between Atlantic Avenue and SR-65 was analyzed as a future eight-lane (mainline) freeway, and the freeway mainline segment between SR-65 and Horseshoe Bar Road interchange was analyzed as six-lane freeway. As shown in Table W, all freeway mainline segments along I-80 are projected to operate at LOS D or better in 2025 (for both without and with Dominguez Road extension scenarios) with the future eight-lane freeway for the segment between Atlantic Avenue and SR-65. Also, all freeway segments along SR-65 are projected to operate at LOS D or better in 2025. The HCS worksheets are provided in Appendices M and N.

Driveway Throat Length

As shown in the project site plan (Figure 2), the main project access driveway on Sierra College Boulevard will form the east leg of the I-80 eastbound off-ramp intersection. The main access drive is approximately 300 feet in length and terminates at a roundabout on site. Vehicles entering the project could make a right turn from the access drive into Village 1 (approximately 250 feet from Sierra College Boulevard); however, left turns will be prohibited along the access drive.

Most of the inbound project traffic will use the roundabout to access The Home Depot, Wal-Mart, and retail buildings located on the north end of the site. However, some traffic would make a right turn off the access drive into Village 1. To determine whether adequate throat distance is provided, LSA consulted the Access Management Manual, published by the Transportation Research Board. According to Table 10-8 in the Access Management Manual, the minimum throat length recommended for a driveway with three egress lanes is 200 feet. Approximately 250 feet is provided from Sierra College Boulevard to the first right-turn opportunity into Village 1. This distance would exceed the recommendation in the Access Management Manual. As a result, no stacking of vehicles from the internal right turn to Sierra College Boulevard is expected.

Right Turns From Unsignalized Driveway

The geometrics shown on the project site plan for Sierra College Boulevard and the project driveways include the planned improvements to the I-80/Sierra College Boulevard interchanges as well as the improvements to Sierra College Boulevard along the project frontage. The project site plan includes one unsignalized driveway, located approximately half way between the I-80 eastbound off-ramp and the Dominguez Road extension. The unsignalized driveway would allow right turns in and out only onto Sierra College Boulevard. The northbound Sierra College Boulevard at the driveway location is

[1] Freeway Improvement Project on Interstate 80 from 1.1km west of the Sacramento/Placer County line to 1.56 km east of the Route 65 connector in Placer County, April 2003, Caltrans.

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Table W: 2025 Peak Hour - Freeway Segment Level of Service Summary

		Without Dominguez Road Extension								With Dominguez Road Extension							
		2025 No Project				2025 With Project				2025 No Project				2025 With Project			
		AM		PM		AM		PM		AM		PM		AM		PM	
Roadway	**Segment**	Density	LOS	Density	LOS	Density	LOS	Density	LOS	Density	LOS	Density	LOS	Density	LOS	Density	LOS
I-80 EB	Atlantic Street to Taylor Road	26.3	D	32.0	D	26.4	D	32.7	D	26.2	D	32.0	D	26.4	D	32.7	D
	Taylor Road to RTE 65	23.6	C	27.9	D	23.8	C	28.4	D	23.6	C	27.9	D	23.7	C	28.5	D
	RTE 65 to Rocklin Road	23.9	C	27.3	D	24.2	C	28.5	D	23.9	C	27.3	D	24.2	C	28.5	D
	Rocklin Road to Sierra College Boulevard	22.6	C	29.0	D	23.0	C	30.7	D	22.9	C	29.1	D	23.3	C	30.8	D
	Sierra College Boulevard to Horseshoe Bar Road	21.1	C	30.6	D	21.2	C	31.2	D	21.1	C	30.5	D	21.2	C	31.1	D
RTE 65 NB	I-80 to Harding Boulevard	28.0	D	30.3	D	28.2	D	30.8	D	28.0	D	30.2	D	28.1	D	30.8	D
	Harding Boulevard to Blue Oaks Boulevard	27.3	D	30.5	D	27.3	D	30.8	D	27.3	D	31.1	D	27.4	D	31.3	D
I-80 WB	Atlantic Street to Taylor Road	27.7	D	30.6	D	27.9	D	31.2	D	27.5	D	30.7	D	27.7	D	31.3	D
	Taylor Road to RTE 65	24.6	C	26.8	D	24.7	C	27.3	D	24.6	C	26.8	D	24.7	C	27.3	D
	RTE 65 to Rocklin Road	24.2	C	27.9	D	24.5	C	29.1	D	24.2	C	27.8	D	24.5	C	28.9	D
	Rocklin Road to Sierra College Boulevard	26.4	D	25.0	C	26.7	D	26.2	D	26.2	D	24.6	C	26.6	D	25.8	C
	Sierra College Boulevard to Horseshoe Bar Road	27.0	D	23.7	C	27.1	D	23.9	C	26.9	D	23.7	C	27	D	23.9	C
RTE 65 SB	I-80 to Harding Boulevard	19.2	C	21.3	C	19.3	C	21.7	C	19.3	C	21.3	C	19.4	C	21.6	C
	Harding Boulevard to Blue Oaks Boulevard	21.1	C	21.9	C	21.2	C	22.1	C	21.1	C	22	C	21.2	C	22.2	C

made up of five lanes. The number 1, 2, and 3 lanes provide northbound through-movement. The number 4 lane provides northbound movement through the I-80 eastbound off-ramp intersection and becomes a "trap" lane onto the I-80 eastbound on-ramp. The number 5 lane is a right-turn-only lane into Rocklin Crossings at the Signalized I-80 eastbound off-ramp driveway.

Because of the width of Sierra College Boulevard at the unsignalized driveway, outbound vehicles could have difficulty turning onto the northbound Sierra College Boulevard through lanes, as those vehicles would need to cross both the right-turn lane into Rocklin Crossings and the freeway trap lane. To determine whether vehicles would be restricted from turning out of the driveway into the through lanes by heavy northbound through traffic, an operational analysis of this driveway location was prepared using Synchro 7. Synchro allows the user to model the expected traffic operations of a corridor, rather than just a single intersection. The unsignalized driveway was modeled along with the two adjacent signalized intersections to determine whether adequate gaps would be caused by the traffic signals to allow egress from the driveway. The unsignalized operations analysis is provided in Appendix I. The unsignalized LOS worksheets indicate the proportion of time that the westbound right-turn movement is not blocked by vehicles traveling northbound on Sierra College Boulevard as well as the capacity of the right-turn movement considering the total conflicting flow rate. In both the a.m. and p.m. peak hour, the capacity of the right-turn movement exceeds the demand for right turns (890 capacity vs. 193 demand during the a.m. peak hour, and 785 capacity vs. 394 demand during the p.m. peak hour). According to the calculations, the westbound right turn would be unblocked 82 percent of the time during the a.m. peak hour and 72 percent of the time during the p.m. peak hour. As a result, sufficient gaps in the traffic stream will occur along Sierra College Boulevard to allow right turns from the unsignalized driveway to the northbound through lanes.

MITIGATION MEASURES

This report provides an analysis of the circulation impacts associated with development of the Rocklin Crossings project. Mitigation measures for all project impacts have been identified in the document and are summarized below.

Existing Plus Approved Projects (Baseline) Plus Project

The following improvements would mitigate the impacts of the project in the existing plus approved projects (baseline) plus project conditions:

- **Rocklin Road/I-80 Westbound Ramps.** The project would add traffic to this already deficient location, which is operating at LOS F during the p.m. peak hour in the existing plus approved projects condition. The City has proposed an improvement at the intersection of Rocklin Road/ I-80 westbound ramps that provides a flyover from westbound Rocklin Road to the I-80 westbound on-ramp. This improvement will mitigate the impact at this location. The project applicant will pay a traffic impact fee (on a fair-share basis) that has been set up by the City for this proposed improvement.
- **Rocklin Road/I-80 Eastbound Ramps.** The proposed improvement at the intersection of Rocklin Road/I-80 westbound ramps (discussed above) will reduce westbound through traffic at the intersection of Rocklin Road/I-80 eastbound ramps; therefore, the intersection will not have a

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cumulative impact. The project applicant will pay a traffic impact fee (on a fair-share basis) that has been set up by the City for the proposed interchange improvement.

- **Sierra College Boulevard/Rocklin Road.** The project would add traffic to this already deficient location, which is operating at LOS D during the p.m. peak hour in the existing plus approved projects condition. Adding a northbound left-turn lane (resulting in dual left-turn lanes) would result in a satisfactory LOS at this location. The project should participate in this improvement on a fair-share basis.

Table X shows the mitigated LOS at the study locations.

2025 Plus Project Without Dominguez Road

The following improvements would mitigate the impacts of the project in the 2025 plus project without Dominguez Road conditions:

- **Rocklin Road/I-80 Westbound Ramps.** The project would add traffic to this already deficient location, which is operating at LOS F during the p.m. peak hour in the 2025 no project without Dominguez Road scenario. The City has proposed an improvement at the intersection of Rocklin Road/I-80 westbound ramps that provides a flyover from westbound Rocklin Road to the I-80 westbound on ramp. This improvement will mitigate the impact at this location. The project applicant will pay a traffic impact fee (on a fair-share basis) that has been set up by the City for this proposed improvement.
- **Rocklin Road/I-80 Eastbound Ramps.** The proposed improvement at the intersection of Rocklin Road/I-80 westbound ramps (discussed above) will reduce westbound through traffic at the intersection of Rocklin Road/I-80 eastbound ramps; therefore, the intersection will not have a cumulative impact. The project applicant will pay a traffic impact fee (on a fair-share basis) that has been set up by the City for the proposed interchange improvement.
- **Barton Road/Brace Road.** This intersection is operating at an unsatisfactory LOS during the a.m. and p.m. peak hours in the no project condition. The intersection is forecast to meet the peak-hour traffic signal warrant in the 2025 no project without Dominguez Road extension scenario. The intersection would continue to meet the peak-hour traffic signal warrant with the addition of project traffic. Signalization of this intersection would result in a satisfactory LOS. To mitigate the project contribution of traffic at this intersection, the project should participate on a fair-share basis in the installation of a traffic signal at Barton Road/Brace Road.
- **Barton Road/Rocklin Road.** This intersection is operating at an unsatisfactory LOS during the a.m. peak hour in the no project condition. The intersection is forecast to meet the peak-hour traffic signal warrant in the 2025 no project without Dominguez Road extension scenario. The intersection would continue to meet the peak-hour traffic signal warrant with the addition of project traffic. Signalization of this intersection would result in a satisfactory LOS. To mitigate the project contribution of traffic at this intersection, the project should participate on a fair-share basis in the installation of a traffic signal at Barton Road/Rocklin Road.
- **Sierra College Boulevard/English Colony Way.** This intersection is operating at an unsatisfactory LOS during the a.m. peak hour in the no project condition. The intersection is forecast to meet the peak-hour traffic signal warrant in the 2025 no project without Dominguez

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Table X: Existing Plus Approved Projects (Baseline) Plus Project Condition Peak Hour Intersection Level of Service Summary - With Mitigation

		Existing Plus Approved Plus Project Condition						Existing Plus Approved Plus Project Condition - With mitigation					
		AM Peak Hour		PM Peak Hour		Saturday		AM Peak Hour		PM Peak Hour		Saturday	
	Intersection	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS
1	Rocklin Road/Pacific Street [1]	0.872	D	0.997	E	0.632	B	0.872	D	0.997	E	0.632	B
2	Rocklin Road/Granite Drive	0.469	A	0.767	C	0.559	A	0.469	A	0.767	C	0.559	A
3	Rocklin Road/I-80 Westbound Ramps	0.797	C	1.075	F	0.711	C	0.529	A	0.683	B	0.529	A
4	Rocklin RoadI-80 Eastbound Ramps	0.843	D	1.000	F	0.619	B	0.694	B	0.791	C	0.524	A
5	Dominguez Road/Pacific Street [1]	0.401	A	0.479	A	0.253	A	0.401	A	0.479	A	0.253	A
6	Dominguez Road/Granite Drive [1]	11.9 sec	B	12.4 sec	B	10.3 sec	B	11.9 sec	B	12.4 sec	B	10.3 sec	B
7	Sierra College Boulevard/Taylor Road (Loomis)	0.655	B	0.840	D	0.537	A	0.655	B	0.840	D	0.537	A
8	Sierra College Boulevard/Brace Road (Loomis)	0.487	A	0.655	B	0.429	A	0.487	A	0.655	B	0.429	A
9	Sierra College Boulevard/Granite Drive	0.583	A	0.713	C	0.580	A	0.583	A	0.713	C	0.580	A
10	Sierra College Boulevard/I-80 Westbound Ramps	0.325	A	0.372	A	0.267	A	0.325	A	0.372	A	0.267	A
11	Sierra College Boulevard/I-80 Eastbound Ramps	0.414	A	0.589	A	0.764	C	0.414	A	0.589	A	0.764	C
12	Sierra College Boulevard/Dominguez Road	-	-	-	-	-	-	-	-	-	-	-	-
13	Sierra College Boulevard/Rocklin Road [1]	0.701	C	0.896	D	0.751	C	0.578	A	0.779	C	0.670	B
14	Taylor Road/Horseshoe Bar Road (Loomis)	0.850	D	1.040	F	0.665	B	0.850	D	1.040	F	0.665	B
15	Horseshoe Bar Road/I-80 Westbound Ramps (Loomis)	0.394	A	0.375	A	0.313	A	0.394	A	0.375	A	0.313	A
16	Horseshoe Bar Road/I-80 Eastbound Ramps (Loomis)	16.5 sec	C	16.2 sec	C	12.3 sec	B	16.5 sec	C	16.2 sec	C	12.3 sec	B
17	Barton Road/Brace Road [1] (Loomis)	16.5 sec	C	15.7 sec	C	9.7 sec	A	16.5 sec	C	15.7 sec	C	9.7 sec	A
18	Barton Road/Rocklin Road [1] (Loomis)	16.5 sec	C	12.2 sec	B	11.3 sec	B	16.5 sec	C	12.2 sec	B	11.3 sec	B
19	Sierra College Boulevard/King Road [1] (Loomis)	0.422	A	0.546	A	0.381	A	0.422	A	0.546	A	0.381	A
20	Sierra College Boulevard/English Colony Way [1] (Placer County)	11.4 sec	B	15.6 sec	C	11.8 sec	B	11.4 sec	B	15.6 sec	C	11.8 sec	B
21	Taylor Road/King Road [1] (Loomis)	0.607	B	0.620	B	0.429	A	0.607	B	0.620	B	0.429	A

Notes:

ICU V/C ratio is used for signalized intersections. HCM delay in seconds is used for unsignalized intersections.

[1] LOS C required for these intersections. LOS D acceptable for all other intersections.

Mitigated condition

(Shade) = Significant Impact

Road extension scenario. The intersection would continue to meet the peak-hour traffic signal warrant with the addition of project traffic. Signalization of this intersection would result in a satisfactory LOS. To mitigate the project contribution of traffic at this intersection, the project should participate on a fair-share basis.

Table Y shows the mitigated LOS at the study locations.

2025 Plus Project With Dominguez Road

The following improvements would mitigate the impacts of the project in the 2025 plus project without Dominguez Road conditions:

- **Rocklin Road/I-80 Westbound Ramps.** The project would add traffic to this already deficient location, which is operating at LOS F during the p.m. peak hour in the 2025 no project with Dominguez Road scenario. The City has proposed an improvement at the intersection of Rocklin Road/I-80 westbound ramps that provides a flyover from westbound Rocklin Road to the I-80 westbound on ramp. This improvement will mitigate the impact at this location. The project applicant will pay a traffic impact fee (on a fair-share basis) that has been set up by the City for this proposed improvement.
- **Dominguez Road/Granite Drive.** The proposed extension of Dominguez Road will create a deficiency at this intersection in the 2025 no project with Dominguez scenario. The project would add traffic to this already deficient location. Changing the stop control from a two-way stop to a four-way stop would result in a satisfactory LOS at this location. The project applicant will pay a traffic impact fee (on a fair-share basis) for the proposed improvement.
- **Sierra College Boulevard/Dominguez Road.** The proposed intersection striping will not be sufficient to accommodate project traffic in the 2025 with Dominguez Road scenario. However, if the currently proposed lane configuration were restriped to accommodate one exclusive left turn lane, one shared left/through lane, one exclusive through lane, and one exclusive right turn lane at the time of its construction, then the intersection will operate at a satisfactory LOS.
- **Barton Road/Brace Road.** This intersection is operating at an unsatisfactory LOS during the a.m. and p.m. peak hours in the no project condition. The intersection is forecast to meet the peak-hour traffic signal warrant in the 2025 no project with Dominguez Road extension scenario. The intersection would continue to meet the peak-hour traffic signal warrant with the addition of project traffic. Signalization of this intersection would result in a satisfactory LOS. To mitigate the project contribution of traffic at this intersection, the project should participate on a fair-share basis in the installation of a traffic signal at Barton Road/Brace Road.
- **Barton Road/Rocklin Road.** This intersection is operating at an unsatisfactory LOS during the a.m. peak hour in the no project condition. The intersection is forecast to meet the peak-hour traffic signal warrant in the 2025 no project with Dominguez Road extension scenario. The intersection would continue to meet the peak-hour traffic signal warrant with the addition of project traffic. Signalization of this intersection would result in a satisfactory LOS. To mitigate the project contribution of traffic at this intersection, the project should participate on a fair-share basis in the installation of a traffic signal at Barton Road/Rocklin Road.

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Table Y: 2025 Plus Project without Dominguez Road Condition Peak Hour Intersection Level of Service Summary - With Mitigation

		2025 Plus Project without Dominguez Road Condition						2025 Plus Project without Dominguez Road Condition - With Mitigation					
		AM Peak Hour		PM Peak Hour		Saturday		AM Peak Hour		PM Peak Hour		Saturday	
	Intersection	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS
1	Rocklin Road/Pacific Street [1]	0.645	B	0.692	B	0.510	A	0.645	B	0.692	B	0.510	A
2	Rocklin Road/Granite Drive	0.567	A	0.780	C	0.582	A	0.567	A	0.780	C	0.582	A
3	Rocklin Road/I-80 Westbound Ramps	0.754	C	1.045	F	0.884	D	0.678	B	0.687	B	0.741	C
4	Rocklin RoadI-80 Eastbound Ramps	0.895	D	0.909	E	0.564	A	0.782	C	0.730	C	0.522	A
5	Dominguez Road/Pacific Street [1]	0.502	A	0.659	B	0.377	A	0.502	A	0.659	B	0.377	A
6	Dominguez Road/Granite Drive [1]	13.1 sec	B	15.5 sec	C	11.5 sec	B	13.1 sec	B	15.5 sec	C	11.5 sec	B
7	Sierra College Boulevard/Taylor Road (Loomis)	0.846	D	0.848	D	0.532	A	0.846	D	0.848	D	0.532	A
8	Sierra College Boulevard/Brace Road (Loomis)	0.511	A	0.673	B	0.347	A	0.511	A	0.673	B	0.347	A
9	Sierra College Boulevard/Granite Drive	0.569	A	0.614	B	0.544	A	0.569	A	0.614	B	0.544	A
10	Sierra College Boulevard/I-80 Westbound Ramps	0.616	B	0.657	B	0.654	B	0.616	B	0.657	B	0.654	B
11	Sierra College Boulevard/I-80 Eastbound Ramps	0.634	B	0.678	B	0.782	C	0.634	B	0.678	B	0.782	C
12	Sierra College Boulevard/Dominguez Road	0.421	A	0.663	B	0.658	B	0.421	A	0.663	B	0.658	B
13	Sierra College Boulevard/Rocklin Road [1]	0.731	C	0.672	B	0.487	A	0.731	C	0.672	B	0.487	A
14	Taylor Road/Horseshoe Bar Road (Loomis)	1.033	F	1.116	F	0.732	C	1.033	F	1.116	F	0.732	C
15	Horseshoe Bar Road/I-80 Westbound Ramps (Loomis)	0.475	A	0.437	A	0.401	A	0.475	A	0.437	A	0.401	A
16	Horseshoe Bar Road/I-80 Eastbound Ramps [2] (Loomis)	30.2 sec	D	27.7 sec	D	17.3 sec	C	30.2 sec	D	27.7 sec	D	17.3 sec	C
17	Barton Road/Brace Road [12] (Loomis)	85.2 sec	F	68.0 sec	F	12.8 sec	B	0.582	A	0.628	B	0.368	A
18	Barton Road/Rocklin Road [12] (Loomis)	304.7 sec	F	27.6 sec	D	23.9 sec	C	0.665	B	0.704	C	0.630	B
19	Sierra College Boulevard/King Road [1] (Loomis)	0.615	B	0.771	C	0.511	A	0.615	B	0.771	C	0.511	A
20	Sierra College Boulevard/English Colony Way [12] (Placer County)	305.0 sec	F	840.9 sec	F	47.3 sec	E	0.536	A	0.702	C	0.491	A
21	Taylor Road/King Road [1] (Loomis)	0.807	D	0.523	A	0.605	B	0.807	D	0.523	A	0.605	B

Notes:

ICU V/C ratio is used for signalized intersections. HCM delay in seconds is used for unsignalized intersections.

[1] LOS C required for these intersections. LOS D acceptable for all other intersections.

[2] Peak Hour volumes meet Signal Warrant #3 of the MUTCD

[*] Delay exceeds 1000 seconds

Mitigated condition

(Shade) = Significant Impact

Sierra College Boulevard/English Colony Way. This intersection is operating at an unsatisfactory LOS during the a.m. peak hour in the no project condition. The intersection is forecast to meet the peak-hour traffic signal warrant in the 2025 no project with Dominguez Road extension scenario. The intersection would continue to meet the peak-hour traffic signal warrant with the addition of project traffic. Signalization of this intersection would result in a satisfactory LOS. To mitigate the project contribution of traffic at this intersection, the project should participate on a fair-share basis.

Table Z shows the mitigated LOS at the study locations.

DRAFT

Table Z: 2025 Plus Project with Dominguez Road Condition Peak Hour Intersection Level of Service Summary - With Mitigation

	Intersection	2025 Plus Project without Dominguez Road Condition						2025 Plus Project without Dominguez Road Condition - With Mitigation					
		AM Peak Hour		PM Peak Hour		Saturday		AM Peak Hour		PM Peak Hour		Saturday	
		V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS	V/C Ratio / Delay	LOS
1	Rocklin Road/Pacific Street [1]	0.647	B	0.694	B	0.512	A	0.647	B	0.694	B	0.512	A
2	Rocklin Road/Granite Drive	0.564	A	0.838	D	0.577	A	0.564	A	0.838	D	0.577	A
3	Rocklin Road/I-80 Westbound Ramps	0.735	C	1.015	F	0.804	D	0.636	B	0.580	A	0.713	C
4	Rocklin RoadI-80 Eastbound Ramps	0.888	D	0.878	D	0.555	A	0.888	D	0.878	D	0.555	A
5	Dominguez Road/Pacific Street [1]	0.507	A	0.711	C	0.390	A	0.507	A	0.711	C	0.390	A
6	Dominguez Road/Granite Drive [1]	50.6 sec	F	*	F	81.3 sec	F	13.2 sec	B	20.8 sec	C	14.5 sec	B
7	Sierra College Boulevard/Taylor Road (Loomis)	0.801	D	0.840	D	0.532	A	0.801	D	0.840	D	0.532	A
8	Sierra College Boulevard/Brace Road (Loomis)	0.501	A	0.656	B	0.340	A	0.501	A	0.656	B	0.340	A
9	Sierra College Boulevard/Granite Drive	0.532	A	0.567	A	0.497	A	0.532	A	0.567	A	0.497	A
10	Sierra College Boulevard/I-80 Westbound Ramps	0.599	A	0.628	B	0.647	B	0.599	A	0.628	B	0.647	B
11	Sierra College Boulevard/I-80 Eastbound Ramps	0.631	B	0.636	B	0.732	C	0.631	B	0.636	B	0.732	C
12	Sierra College Boulevard/Dominguez Road	0.466	A	0.715	C	0.909	E	0.460	A	0.600	B	0.886	D
13	Sierra College Boulevard/Rocklin Road [1]	0.713	C	0.659	B	0.484	A	0.713	C	0.659	B	0.484	A
14	Taylor Road/Horseshoe Bar Road (Loomis)	1.032	F	1.105	F	0.724	C	1.032	F	1.105	F	0.724	C
15	Horseshoe Bar Road/I-80 Westbound Ramps (Loomis)	0.476	A	0.431	A	0.395	A	0.476	A	0.431	A	0.395	A
16	Horseshoe Bar Road/I-80 Eastbound Ramps [2] (Loomis)	29.4 sec	D	25.3 sec	D	16.5 sec	C	29.4 sec	D	25.3 sec	D	16.5 sec	C
17	Barton Road/Brace Road [12] (Loomis)	82.1 sec	F	64.9 sec	F	12.8 sec	B	0.579	A	0.617	B	0.367	A
18	Barton Road/Rocklin Road [12] (Loomis)	316.9 sec	F	28.5 sec	D	24.0 sec	C	0.652	B	0.639	B	0.633	B
19	Sierra College Boulevard/King Road [1] (Loomis)	0.615	B	0.760	C	0.505	A	0.615	B	0.760	C	0.505	A
20	Sierra College Boulevard/English Colony Way [12] (Placer County)	283.5 sec	F	829.8 sec	F	47.9 sec	E	0.524	A	0.672	B	0.410	A
21	Taylor Road/King Road [1] (Loomis)	0.807	D	0.522	A	0.598	A	0.807	D	0.522	A	0.598	A

Notes:

ICU V/C ratio is used for signalized intersections. HCM delay in seconds is used for unsignalized intersections.

[1] LOS C required for these intersections. LOS D acceptable for all other intersections.

[2] Peak Hour volumes meet Signal Warrant #3 of the MUTCD

[*] Delay exceeds 1000 seconds

Mitigated condition

(Shade) = Significant Impact

APPENDIX D

Air Quality Data

Rocklin Crossings GHG Summary

URBEMIS Output Summary	CO2 Estimates		Conversion Factors		Total CO2 Emissions		
Construction Emissions							
2008	563.92	tons/yr	0.907	metric ton/english ton	512	Metric tons/year	
2009	232.91	tons/yr	0.907	metric ton/english ton	211	Metric tons/year	
					723	Metric tons	
Area-Source Emissions							
Operational Year 2009	1151.33	tons/yr	0.907	metric ton/english ton	1,044	Metric tons/year	
Mobile-Source Emissions							
Operational Year 2009							
Employee Commute	2092.14	tons/yr	0.907	metric ton/english ton	1,898	Metric tons/year	*Assumes 1600 one-way employee trips/day
Vendor Trips	531.32	tons/yr	0.907	metric ton/english ton	482	Metric tons/year	*Assumes 109 total truck trips (84 serving major tenants, +30% serving other tenants) Bollard 2007
Shopping Trips	12773.04	tons/yr	0.907	metric ton/english ton	11,588	Metric tons/year	*= Total vehicle emissions - employee - vendor trip emissions
Total Mobile-Source	15396.50	tons/yr	0.907	metric ton/english ton	13,967	Metric tons/year	*Assumes 18,788 total trips/day (accounting for pass-by trips) LSA 2007
Total Direct Operational Emissions					**15,012**	Metric tons/year	

Indirect Emissions from Energy Consumption

KWh/du/year	# du	KWh/ksf/year	# ksf Commercial	Total KWh	MWh	Region	Emission Factor (lb CO2/MWh)	GWP	Emission Factor (lb CH4/MWh)	GWP	Emission Factor (lb N2O/MWh)	GWP	Total CO2e (Metric Tons/year)
7000	0	16,750	543.5	9,103,625	9,104	CALI	804.54	1	0.0067	23	0.0037	296	**3,327**

Sources:

California Energy Commission [CEC] 2000. California Energy Demand Staff Report P200-00-002

California Climate Action Registry [CCAR] General Reporting Protocol v 2.2 March 2007

TOTAL "NEW" OPERATIONAL EMISSIONS	**6,752**	Metric tons GHG/year
TOTAL OPERATIONAL GHG EMISSIONS	**18,339**	Metric tons GHG/year

10/22/2007 12:32:08 PM

Urbemis 2007 Version 9.2.2

Combined Annual Emissions Reports (Tons/Year)

File Name: C:\Documents and Settings\phillipsh\Application Data\Urbemis\Version9a\Projects\Rocklin Crossings.urb9

Project Name: Rocklin Crossings

Project Location: Placer County APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	CO2
2008 TOTALS (tons/year unmitigated)	563.92
2009 TOTALS (tons/year unmitigated)	232.91

AREA SOURCE EMISSION ESTIMATES

	CO2
TOTALS (tons/year, unmitigated)	1,151.33

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	CO2
TOTALS (tons/year, unmitigated)	15,396.50

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	CO2
TOTALS (tons/year, unmitigated)	16,547.83

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Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

	CO2
2008	563.92
Fine Grading 03/25/2008-07/27/2008	139.52
Fine Grading Dust	0.00
Fine Grading Off Road Diesel	133.83
Fine Grading On Road Diesel	0.00
Fine Grading Worker Trips	5.68
Asphalt 07/28/2008-03/28/2009	77.90
Paving Off-Gas	0.00
Paving Off Road Diesel	63.95
Paving On Road Diesel	2.40
Paving Worker Trips	11.54
Building 07/28/2008-03/28/2009	342.02
Building Off Road Diesel	91.60
Building Vendor Trips	49.63
Building Worker Trips	200.79
Coating 07/28/2008-03/28/2009	4.48
Architectural Coating	0.00
Coating Worker Trips	4.48

10/22/2007 12:32:08 PM

2009	232.91
Asphalt 07/28/2008-03/28/2009	42.75
Paving Off-Gas	0.00
Paving Off Road Diesel	35.09
Paving On Road Diesel	1.32
Paving Worker Trips	6.34
Building 07/28/2008-03/28/2009	187.71
Building Off Road Diesel	50.26
Building Vendor Trips	27.23
Building Worker Trips	110.22
Coating 07/28/2008-03/28/2009	2.46
Architectural Coating	0.00
Coating Worker Trips	2.46

Phase Assumptions

Phase: Fine Grading 3/25/2008 - 7/27/2008 - Default Fine Site Grading Description

Total Acres Disturbed: 24.96

Maximum Daily Acreage Disturbed: 6.24

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 8 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 8 hours per day

2 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

10/22/2007 12:32:08 PM

Phase: Paving 7/28/2008 - 3/28/2009 - Default Paving Description

Acres to be Paved: 6.24

Off-Road Equipment:

4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day

1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day

2 Paving Equipment (104 hp) operating at a 0.53 load factor for 6 hours per day

1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day

Phase: Building Construction 7/28/2008 - 3/28/2009 - Default Building Construction Description

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.43 load factor for 6 hours per day

2 Forklifts (145 hp) operating at a 0.3 load factor for 6 hours per day

1 Generator Sets (49 hp) operating at a 0.74 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

3 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

Phase: Architectural Coating 7/28/2008 - 3/28/2009 - Default Architectural Coating Description

Rule: Residential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Residential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	CO2
Natural Gas	1,150.59
Hearth	0.00
Landscape	0.74
Consumer Products	
Architectural Coatings	
TOTALS (tons/year, unmitigated)	1,151.33

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	CO2
Free-standing discount superstore	8,043.17
Regnl shop. center	4,760.87
Home improvement superstore	2,592.46
TOTALS (tons/year, unmitigated)	15,396.50

Operational Settings:

Includes correction for passby trips

Does not include double counting adjustment for internal trips

10/22/2007 12:32:08 PM

Analysis Year: 2009 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
Free-standing discount superstore		41.00	1000 sq ft	231.35	9,485.35	45,616.44
Regnl shop. center		33.41	1000 sq ft	171.11	5,716.79	26,985.69
Home improvement superstore		25.43	1000 sq ft	141.04	3,586.65	14,623.62
					18,788.79	87,225.75

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	49.0	2.0	97.6	0.4
Light Truck < 3750 lbs	10.9	3.7	90.8	5.5
Light Truck 3751-5750 lbs	21.7	0.9	98.6	0.5
Med Truck 5751-8500 lbs	9.5	1.1	98.9	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.6	0.0	75.0	25.0
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	50.0	50.0
Med-Heavy Truck 14,001-33,000 lbs	1.0	0.0	20.0	80.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.9	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	3.5	77.1	22.9	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	1.0	10.0	80.0	10.0

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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)						
Free-standing discount superstore				2.0	1.0	97.0
Regnl shop. center				2.0	1.0	97.0
Home improvement superstore				2.0	1.0	97.0

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Urbemis 2007 Version 9.2.2

Combined Winter Emissions Reports (Pounds/Day)

File Name:

Project Name: Rocklin Crossings

Project Location: Placer County APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

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Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2008 TOTALS (lbs/day unmitigated)	75.24	42.47	65.99	0.05	124.81	3.03	126.84	26.07	2.78	27.94	7,511.53
2009 TOTALS (lbs/day unmitigated)	74.73	40.22	61.89	0.05	0.22	2.89	3.11	0.08	2.65	2.73	7,513.38

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	3.56	5.25	4.41	0.00	0.01	0.01	6,304.60

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	192.52	306.06	2,191.97	1.41	280.68	54.21	141,270.97

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	196.08	311.31	2,196.38	1.41	280.69	54.22	147,575.57

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2

10/2/2007 1:48:01 PM

Time Slice 3/25/2008-7/25/2008 Active Days: 89	4.67	37.81	20.33	0.00	**124.81**	2.03	**126.84**	**26.07**	1.87	**27.94**	3,135.19
Fine Grading 03/25/2008-07/27/2008	4.67	37.81	20.33	0.00	124.81	2.03	126.84	26.07	1.87	27.94	3,135.19
Fine Grading Dust	0.00	0.00	0.00	0.00	124.80	0.00	124.80	26.06	0.00	26.06	0.00
Fine Grading Off Road Diesel	4.62	37.73	18.93	0.00	0.00	2.03	2.03	0.00	1.87	1.87	3,007.48
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.05	0.08	1.39	0.00	0.01	0.00	0.01	0.00	0.00	0.00	127.71
Time Slice 7/28/2008-12/31/2008 Active Days: 113	**75.24**	**42.47**	**65.99**	**0.05**	0.22	**3.03**	3.26	0.08	**2.78**	2.86	7,511.53
Asphalt 07/28/2008-03/28/2009	2.97	16.87	10.82	0.00	0.01	1.42	1.43	0.00	1.30	1.31	1,378.81
Paving Off-Gas	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	2.78	16.39	8.47	0.00	0.00	1.40	1.40	0.00	1.29	1.29	1,131.92
Paving On Road Diesel	0.02	0.36	0.12	0.00	0.00	0.01	0.02	0.00	0.01	0.01	42.56
Paving Worker Trips	0.07	0.12	2.23	0.00	0.01	0.00	0.01	0.00	0.00	0.01	204.33
Building 07/28/2008-03/28/2009	5.72	25.55	54.30	0.04	0.21	1.61	1.82	0.07	1.48	1.55	6,053.39
Building Off Road Diesel	4.07	18.22	11.80	0.00	0.00	1.33	1.33	0.00	1.22	1.22	1,621.20
Building Vendor Trips	0.37	5.18	3.71	0.01	0.03	0.20	0.24	0.01	0.19	0.20	878.42
Building Worker Trips	1.27	2.15	38.79	0.03	0.17	0.08	0.25	0.06	0.07	0.13	3,553.78
Coating 07/28/2008-03/28/2009	66.56	0.05	0.87	0.00	0.00	0.00	0.01	0.00	0.00	0.00	79.33
Architectural Coating	66.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.03	0.05	0.87	0.00	0.00	0.00	0.01	0.00	0.00	0.00	79.33

10/2/2007 1:48:01 PM

Time Slice 1/1/2009-3/27/2009 Active Days: 62	74.73	40.22	61.89	**0.05**	0.22	2.89	3.11	0.08	2.65	2.73	**7,513.38**
Asphalt 07/28/2008-03/28/2009	2.80	16.06	10.52	0.00	0.01	1.35	1.36	0.00	1.24	1.24	1,378.90
Paving Off-Gas	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	2.62	15.62	8.36	0.00	0.00	1.33	1.33	0.00	1.22	1.22	1,131.92
Paving On Road Diesel	0.02	0.33	0.11	0.00	0.00	0.01	0.01	0.00	0.01	0.01	42.56
Paving Worker Trips	0.07	0.11	2.05	0.00	0.01	0.00	0.01	0.00	0.00	0.01	204.43
Building 07/28/2008-03/28/2009	5.37	24.12	50.58	0.04	0.21	1.54	1.75	0.07	1.41	1.48	6,055.11
Building Off Road Diesel	3.87	17.35	11.50	0.00	0.00	1.28	1.28	0.00	1.17	1.17	1,621.20
Building Vendor Trips	0.35	4.83	3.46	0.01	0.03	0.18	0.22	0.01	0.17	0.18	878.43
Building Worker Trips	1.15	1.94	35.62	0.03	0.17	0.08	0.26	0.06	0.07	0.13	3,555.48
Coating 07/28/2008-03/28/2009	66.55	0.04	0.80	0.00	0.00	0.00	0.01	0.00	0.00	0.00	79.36
Architectural Coating	66.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.03	0.04	0.80	0.00	0.00	0.00	0.01	0.00	0.00	0.00	79.36

Phase Assumptions

Phase: Fine Grading 3/25/2008 - 7/27/2008 - Default Fine Site Grading Description

Total Acres Disturbed: 24.96

Maximum Daily Acreage Disturbed: 6.24

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 8 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 8 hours per day

2 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

10/2/2007 1:48:01 PM

Phase: Paving 7/28/2008 - 3/28/2009 - Default Paving Description

Acres to be Paved: 6.24

Off-Road Equipment:

4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day

1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day

2 Paving Equipment (104 hp) operating at a 0.53 load factor for 6 hours per day

1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day

Phase: Building Construction 7/28/2008 - 3/28/2009 - Default Building Construction Description

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.43 load factor for 6 hours per day

2 Forklifts (145 hp) operating at a 0.3 load factor for 6 hours per day

1 Generator Sets (49 hp) operating at a 0.74 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

3 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

Phase: Architectural Coating 7/28/2008 - 3/28/2009 - Default Architectural Coating Description

Rule: Residential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Residential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.38	5.25	4.41	0.00	0.01	0.01	6,304.60
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping - No Winter Emissions							
Consumer Products	0.00						
Architectural Coatings	3.18						
TOTALS (lbs/day, unmitigated)	3.56	5.25	4.41	0.00	0.01	0.01	6,304.60

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Free-standing discount superstore	99.57	158.29	1,133.65	0.73	145.16	28.04	73,063.16
Regnl shop. center	56.19	89.33	639.80	0.41	81.93	15.82	41,234.51
Home improvement superstore	36.76	58.44	418.52	0.27	53.59	10.35	26,973.30
TOTALS (lbs/day, unmitigated)	192.52	306.06	2,191.97	1.41	280.68	54.21	141,270.97

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

10/2/2007 1:48:01 PM

Analysis Year: 2009 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
Free-standing discount superstore		49.21	1000 sq ft	231.35	11,384.73	84,167.33
Regnl shop. center		37.55	1000 sq ft	171.11	6,425.18	47,501.36
Home improvement superstore		29.80	1000 sq ft	141.04	4,202.99	31,072.72
					22,012.90	162,741.41

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	49.0	2.0	97.6	0.4
Light Truck < 3750 lbs	10.9	3.7	90.8	5.5
Light Truck 3751-5750 lbs	21.7	0.9	98.6	0.5
Med Truck 5751-8500 lbs	9.5	1.1	98.9	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.6	0.0	75.0	25.0
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	50.0	50.0
Med-Heavy Truck 14,001-33,000 lbs	1.0	0.0	20.0	80.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.9	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	3.5	77.1	22.9	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	1.0	10.0	80.0	10.0

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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)						
Free-standing discount superstore				2.0	1.0	97.0
Regnl shop. center				2.0	1.0	97.0
Home improvement superstore				2.0	1.0	97.0

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Urbemis 2007 Version 9.2.2

Combined Summer Emissions Reports (Pounds/Day)

File Name:

Project Name: Rocklin Crossings

Project Location: Placer County APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

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Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2008 TOTALS (lbs/day unmitigated)	75.24	42.47	65.99	0.05	124.81	3.03	126.84	26.07	2.78	27.94	7,511.53
2009 TOTALS (lbs/day unmitigated)	74.73	40.22	61.89	0.05	0.22	2.89	3.11	0.08	2.65	2.73	7,513.38

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	3.95	5.31	9.22	0.00	0.02	0.02	6,312.84

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	151.56	211.36	1,916.73	1.61	280.68	54.21	162,718.64

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	155.51	216.67	1,925.95	1.61	280.70	54.23	169,031.48

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2

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Time Slice 3/25/2008-7/25/2008 Active Days: 89	4.67	37.81	20.33	0.00	**124.81**	2.03	**126.84**	**26.07**	1.87	**27.94**	3,135.19
Fine Grading 03/25/2008-07/27/2008	4.67	37.81	20.33	0.00	124.81	2.03	126.84	26.07	1.87	27.94	3,135.19
Fine Grading Dust	0.00	0.00	0.00	0.00	124.80	0.00	124.80	26.06	0.00	26.06	0.00
Fine Grading Off Road Diesel	4.62	37.73	18.93	0.00	0.00	2.03	2.03	0.00	1.87	1.87	3,007.48
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.05	0.08	1.39	0.00	0.01	0.00	0.01	0.00	0.00	0.00	127.71
Time Slice 7/28/2008-12/31/2008 Active Days: 113	**75.24**	**42.47**	**65.99**	**0.05**	0.22	**3.03**	3.26	0.08	**2.78**	2.86	7,511.53
Asphalt 07/28/2008-03/28/2009	2.97	16.87	10.82	0.00	0.01	1.42	1.43	0.00	1.30	1.31	1,378.81
Paving Off-Gas	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	2.78	16.39	8.47	0.00	0.00	1.40	1.40	0.00	1.29	1.29	1,131.92
Paving On Road Diesel	0.02	0.36	0.12	0.00	0.00	0.01	0.02	0.00	0.01	0.01	42.56
Paving Worker Trips	0.07	0.12	2.23	0.00	0.01	0.00	0.01	0.00	0.00	0.01	204.33
Building 07/28/2008-03/28/2009	5.72	25.55	54.30	0.04	0.21	1.61	1.82	0.07	1.48	1.55	6,053.39
Building Off Road Diesel	4.07	18.22	11.80	0.00	0.00	1.33	1.33	0.00	1.22	1.22	1,621.20
Building Vendor Trips	0.37	5.18	3.71	0.01	0.03	0.20	0.24	0.01	0.19	0.20	878.42
Building Worker Trips	1.27	2.15	38.79	0.03	0.17	0.08	0.25	0.06	0.07	0.13	3,553.78
Coating 07/28/2008-03/28/2009	66.56	0.05	0.87	0.00	0.00	0.00	0.01	0.00	0.00	0.00	79.33
Architectural Coating	66.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.03	0.05	0.87	0.00	0.00	0.00	0.01	0.00	0.00	0.00	79.33

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Time Slice 1/1/2009-3/27/2009 Active Days: 62	74.73	40.22	61.89	**0.05**	0.22	2.89	3.11	0.08	2.65	2.73	**7,513.38**
Asphalt 07/28/2008-03/28/2009	2.80	16.06	10.52	0.00	0.01	1.35	1.36	0.00	1.24	1.24	1,378.90
Paving Off-Gas	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	2.62	15.62	8.36	0.00	0.00	1.33	1.33	0.00	1.22	1.22	1,131.92
Paving On Road Diesel	0.02	0.33	0.11	0.00	0.00	0.01	0.01	0.00	0.01	0.01	42.56
Paving Worker Trips	0.07	0.11	2.05	0.00	0.01	0.00	0.01	0.00	0.00	0.01	204.43
Building 07/28/2008-03/28/2009	5.37	24.12	50.58	0.04	0.21	1.54	1.75	0.07	1.41	1.48	6,055.11
Building Off Road Diesel	3.87	17.35	11.50	0.00	0.00	1.28	1.28	0.00	1.17	1.17	1,621.20
Building Vendor Trips	0.35	4.83	3.46	0.01	0.03	0.18	0.22	0.01	0.17	0.18	878.43
Building Worker Trips	1.15	1.94	35.62	0.03	0.17	0.08	0.26	0.06	0.07	0.13	3,555.48
Coating 07/28/2008-03/28/2009	66.55	0.04	0.80	0.00	0.00	0.00	0.01	0.00	0.00	0.00	79.36
Architectural Coating	66.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.03	0.04	0.80	0.00	0.00	0.00	0.01	0.00	0.00	0.00	79.36

Phase Assumptions

Phase: Fine Grading 3/25/2008 - 7/27/2008 - Default Fine Site Grading Description

Total Acres Disturbed: 24.96

Maximum Daily Acreage Disturbed: 6.24

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 8 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 8 hours per day

2 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

10/2/2007 1:47:22 PM

Phase: Paving 7/28/2008 - 3/28/2009 - Default Paving Description

Acres to be Paved: 6.24

Off-Road Equipment:

4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day

1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day

2 Paving Equipment (104 hp) operating at a 0.53 load factor for 6 hours per day

1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day

Phase: Building Construction 7/28/2008 - 3/28/2009 - Default Building Construction Description

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.43 load factor for 6 hours per day

2 Forklifts (145 hp) operating at a 0.3 load factor for 6 hours per day

1 Generator Sets (49 hp) operating at a 0.74 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

3 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

Phase: Architectural Coating 7/28/2008 - 3/28/2009 - Default Architectural Coating Description

Rule: Residential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Residential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.38	5.25	4.41	0.00	0.01	0.01	6,304.60
Hearth - No Summer Emissions							
Landscape	0.39	0.06	4.81	0.00	0.01	0.01	8.24
Consumer Products	0.00						
Architectural Coatings	3.18						
TOTALS (lbs/day, unmitigated)	3.95	5.31	9.22	0.00	0.02	0.02	6,312.84

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Free-standing discount superstore	77.92	109.31	991.30	0.83	145.16	28.04	84,155.56
Regnl shop. center	44.35	61.69	559.46	0.47	81.93	15.82	47,494.71
Home improvement superstore	29.29	40.36	365.97	0.31	53.59	10.35	31,068.37
TOTALS (lbs/day, unmitigated)	151.56	211.36	1,916.73	1.61	280.68	54.21	162,718.64

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

10/2/2007 1:47:23 PM

Analysis Year: 2009 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
Free-standing discount superstore		49.21	1000 sq ft	231.35	11,384.73	84,167.33
Regnl shop. center		37.55	1000 sq ft	171.11	6,425.18	47,501.36
Home improvement superstore		29.80	1000 sq ft	141.04	4,202.99	31,072.72
					22,012.90	162,741.41

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	49.0	2.0	97.6	0.4
Light Truck < 3750 lbs	10.9	3.7	90.8	5.5
Light Truck 3751-5750 lbs	21.7	0.9	98.6	0.5
Med Truck 5751-8500 lbs	9.5	1.1	98.9	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.6	0.0	75.0	25.0
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	50.0	50.0
Med-Heavy Truck 14,001-33,000 lbs	1.0	0.0	20.0	80.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.9	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	3.5	77.1	22.9	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	1.0	10.0	80.0	10.0

10/2/2007 1:47:23 PM

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)						
Free-standing discount superstore				2.0	1.0	97.0
Regnl shop. center				2.0	1.0	97.0
Home improvement superstore				2.0	1.0	97.0

10/18/2007 5:21:25 PM

Urbemis 2007 Version 9.2.2

Detail Report for Annual Operational Unmitigated Emissions (Tons/Year)

File Name: C:\Documents and Settings\phillipsh\Application Data\Urbemis\Version9a\Projects\Rocklin Crossings Vendors.urb9

Project Name: Rocklin Crossings Vendors

Project Location: Placer County APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

OPERATIONAL EMISSION ESTIMATES (Annual Tons Per Year, Unmitigated)

Source	CO2
Rocklin Crossings Vendors	531.32
TOTALS (tons/year, unmitigated)	531.32

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2009 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
Rocklin Crossings Vendors		109.00	1000 sq ft	1.00	109.00	805.84
					109.00	805.84

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	0.0	2.0	97.6	0.4

10/18/2007 5:21:25 PM

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Truck < 3750 lbs	0.0	3.7	90.8	5.5
Light Truck 3751-5750 lbs	0.0	0.9	98.6	0.5
Med Truck 5751-8500 lbs	0.0	1.1	98.9	0.0
Lite-Heavy Truck 8501-10,000 lbs	0.0	0.0	75.0	25.0
Lite-Heavy Truck 10,001-14,000 lbs	0.0	0.0	50.0	50.0
Med-Heavy Truck 14,001-33,000 lbs	36.0	0.0	20.0	80.0
Heavy-Heavy Truck 33,001-60,000 lbs	64.0	0.0	0.0	100.0
Other Bus	0.0	0.0	0.0	100.0
Urban Bus	0.0	0.0	0.0	100.0
Motorcycle	0.0	77.1	22.9	0.0
School Bus	0.0	0.0	0.0	100.0
Motor Home	0.0	10.0	80.0	10.0

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)

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Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Rocklin Crossings Vendors				2.0	1.0	97.0

Operational Changes to Defaults

10/18/2007 5:27:36 PM

Urbemis 2007 Version 9.2.2

Detail Report for Annual Operational Unmitigated Emissions (Tons/Year)

File Name: C:\Documents and Settings\phillipsh\Application Data\Urbemis\Version9a\Projects\Rocklin Crossings Employees.urb9

Project Name: Rocklin Crossings Employees

Project Location: Placer County APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

OPERATIONAL EMISSION ESTIMATES (Annual Tons Per Year, Unmitigated)

Source	CO2
Rocklin Crossings Employment	2,092.14
TOTALS (tons/year, unmitigated)	2,092.14

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2009 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
Rocklin Crossings Employment		1,600.00	1000 sq ft	1.00	1,600.00	11,828.80
					1,600.00	11,828.80

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	39.8	1.8	97.7	0.5

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Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Truck < 3750 lbs	14.2	3.5	87.3	9.2
Light Truck 3751-5750 lbs	22.4	0.9	98.7	0.4
Med Truck 5751-8500 lbs	11.0	0.9	98.2	0.9
Lite-Heavy Truck 8501-10,000 lbs	2.6	0.0	69.2	30.8
Lite-Heavy Truck 10,001-14,000 lbs	0.9	0.0	44.4	55.6
Med-Heavy Truck 14,001-33,000 lbs	0.9	0.0	22.2	77.8
Heavy-Heavy Truck 33,001-60,000 lbs	1.2	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.0	0.0	0.0	0.0
Motorcycle	5.5	70.9	29.1	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	1.3	0.0	84.6	15.4

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)

10/18/2007 5:27:36 PM

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Rocklin Crossings Employment				2.0	1.0	97.0

Operational Changes to Defaults

APPENDIX E

Noise Data and Environmental Noise Assessment

Environmental Noise Assessment

Rocklin Crossings Retail Center

Rocklin, California

BAC Job # 2006-004

Prepared For:

Rocklin Crossings, LLC.

Attn: Mark Perlberger
2100 Northrop Drive, Suite 500
Sacramento, CA 95825

Prepared By:

Bollard Acoustical Consultants, Inc.

Paul Bollard

Paul Bollard, President

08/21/2007

BOLLARD
Acoustical Consultants

1293 Lincoln Way, Suite A ▸ Auburn, CA 95603 ▸ Phone: (530) 745-0550 ▸ Fax: (530) 745-0551 ▸ BACNOISE.COM

INTRODUCTION

The proposed Rocklin Crossing commercial project is located at the southeast quadrant of Interstate 80 and Sierra College Boulevard in the City of Rocklin, California. The project proposes commercial uses including a large retail / grocery store and home improvement store, as well as smaller pads for other commercial uses. This report discusses the existing noise environment in the project vicinity, and noise impacts associated with the project. Figure 1a shows a conceptual the project site plan consistent with the building envelope proposed.

BACKGROUND AND TERMINOLOGY

Noise is often described as unwanted sound. Sound is defined as any pressure variation in air that the human ear can detect. If the pressure variations occur frequently enough (at least 20 times per second), they can be heard and are called sound. The number of pressure variations per second is called the frequency of sound, and is expressed as cycles per second, called Hertz (Hz). Definitions of acoustical terminology are shown in Appendix A.

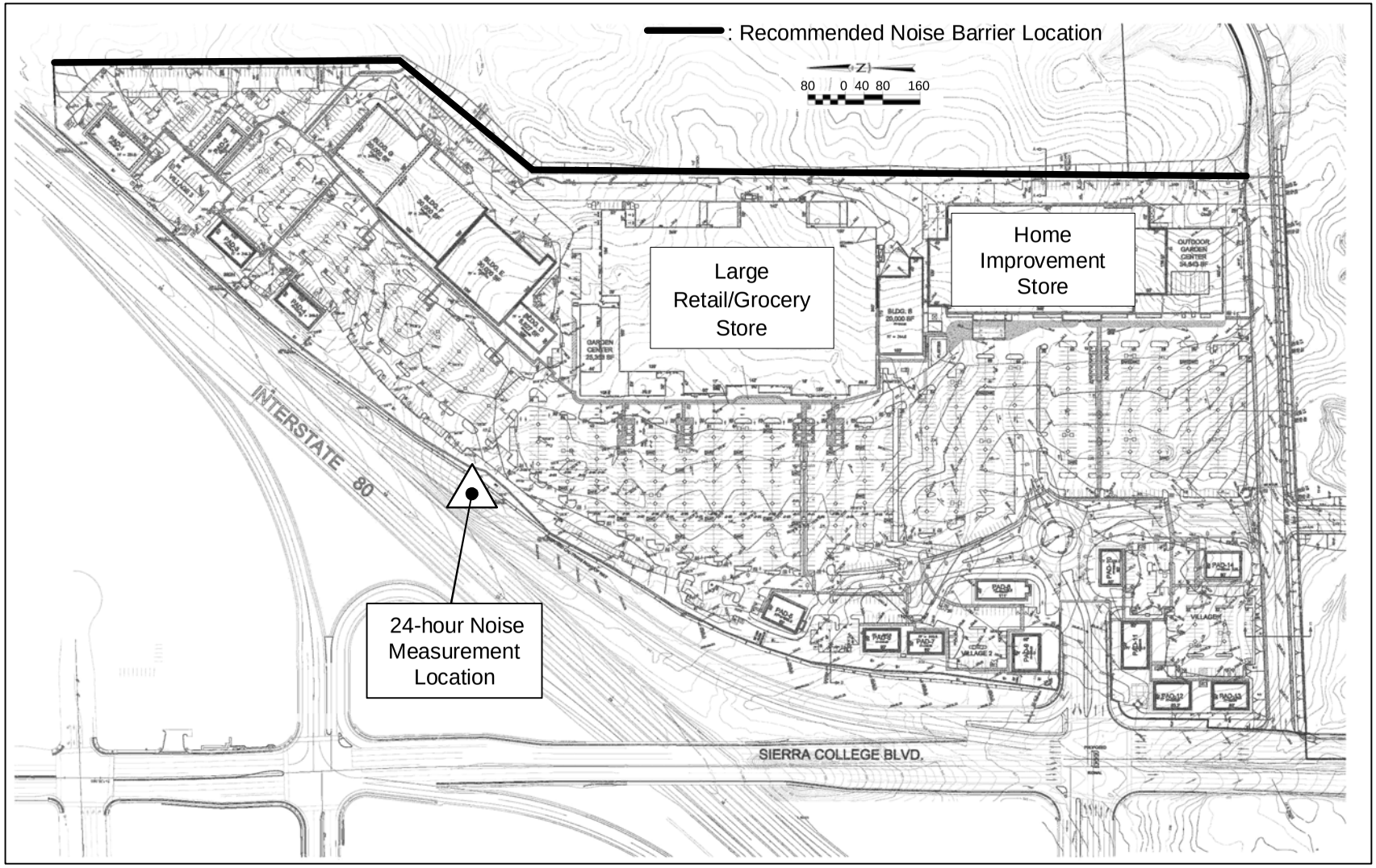
Measuring sound directly in terms of pressure would require a very large and awkward range of numbers. To avoid this, the decibel scale was devised. The decibel scale uses the hearing threshold (20 micropascals of pressure), as a point of reference, defined as 0 dB. Other sound pressures are then compared to the reference pressure, and the logarithm is taken to keep the numbers in a practical range. The decibel scale allows a million-fold increase in pressure to be expressed as 120 dB. Another useful aspect of the decibel scale is that changes in decibel levels correspond closely to human perception of relative loudness. Figure 2 illustrates common noise levels associated with various sources.

The perceived loudness of sounds is dependent upon many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable, and can be approximated by weighing the frequency response of a sound level meter by means of the standardized A-weighing network. There is a strong correlation between A-weighted sound levels (expressed as dBA) and community response to noise. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment. All noise levels reported in this section are in terms of A-weighted levels.

Community noise is commonly described in terms of the “ambient” noise level, which is defined as the all-encompassing noise level associated with a given noise environment. A common statistical tool to measure the ambient noise level is the average, or equivalent, sound level (Leq). The Leq is the foundation of the day/night average noise descriptor, Ldn, and shows very good correlation with community response to noise.

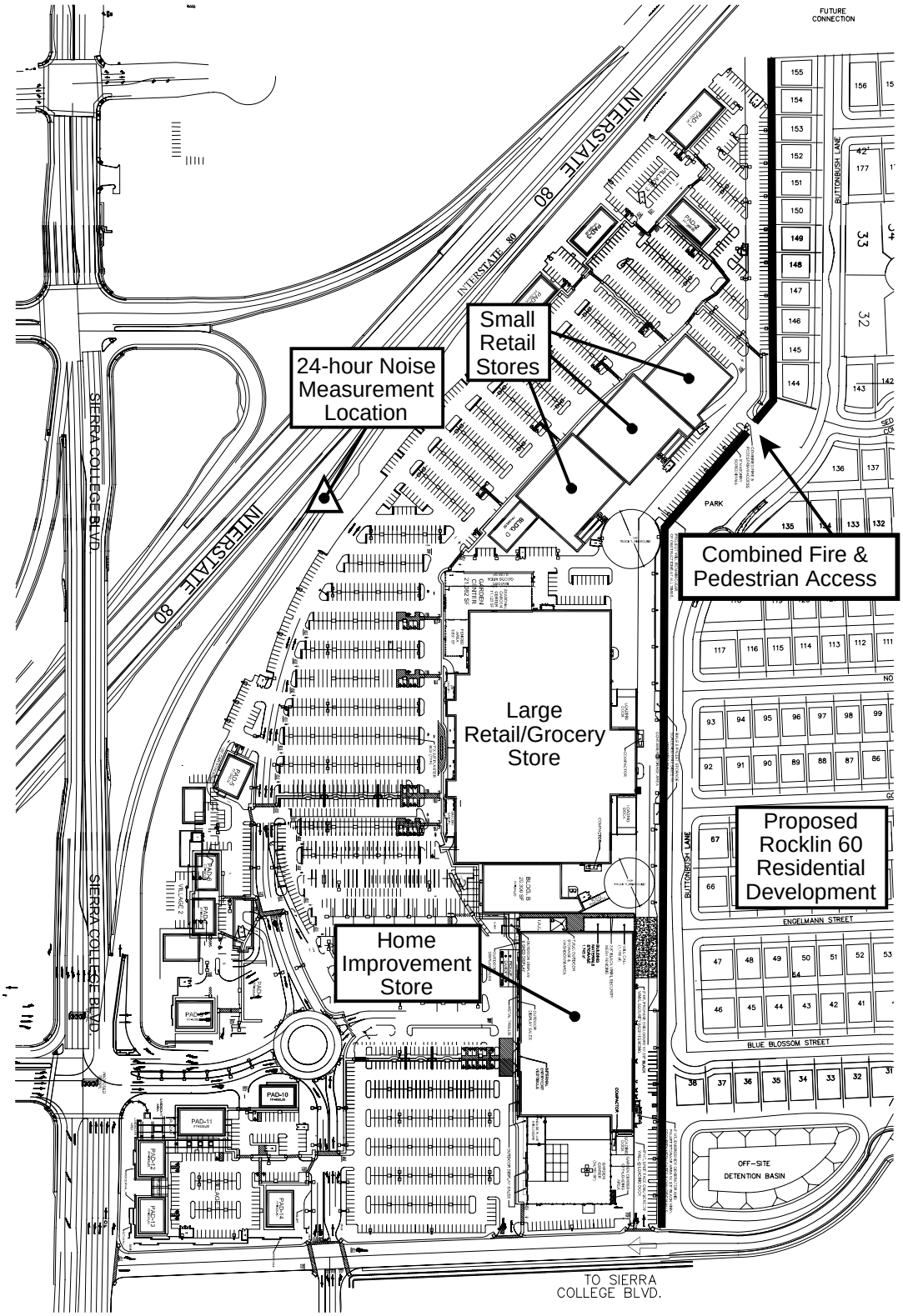
Figure 1a

Rocklin Crossings Retail Center
Rocklin, California



BOLLARD
Acoustical Consultants

Figure 1b
Rocklin Crossings Retail Center
Rocklin, California



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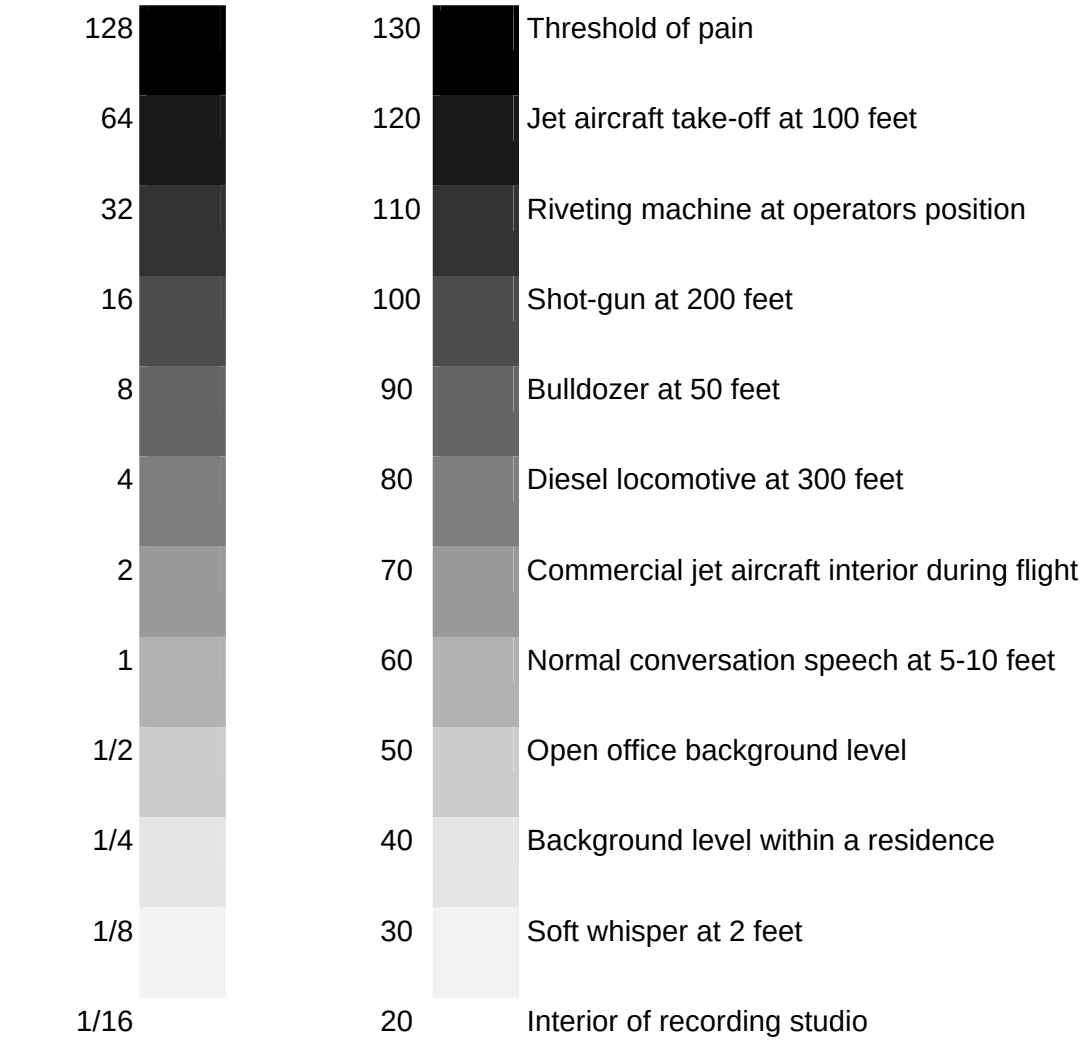
: Recommended Noise Barrier Location

Figure 2
Typical A-Weighted Sound Levels of Common Noise Sources



The Day-night Average Level (Ldn) is based upon the average noise level over a 24-hour day, with a +10 decibel weighing applied to noise occurring during nighttime (10:00 p.m. to 7:00 a.m.) hours. The nighttime penalty is based upon the assumption that people react to nighttime noise exposures as though they were twice as loud as daytime exposures. Because Ldn represents a 24-hour average, it tends to disguise short-term variations in the noise environment.

PROJECT DESCRIPTION

The project consists of 2 1proposed buildings totaling approximately 543,500 square feet. The primary noise generating aspects of the project will consist of on-site truck circulation and unloading activities, heating, ventilating and air conditioning (HVAC) equipment, and project construction. The large retail/grocery store is proposed to be located near the center of the eastern project site border and the home improvement store will be located immediately to the south, also near the eastern project site boundary. The project site layout is provided in Figure 1a.

EXISTING LAND USES IN THE PROJECT VICINITY

The project site is currently vacant. A small convenience center containing gas stations, a convenience store, and a fast food restaurant is located north of the project site across Interstate 80 on Sierra College Boulevard. Several existing rural residential homes are located east of the project site, as well as south of the project along Sierra College Boulevard. A community church is also located south of the project site off Sierra College Boulevard. Due to the substantial distance from the project site to these uses, noise impacts associated with the project are not anticipated.

It should be noted that the Rocklin 60 Residential Project is currently proposed on the adjacent property to the east of this project. Therefore, new residential homes are proposed to be located along the eastern property line of this development. For this reason, this report will assess potential noise impacts of the Rocklin Crossings Commercial Development on the adjacent residential development and suggest mitigation measures where appropriate.

EXISTING NOISE ENVIRONMENT IN THE PROJECT VICINITY

The ambient noise environment in the immediate project vicinity is dominated by traffic on Interstate 80. Traffic on Sierra College Boulevard also contributes to the ambient noise environment in the project vicinity, but to a far lesser extent than I-80.

To generally quantify the existing ambient noise environment in the project vicinity, continuous hourly noise level measurements were conducted on the project site for a period of 24 hours on January 19, 2006. The 24 hour noise measurement location is shown on Figure 1a.

A Larson Davis Laboratories (LDL) Model 820 precision integrating sound level meter was used for the noise level measurement survey. The meter was calibrated before and after use with an LDL Model CA200 acoustical calibrator to ensure the accuracy off the measurements. The equipment used meets all pertinent specifications of the American National Standards Institute for Type 1 sound level meters (ANSI S1.4).

The noise level measurement survey results are summarized below in Table 1, with the detailed results contained in Appendix B. The ambient noise monitoring survey revealed that ambient noise levels in the immediate project vicinity are elevated, as would be expected along the noise I-80 corridor.

Table 1
Existing Ambient Noise Monitoring Results
Rocklin Crossings - January 19, 2006

		Average Measured Hourly Noise Levels, dBA						
Site	Location	24-hour L_{dn}	Daytime (7:00 am - 10:00 pm)			Nighttime (10:00 pm - 7 am)		
			L_{eq}	L_{50}	L_{max}	L_{eq}	L_{50}	L_{max}
1	On project site at I-80 right-of-way	83	79	78	85-92	76	71	83-89

Source - Bollard Acoustical Consultants, Inc.

CRITERIA FOR ACCEPTABLE NOISE EXPOSURE

To limit population exposure to physically and/or psychologically damaging noise levels, the State of California, various county governments, and most municipalities in the State have established standards and ordinances to control noise. The General Plan Noise Element provides standards regarding noise levels for uses relevant to the proposed project. In addition, noise thresholds can be derived from the CEQA guidelines. The following provides a general overview of the existing regulations which would be pertinent to this project.

State

The California Environmental Quality Act (CEQA) Guidelines indicate that a significant noise impact may occur if a project exposes persons to noise levels in excess of local general plans or noise ordinance standards, or cause a substantial permanent or temporary increase in ambient noise levels.

Local

City of Rocklin General Plan

The existing City of Rocklin General Plan Noise Element does not contain quantitative noise level limits for commercial uses affecting residential uses. The following include the existing policies, laws, and regulations established in the 1991 City of Rocklin General Plan, as applicable to the proposed project.

Goal	To protect residents from health hazards and annoyance associated with excessive noise levels.
Policy 1	To use adopted noise compatibility guidelines to evaluate compatibility of proposed new development.
Policy 2	To require noise analysis of proposed development projects as part of the environmental review process and to require mitigation measures that reduce noise impacts to acceptable levels.
Policy 3	To require noise buffering or insulation in new development along major streets and highways, and along railroad tracks.
Policy 4	To control noise sources in residential areas by restricting truck traffic to designated truck routes.
Policy 5	To monitor noise generating land uses to assure compliance with acceptable noise levels.
Policy 6	To encourage sound mitigation, including but not limited to sound walls, along existing highways where noise is determined to exceed adopted standards.

Recommended State Model Noise Ordinance Standards:

In cases where local jurisdictions do not have quantitative noise level limits which would be applicable to noise-sensitive receptors affected by non-transportation noise sources (such as the noise sources associated with the proposed commercial uses), the State of California Model Community Noise Control Ordinance can provide guidance.

The State of California Office of Noise Control (ONC) developed the Model Community Noise Control Ordinance to assist cities and counties in the development of appropriate noise standards for their jurisdictions. The ONC standards are recommended in terms of hourly levels, and include adjustments for the rural versus urban nature of the community, the time of day the noise occurs, the duration of the intrusive sound, the ambient conditions, and the characteristics of the noise (impulsive, tonal, speech or music, etc.). The ONC recommended standards which could be considered most applicable to this project are shown in Table 2.

Table 2
State of California Model Noise Ordinance Recommended Standards
(Suburban Land Uses)

Receiving Land Use	Duration of Intrusive Sound	Daytime Standard (7 a.m. - 10 p.m.)	Nighttime Standard (10 p.m. - 7 a.m.)
One & Two Family Residential	30 - 60 minutes per hour	55	45
	15 - 30 minutes per hour	60	50
	5 - 15 minutes per hour	65	55
	1 - 5 minutes per hour	70	60
	Less than 1 minute per hour	75	65

If the offensive noise contains a steady, audible tone such as a whine, screech, or hum, or is a repetitive noise such as hammering, or riveting, or contains music or speech, the standard limits shown shall be reduced by 5 dB.

NOISE GENERATION OF THE PROPOSED PROJECT

A combination of use of existing literature, and application of accepted noise prediction and sound propagation algorithms, were used to predict noise levels resulting from the Rocklin Crossings Retail Center project. Specific noise sources evaluated in this section include project construction, truck circulation and unloading activities, mechanical equipment, parking lot noise, parking lot sweeper truck noise, and Garden Center noise. Potential noise impacts of each of these major noise sources are described below.

Construction Noise

During the construction phases of the project, noise from construction activities would add to the noise environment in the immediate project vicinity. Activities involved in construction would generate maximum noise levels ranging from 85 to 90 dB at a distance of 50 feet, as indicated in Table 3. Noise would also be generated during the construction phase by increased truck traffic on area roadways. Construction activities would be temporary in nature and are anticipated to occur during normal daytime working hours.

Site preparation of the project site may require blasting. If blasting is required at the project site as part of project construction, such activities would likely consist of small shots to clear boulders. Such shots are designed to transfer the energy into the rock, rather than have the shot vent to the atmosphere. As a result, noise generated by such blasting activities would sound like a muted thud, and is not expected to result in adverse public reaction at existing noise sensitive land uses in the project vicinity.

Table 3
Construction Equipment Noise

Type of Equipment	Maximum Level, dB at 50 feet
Bulldozers	87
Heavy Trucks	88
Backhoe	85
Pneumatic Tools	85

Source: Environmental Noise Pollution, Patrick R. Cunniff, 1977.

Truck Delivery Noise

The proposed home improvement store, large retail/grocery store, and commercial buildings E, F & G, will all have truck deliveries in the rear of these stores. As a result, trucks will arrive, pass, stop, start, couple and decouple trailers, back into loading docks, be unloaded, and depart the site. The trailers will consist of enclosed trailers with food (some refrigerated) and merchandise for each of the commercial buildings, and flatbeds carrying lumber to the home improvement store.

According to project representatives, worst case daily truck activity at these stores will conservatively consist of approximately 15 semi-trailer trucks per day and approximately 3 semi dual trailer flatbed trucks per day for delivery of materials at the home improvement store. In addition, 6 semi-trailer trucks delivering dry grocery goods and general merchandise per day and 3 refrigerated semi-trailer truck deliveries per day at the grocery store. Approximately 15 smaller 2-axle vender trucks will also make deliveries to these stores each day. Therefore, for this analysis, it was assumed that up to 27 heavy truck deliveries and 15 small truck deliveries could occur in a given day.

Based on evaluation of the project site plan, delivery trucks will likely enter the site from the roadway proposed along the southern edge of the project site and traverse north behind the stores along the project's eastern border and then make their way the project's western site exit. The trucks will be closest to the noise-sensitive receivers during passages directly behind the stores. Specifically, truck pass-bys will be approximately 70 to 150 feet from the approximate center of the nearest residential backyards proposed to the east.

Heavy Truck pass-bys en route to the loading dock areas are expected to be relatively brief, and are estimated to produce an average Sound Exposure Level (SEL) of approximately 87 dB at a distance of 50 feet. Smaller truck pass-by's produce an average SEL of approximately 80 dB at 50 feet. Relative to the louder and greater number of heavy truck deliveries, the noise generation of the smaller (2-axle) trucks is not anticipated to appreciably affect overall truck pass-by noise levels. The typical Lmax level due to a truck pass-by has been measured to be approximately 75 dB at a distance of 50 feet.

Primary noise sources associated with loading dock operations at the proposed large retail/grocery store, will most likely be heavy trucks stopping (air brakes), backing into the loading docks (back-up alarms), and pulling out of the loading docks (revving engines). In addition, if the heavy truck engines idle and/or trailer refrigeration unit's cycle on and off while the trucks are being unloaded, then these would be additional sources of noise at this location. Once the trucks have backed into the loading dock, they are unloaded from the inside of the store using a fork lift or hand cart, and most of that unloading noise is contained within the building and truck trailer.

Not all trucks are unloaded at loading docks, as beverage, bread, potato chip, and other venders often utilize hand carts to unload their products through rear doors (as opposed to depressed dock areas). Flatbed lumber trailers will be unloaded using forklifts in the area behind the home improvement store. Noise from these operations also contributes to the overall truck delivery noise environment.

Due to the fairly intensive truck unloading operations which will occur adjacent to the eastern site boundary, it is not feasible to assess the noise of different operations (i.e. lumber unloading, loading docks, truck pass-by's, refrigeration trucks, etc.), independently. As a result, the noise generation of each of these sources was combined to arrive at a cumulative assessment of truck delivery noise. The results of this assessment indicate that a typical busy hour of overall truck activity along the eastern site boundary would generate median (L_{50}) and maximum (L_{max}) noise levels of 60 dB and 80 dB, respectively, at a reference distance of 50 feet from the effective noise center of the truck unloading activities. An exception to these levels is made for refrigeration trucks, in which median noise levels would be approximately 5 dB higher, or 65 dB L_{50}. Maximum noise levels associated with refrigeration trucks were not found to be higher than maximum noise levels for non-refrigeration trucks. . This is because the maximum noise generation of heavy truck passby's are affected most by engine noise, and are not appreciably affected by the refrigeration units.

The reference noise levels cited above are propagated to the nearest proposed residences to the east assuming standard spherical spreading treating the noise source as a stationary point. This standard assumption leads to a 6 dB decrease in noise levels for each doubling of distance. For example, the reference level of 60 dB L_{50} at 50 feet from the source would decrease to 54 dB L_{50} at a distance of 100 feet, and to 48 dB L_{50} at a distance of 200 feet.

The distances from the approximate noise center of the truck delivery areas to the nearest proposed residences in the Rocklin 60 development to the east vary. For example, Lot 38 is located closer to than lots 46-47, 66-67, and 92-93. Lots 145 and 146 are located even closer to the eastern site boundary still. Table 4 shows the approximate distances from the effective noise centers of the truck delivery areas to the nearest proposed residences to the east, and the corresponding noise levels associated with the combined truck delivery operations.

Table 4
Predicted Truck Delivery Noise Levels at Nearest Proposed Residences
Rocklin Crossing Project

Lot(s)	Distance	Predicted L_{50} Without / With Refrigeration Trucks	Predicted L_{max}
38	70	57 / 62	77
46-47, 66-67, 92-93, 117-118	120	52 / 57	72
145-146	70	57 / 62	77

Notes:
1. Lot locations are shown on Figure 1b.
2. Distances shown are from approximately noise center of truck activity areas to backyards of nearest residences.
3. Predicted L_{50} values based on a reference level of 60 dB at 50 feet.
4. Predicted L_{max} values based on a reference level of 80 dB at 50 feet.

The Table 4 data indicate that predicted median and maximum noise levels associated with truck deliveries would exceed both the recommended median and maximum noise level criteria shown in Table 2. As a result, a noise barrier analysis was preformed for this project. The barrier analysis took into account the relative elevations of the commercial truck activity areas as well as the elevations of the proposed residences to the east. It should be noted that a noise barrier is proposed by the project applicant, and that the barrier is to be located relative to the elevation of the commercial site. This is important in that the proposed residential area will be at a lower elevation than the commercial site, thereby improving the efficiency of the noise barrier constructed at the commercial site. The results of the barrier analysis are summarized in Table 5, with the detailed results shown in Appendix C.

Table 5
Barrier Heights Required to Satisfy Exterior noise standards at Nearest Residences
Rocklin Crossings Retail Center, Rocklin, California

	Noise Barrier Height to Achieve:	
Lo1	45 dB L50 Without / With Refrigeration Trucks	65 / 75 dB L_{max}
Lot 38	7 / 16	7 / 6
Lots 46-47	6 / 11	6 / 0
Lots 66-67	6 / 11	6 / 0
Lots 92-93	6 / 11	6 / 0
Lots 117-118	6 / 13	6 / 0
Lots 145-146	9 / 16	9 / 6

1. Source, residential building pads, and barrier elevations are given in Appendix D.

The results of the noise barrier analysis indicate that, without refrigeration trucks present, noise barriers ranging in height from 6 to 9 feet along the eastern site boundary would could be utilized to reduce truck unloading activity noise to a state of compliance with the recommended 45 dB L_{50} and 65 dB L_{max} nighttime noise level criteria shown in Table 2.

To fully mitigate all truck unloading activity noise during day and nighttime hours, it is recommended that a solid property line noise barrier 9 feet in height (relative to commercial site elevation) be constructed at the locations shown in Figure 1b. In addition, barrier walls should be constructed along the sides of the Large Grocery cold food loading dock, and refrigeration trucks required to park in those shielded areas while idling on site.

Mechanical Equipment Noise

The HVAC system for maintaining comfortable shopping temperatures within the store will consist of packaged rooftop air conditioning systems. The units will be relatively evenly distributed across the roof of the building, starting about 30 feet in from the edges of the roof. These HVAC units, which typically stand about 4-5 feet tall, would be shielded from view by the project building parapets. Such rooftop HVAC units typically generate noise levels of approximately 50 dB L_{50} at a reference distance of 100 feet from the building, including shielding by the building. During nighttime hours, the air conditioning requirements of the facilities decrease significantly, with reference levels being reduced to less than 45 dB L50. Given the distance between the rooftop HVAC units and the nearest proposed residences in the Rocklin 60 development to the east, and the shielding provided by the rooftop parapet, no additional HVAC equipment noise mitigation measures appear to be warranted for this project.

To quantify the noise emissions from food cold storage refrigeration equipment, noise level measurements conducted at a similar large grocery store were utilized. At a distance of 50 feet from the food cold storage equipment, a noise level of 66 dB L_{50} was recorded. This equipment is proposed to be located on the roof of the large retail/grocery store, approximately 300 feet west of the nearest proposed residences. At this distance, the food cold storage equipment is predicted to generate noise levels of 50 dB L_{50}, not including shielding by the rooftop and parapet. After consideration of this shielding, cold storage equipment noise levels are predicted to be below the recommended 45 dB L_{50} nighttime noise criteria. As a result, no additional noise mitigation measures appear to be warranted for the food cold storage equipment associated with the large retail/grocery store.

Parking Lot Noise

The majority of the on-site parking for the proposed project will be located on the west side of the buildings shown on Figure 1a, well removed from the residences to the east. Nonetheless, there is a smaller parking area and rows of parking along the eastern project boundary, as indicated in Figure 1a.

Assuming all of the approximately 200 spaces in the parking area located at the northeastern portion of the project site are filled and emptied in one hour, a total of 400 parking lot events would occur in that area during a very busy hour. The approximate center of activity of the parking area would be approximately 65 feet from the residential property line to the east and approximately 70 feet from the nearest backyard locations of the proposed residential development. A typical SEL due to automobile arrivals/departures, including car doors slamming and people conversing is approximately 70 dB and maximum parking lot noise levels are typically 63 dB, at a distance of 50 feet. At that nearest outdoor activity areas, the predicted median hourly and maximum noise levels were computed to be 49 dB L50 and 51 dB Lmax. Interior levels within the nearest proposed residences would be at least 15 dB lower, or approximately 33 dB L50 and 36 dB Lmax. The predicted levels, which include a -9 dB offset to account for the recommended property line noise

barrier for truck delivery noise, would satisfy the daytime noise level standards shown in Table 2 for this parking area, even with those standards reduced by 5 dB to account for the impulsive nature of the car doors opening and closing. Parking lot activity is not anticipated to occur during nighttime hours (10 p.m. to 7 a.m.). As a result, no additional noise mitigation measures are warranted for parking areas.

Parking Lot Sweeper Noise

As mentioned above, the majority of the on-site parking lot areas for the proposed project will be located on the west side of the buildings shown on Figure 1a, well removed from the residences to the east. In addition, parking lot sweeper noise varies and is dependent upon the actual sweeper truck equipment, as well as the truck operator. However, the proposed intervening buildings along with the recommended 9-foot tall eastern property line noise barrier are predicted to provide significant shielding of sweeper truck noise. As a result, sweeper truck noise is not expected to exceed the standards contained in Table 2. No additional noise mitigation measures would be required for this aspect of the project.

Garden Center Noise

The project includes Garden Centers at both the Large Retail/Grocery Store, as well as at the Home Improvement Store. The garden center of the Large Retail/Grocery Store is located at the northwest portion of the building, and the garden center of the Home Improvement Store is located at the southern portion of that building. The public address (P/A) system at the Garden Centers are anticipated to generate lower noise levels than the truck delivery and unloading activities, provided that the speakers face down and into the Garden Centers and away from the nearest residences to the east. As a result, no additional noise mitigation measures appear to be warranted for the Garden Center areas.

Other Noise Sources

Other noise sources located behind the commercial center could include cardboard baling and trash compaction machinery, and garbage collection. These noise sources are predicted to be less intensive than the truck delivery activities, and the noise barrier recommended for those operations would provide similar noise reduction from these ancillary noise sources.

CONCLUSIONS AND RECOMMENDATIONS

The Rocklin Crossings commercial project site is exposed to existing and future traffic noise levels due to Interstate 80 which are elevated. Because the commercial uses proposed within this project are not considered to be noise sensitive, the elevated ambient conditions at the project site are not anticipated to adversely affect this development.

Mechanical equipment and truck deliveries associated with the Rocklin Crossings commercial development will generate substantial noise levels which could affect the proposed Rocklin 60 residential development to the immediate east. As a result, the following specific noise mitigation measures are recommended for this development. These measures would also provide acoustic attenuation of project noise levels at the existing residential uses located further east of the Rocklin 60 residential development.

1. A solid noise barrier should be constructed at the locations shown on Figures 1a and 1b.

2. The barrier should be constructed of masonry block, pre-cast concrete panels, or other massive materials.

3. The recommended noise barrier height along the entire eastern boundary of the project site is 9 feet relative to the pad elevations of the nearest commercial buildings.

4. Solid noise barriers should extend along the cold food unloading area of the large retail/grocery store loading dock to further shield refrigeration trucks while being unloaded. Refrigeration trucks should be required to park within those shielded loading dock areas while on site. The barriers should be sufficiently tall to completely shield the refrigeration units of on the truck trailers.

5. All rooftop mechanical equipment should be completely screened from view of existing or proposed residences by the proposed parapet.

6. Construction activities should be limited to daytime hours to eliminate the potential for adverse noise impacts associated with nighttime construction.

These conclusions are based on the site plans shown on Figures 1a and 1b, and on the assumptions contained herein. Deviation from these site plans or assumptions could cause actual noise levels to vary. Implementation of the above-described measures is predicted to fully mitigate noise impacts associated with on-site activities at the Rocklin Crossings Commercial Project.

Appendix A
Acoustical Terminology

Acoustics	The science of sound.
Ambient Noise	The distinctive acoustical characteristics of a given space consisting of all noise sources audible at that location. In many cases, the term ambient is used to describe an existing or pre-project condition such as the setting in an environmental noise study.
Attenuation	The reduction of an acoustic signal.
A-Weighting	A frequency-response adjustment of a sound level meter that conditions the output signal to approximate human response.
Decibel or dB	Fundamental unit of sound, A Bell is defined as the logarithm of the ratio of the sound pressure squared over the reference pressure squared. A Decibel is one-tenth of a Bell.
Frequency	The measure of the rapidity of alterations of a periodic signal, expressed in cycles per second or hertz.
Ldn	Day/Night Average Sound Level. Similar to CNEL but with no evening weighting.
Leq	Equivalent or energy-averaged sound level.
Lmax	The highest root-mean-square (RMS) sound level measured over a given period of time.
Loudness	A subjective term for the sensation of the magnitude of sound.
Masking	The amount (or the process) by which the threshold of audibility is for one sound is raised by the presence of another (masking) sound.
Noise	Unwanted sound.
Threshold of Hearing	The lowest sound that can be perceived by the human auditory system, generally considered to be 0 dB for persons with perfect hearing.
Threshold of Pain	Approximately 120 dB above the threshold of hearing.

Appendix B-1

Rocklin Crossings Retail Center
24hr Continuous Noise Monitoring at Site #1
Thursday, January 19, 2006

Hour	Leq	Lmax	L50	L90
0:00	71.7	83.1	67.8	56.7
1:00	70.5	82.9	64.4	53.7
2:00	70.3	84.1	63.6	53.8
3:00	71.2	83.7	64.9	53.7
4:00	73.0	83.8	69.2	62.3
5:00	75.4	84.2	73.8	68.7
6:00	78.2	86.8	77.6	73.4
7:00	79.6	85.0	79.4	76.1
8:00	79.1	87.2	78.8	75.5
9:00	78.6	87.6	78.1	74.4
10:00	78.5	85.5	78.0	74.4
11:00	78.8	86.0	78.4	74.8
12:00	79.2	89.1	78.9	75.8
13:00	79.2	87.6	79.0	75.5
14:00	79.4	87.0	79.2	76.2
15:00	79.6	88.0	79.5	76.6
16:00	79.7	88.3	79.6	76.7
17:00	79.4	92.1	79.3	76.6
18:00	78.9	86.6	78.5	75.3
19:00	78.0	89.4	77.4	73.3
20:00	77.4	85.3	76.8	72.3
21:00	77.1	86.6	76.6	71.8
22:00	75.4	89.4	74.4	68.0
23:00	74.8	84.3	73.3	65.4

	Statistical Summary					
	Daytime (7 a.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average
Leq (Average)	79.7	77.1	78.5	79.6	70.3	75.6
Lmax (Maximum)	92.1	85.3	87.6	89.4	82.9	84.7
L50 (Median)	79.6	76.6	78.4	79.4	63.6	70.8
L90 (Background)	76.7	71.8	74.9	76.1	53.7	63.2

Computed Ldn, dB	82.6
% Daytime Energy	77%
% Nighttime Energy	23%

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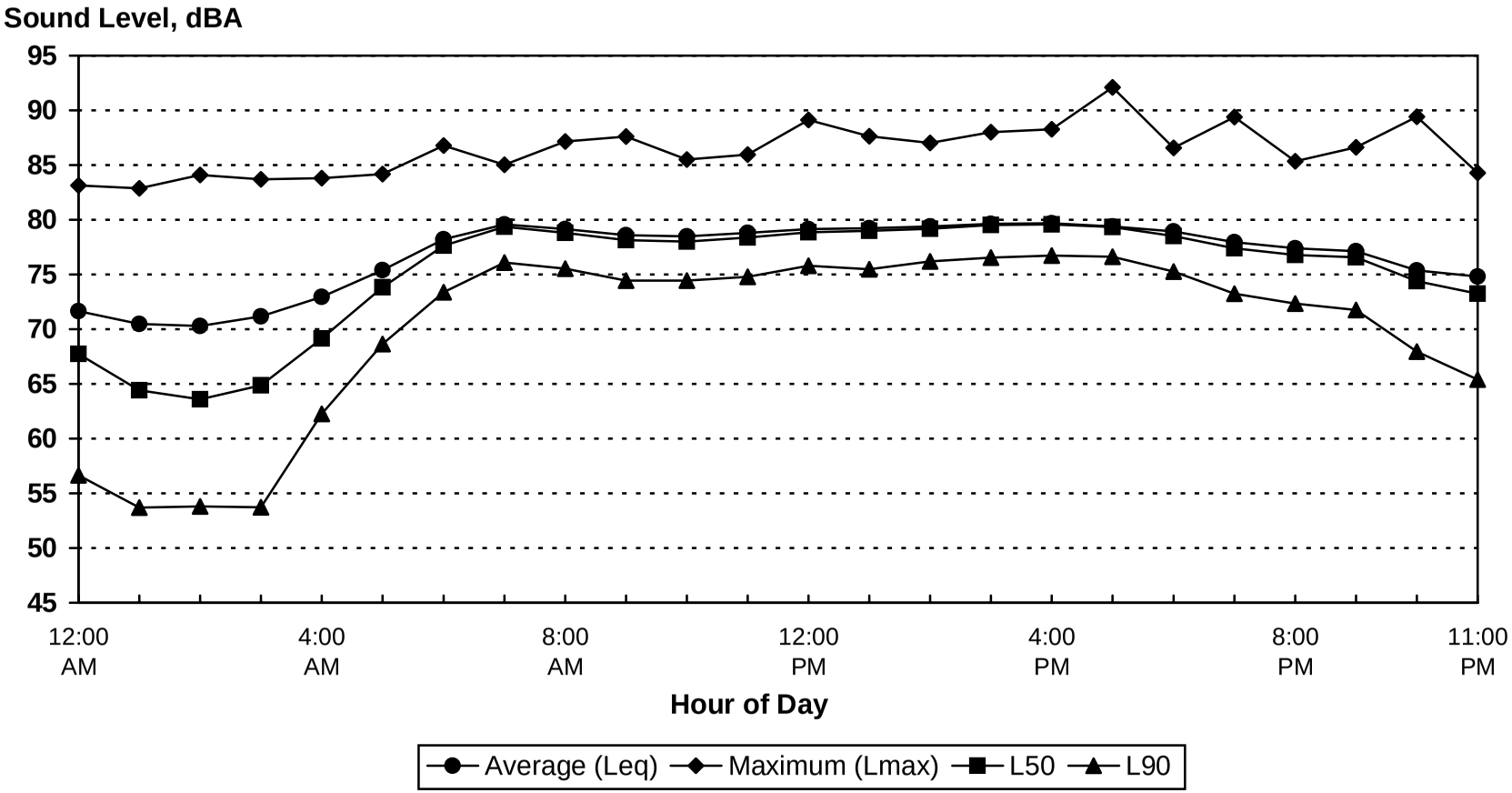
Appendix B-2
Rocklin Crossings Retail Center
24hr Continuous Noise Monitoring at Site #1
Thursday, January 19, 2006



Ldn: 83 dB

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Appendix C-1

Barrier Insertion Loss Calculation

Project Information:

Job Number: 2006-004
Project Name: Rocklin Crossings Retail Center
Location(s): Lot 38

Noise Level Data:

Source Description: Cumulative Truck and Loading Dock Sources
Source Noise Level, dBA: 57
Source Frequency (Hz): 500
Source Height (ft): 345

Site Geometry:

Receiver Description: Backyard Area
Source to Barrier Distance (C_1): 40
Barrier to Receiver Distance (C_2): 30

Pad/Ground Elevation at Receiver: 330
Receiver Elevation[1]: 335
Base of Barrier Elevation: 341
Starting Barrier Height 6

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height (ft)	Insertion Loss, dB	Noise Level, dB	Barrier Breaks Line of Site to Source?
347	6	-11.1	45.9	Yes
348	7	-11.9	45.1	Yes
349	8	-12.8	44.2	Yes
350	9	-13.3	43.7	Yes
351	10	-13.9	43.1	Yes
352	11	-14.4	42.6	Yes
353	12	-14.6	42.4	Yes
354	13	-15.3	41.7	Yes
355	14	-15.3	41.7	Yes
356	15	-15.9	41.1	Yes
357	16	-16.3	40.7	Yes

Notes: 1.Standard receiver elevation is five feet above grade/pad elevations at the receiver location(s)

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Appendix C-2

Barrier Insertion Loss Calculation

Project Information:

Job Number: 2006-004
Project Name: Rocklin Crossings Retail Center
Location(s): Lots 46-47

Noise Level Data:

Source Description: Cumulative Truck and Loading Dock Sources
Source Noise Level, dBA: 52
Source Frequency (Hz): 500
Source Height (ft): 346

Site Geometry:

Receiver Description: Backyard Area
Source to Barrier Distance (C_1): 50
Barrier to Receiver Distance (C_2): 70

Pad/Ground Elevation at Receiver: 331
Receiver Elevation[1]: 336
Base of Barrier Elevation: 342
Starting Barrier Height 6

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height (ft)	Insertion Loss, dB	Noise Level, dB	Barrier Breaks Line of Site to Source?
348	6	-8.8	43.2	Yes
349	7	-9.6	42.4	Yes
350	8	-10.3	41.7	Yes
351	9	-10.7	41.3	Yes
352	10	-11.3	40.7	Yes
353	11	-11.9	40.1	Yes
354	12	-12.6	39.4	Yes
355	13	-13.0	39.0	Yes
356	14	-13.6	38.4	Yes
357	15	-14.0	38.0	Yes
358	16	-14.4	37.6	Yes

Notes: 1.Standard receiver elevation is five feet above grade/pad elevations at the receiver location(s)

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Appendix C-3

Barrier Insertion Loss Calculation

Project Information:

Job Number: 2006-004
Project Name: Rocklin Crossings Retail Center
Location(s): Lots 66-67

Noise Level Data:

Source Description: Cumulative Truck and Loading Dock Sources
Source Noise Level, dBA: 52
Source Frequency (Hz): 500
Source Height (ft): 348

Site Geometry:

Receiver Description: Backyard Area
Source to Barrier Distance (C_1): 50
Barrier to Receiver Distance (C_2): 70

Pad/Ground Elevation at Receiver: 334
Receiver Elevation[1]: 339
Base of Barrier Elevation: 344
Starting Barrier Height 6

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height (ft)	Insertion Loss, dB	Noise Level, dB	Barrier Breaks Line of Site to Source?
350	6	-8.4	43.6	Yes
351	7	-9.2	42.8	Yes
352	8	-10.0	42.0	Yes
353	9	-10.5	41.5	Yes
354	10	-11.1	40.9	Yes
355	11	-11.7	40.3	Yes
356	12	-12.3	39.7	Yes
357	13	-12.9	39.1	Yes
358	14	-13.4	38.6	Yes
359	15	-13.8	38.2	Yes
360	16	-14.3	37.7	Yes

Notes: 1.Standard receiver elevation is five feet above grade/pad elevations at the receiver location(s)

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Appendix C-4

Barrier Insertion Loss Calculation

Project Information:

Job Number: 2006-004
Project Name: Rocklin Crossings Retail Center
Location(s): Lots 92-93

Noise Level Data:

Source Description: Cumulative Truck and Loading Dock Sources
Source Noise Level, dBA: 52
Source Frequency (Hz): 500
Source Height (ft): 348

Site Geometry:

Receiver Description: Backyard Area
Source to Barrier Distance (C_1): 50
Barrier to Receiver Distance (C_2): 70

Pad/Ground Elevation at Receiver: 335
Receiver Elevation[1]: 340
Base of Barrier Elevation: 344
Starting Barrier Height 6

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height (ft)	Insertion Loss, dB	Noise Level, dB	Barrier Breaks Line of Site to Source?
350	6	-8.1	43.9	Yes
351	7	-9.0	43.0	Yes
352	8	-9.7	42.3	Yes
353	9	-10.3	41.7	Yes
354	10	-10.9	41.1	Yes
355	11	-11.5	40.5	Yes
356	12	-12.1	39.9	Yes
357	13	-12.6	39.4	Yes
358	14	-13.2	38.8	Yes
359	15	-13.6	38.4	Yes
360	16	-14.1	37.9	Yes

Notes: 1.Standard receiver elevation is five feet above grade/pad elevations at the receiver location(s)

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Appendix C-5

Barrier Insertion Loss Calculation

Project Information:

Job Number: 2006-004
Project Name: Rocklin Crossings Retail Center
Location(s): Lots 117-118

Noise Level Data:

Source Description: Cumulative Truck and Loading Dock Sources
Source Noise Level, dBA: 52
Source Frequency (Hz): 500
Source Height (ft): 348

Site Geometry:

Receiver Description: Backyard Area
Source to Barrier Distance (C_1): 50
Barrier to Receiver Distance (C_2): 70

Pad/Ground Elevation at Receiver: 338
Receiver Elevation[1]: 343
Base of Barrier Elevation: 344
Starting Barrier Height 6

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height (ft)	Insertion Loss, dB	Noise Level, dB	Barrier Breaks Line of Site to Source?
350	6	-7.1	44.9	Yes
351	7	-7.9	44.1	Yes
352	8	-8.8	43.2	Yes
353	9	-9.5	42.5	Yes
354	10	-10.2	41.8	Yes
355	11	-10.7	41.3	Yes
356	12	-11.3	40.7	Yes
357	13	-11.9	40.1	Yes
358	14	-12.6	39.4	Yes
359	15	-13.0	39.0	Yes
360	16	-13.5	38.5	Yes

Notes: 1.Standard receiver elevation is five feet above grade/pad elevations at the receiver location(s)

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Appendix C-6

Barrier Insertion Loss Calculation

Project Information:

Job Number: 2006-004
Project Name: Rocklin Crossings Retail Center
Location(s): Lots 145-146

Noise Level Data:

Source Description: Cumulative Truck and Loading Dock Sources
Source Noise Level, dBA: 56
Source Frequency (Hz): 500
Source Height (ft): 352

Site Geometry:

Receiver Description: Backyard Area
Source to Barrier Distance (C_1): 50
Barrier to Receiver Distance (C_2): 20

Pad/Ground Elevation at Receiver: 345
Receiver Elevation[1]: 350
Base of Barrier Elevation: 348
Starting Barrier Height 6

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height (ft)	Insertion Loss, dB	Noise Level, dB	Barrier Breaks Line of Site to Source?
354	6	-7.8	48.2	Yes
355	7	-9.0	47.0	Yes
356	8	-9.9	46.1	Yes
357	9	-10.7	45.3	Yes
358	10	-11.5	44.5	Yes
359	11	-12.5	43.5	Yes
360	12	-13.2	42.8	Yes
361	13	-13.8	42.2	Yes
362	14	-14.4	41.6	Yes
363	15	-14.6	41.4	Yes
364	16	-15.3	40.7	Yes

Notes: 1.Standard receiver elevation is five feet above grade/pad elevations at the receiver location(s)

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FHWA OUTPUT – EXISTING NO PROJECT YEAR 2006

```
     TRAFFIC DISTRIBUTION PERCENTAGES
     DAY        EVENING     NIGHT
     ---        -------     -----
AUTOS
     68.62      11.20       8.49
M-TRUCKS
      7.30      1.19        0.90
H-TRUCKS
      1.79      0.29        0.22

  RUN NAME: TAYLOR RD BETW KING & HORSESHOE BAR       RUN DATE: 022807

ADT:  17060      SPEED:  35      ACTIVE HALF WIDTH (FT):  6
SITE CHARACTERISTICS: SOFT     GRADE (PERCENT):  .5

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE =  69.82
* *  DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL * *
70 CNEL  65 CNEL   60 CNEL   55 CNEL
-------  -------   -------   -------
  54.5      116.8      251.3      541.2

  RUN NAME: TAYLOR RD BETW HORSESHOE BAR & SIERRA COLLEGE       RUN DATE: 022807

ADT:  10673      SPEED:  35      ACTIVE HALF WIDTH (FT):  6
SITE CHARACTERISTICS: SOFT     GRADE (PERCENT):  .5

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE =  67.78
* *  DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL * *
70 CNEL  65 CNEL   60 CNEL   55 CNEL
-------  -------   -------   -------
   0.0       85.6      183.9      396.0

  RUN NAME: PACIFIC ST BETW SIERRA COLLEGE & DOMINGUEZ        RUN DATE: 022807

ADT:  11578      SPEED:  35      ACTIVE HALF WIDTH (FT):  18
SITE CHARACTERISTICS: SOFT     GRADE (PERCENT):  .5

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE =  67.06
* *  DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL * *
70 CNEL  65 CNEL   60 CNEL   55 CNEL
-------  -------   -------   -------
   0.0       91.8      194.7      417.9

  RUN NAME: PACIFIC ST BETW DOMINGUEZ & ROCKLIN       RUN DATE: 022807

ADT:  15889      SPEED:  35      ACTIVE HALF WIDTH (FT):  18
SITE CHARACTERISTICS: SOFT     GRADE (PERCENT):  .5

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE =  68.44
* *  DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL * *
70 CNEL  65 CNEL   60 CNEL   55 CNEL
-------  -------   -------   -------
  54.6      112.5      240.0      515.8

  RUN NAME: ROCKLIN RD BETW PACIFIC & GRANITE        RUN DATE: 022807

ADT:  21211      SPEED:  35      ACTIVE HALF WIDTH (FT):  18
```

SITE CHARACTERISTICS: SOFT GRADE (PERCENT): .5

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE = 69.69
* * DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL * *
70 CNEL 65 CNEL 60 CNEL 55 CNEL
--- --- --- ---
65.1 135.9 290.7 625.2

RUN NAME: ROCKLIN RD BETW I-80 & SIERRA COLLEGE RUN DATE: 022807

ADT: 9989 SPEED: 35 ACTIVE HALF WIDTH (FT): 18
SITE CHARACTERISTICS: SOFT GRADE (PERCENT): .5

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE = 66.42
* * DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL * *
70 CNEL 65 CNEL 60 CNEL 55 CNEL
--- --- --- ---
0.0 83.5 176.6 378.8

RUN NAME: ROCKLIN RD BETW SIERRA COLLEGE & BARTON RUN DATE: 022807

ADT: 5176 SPEED: 35 ACTIVE HALF WIDTH (FT): 12
SITE CHARACTERISTICS: SOFT GRADE (PERCENT): .5

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE = 64.06
* * DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL * *
70 CNEL 65 CNEL 60 CNEL 55 CNEL
--- --- --- ---
0.0 54.0 114.0 244.5

RUN NAME: BARTON RD BETW ROCKLIN & BRACE RUN DATE: 022807

ADT: 3354 SPEED: 35 ACTIVE HALF WIDTH (FT): 6
SITE CHARACTERISTICS: SOFT GRADE (PERCENT): .5

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE = 62.76
* * DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL * *
70 CNEL 65 CNEL 60 CNEL 55 CNEL
--- --- --- ---
0.0 0.0 85.2 183.2

RUN NAME: HORSESHOE BAR RD BETW I-80 & BRACE RUN DATE: 022807

ADT: 6101 SPEED: 35 ACTIVE HALF WIDTH (FT): 6
SITE CHARACTERISTICS: SOFT GRADE (PERCENT): .5

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE = 65.36
* * DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL * *
70 CNEL 65 CNEL 60 CNEL 55 CNEL
--- --- --- ---
0.0 59.1 126.8 272.8

RUN NAME: BRACE RD BETW I-80 & BARTON RUN DATE: 022807

ADT: 4006 SPEED: 35 ACTIVE HALF WIDTH (FT): 6
SITE CHARACTERISTICS: SOFT GRADE (PERCENT): .5

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE = 63.53
* * DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL * *

70 CNEL 65 CNEL 60 CNEL 55 CNEL
--- --- --- ---
0.0 0.0 95.9 206.2

RUN NAME: BRACE RD BETW I-80 & SIERRA COLLEGE RUN DATE: 022807

ADT: 3408 SPEED: 35 ACTIVE HALF WIDTH (FT): 6
SITE CHARACTERISTICS: SOFT GRADE (PERCENT): .5

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE = 62.83
* * DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL * *
70 CNEL 65 CNEL 60 CNEL 55 CNEL
--- --- --- ---
0.0 0.0 86.1 185.1

RUN NAME: SIERRA COLLEGE BLVD BETW ENGLISH COLONY & KING RUN DATE: 022807

ADT: 9600 SPEED: 35 ACTIVE HALF WIDTH (FT): 6
SITE CHARACTERISTICS: SOFT GRADE (PERCENT): .5

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE = 67.32
* * DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL * *
70 CNEL 65 CNEL 60 CNEL 55 CNEL
--- --- --- ---
0.0 79.7 171.4 369.0

RUN NAME: SIERRA COLLEGE BLVD BETW KING & TAYLOR RUN DATE: 022807

ADT: 10560 SPEED: 35 ACTIVE HALF WIDTH (FT): 6
SITE CHARACTERISTICS: SOFT GRADE (PERCENT): .5

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE = 67.74
* * DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL * *
70 CNEL 65 CNEL 60 CNEL 55 CNEL
--- --- --- ---
0.0 85.0 182.6 393.2

RUN NAME: SIERRA COLLEGE BLVD BETW TAYLOR & I-80 RUN DATE: 022807

ADT: 17566 SPEED: 35 ACTIVE HALF WIDTH (FT): 6
SITE CHARACTERISTICS: SOFT GRADE (PERCENT): .5

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE = 69.95
* * DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL * *
70 CNEL 65 CNEL 60 CNEL 55 CNEL
--- --- --- ---
55.5 119.1 256.3 551.9

RUN NAME: SIERRA COLLEGE BLVD BETW I-80 & DOMINGUEZ RUN DATE: 022807

ADT: 13275 SPEED: 35 ACTIVE HALF WIDTH (FT): 6
SITE CHARACTERISTICS: SOFT GRADE (PERCENT): .5

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE = 68.73
* * DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL * *
70 CNEL 65 CNEL 60 CNEL 55 CNEL
--- --- --- ---
0.0 98.9 212.7 458.0

RUN NAME: SIERRA COLLEGE BLVD BETW DOMINGUEZ & ROCKLIN RUN DATE: 022807

ADT: 13275 SPEED: 35 ACTIVE HALF WIDTH (FT): 6
SITE CHARACTERISTICS: SOFT GRADE (PERCENT): .5

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE = 68.73
* * DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL * *

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	98.9	212.7	458.0

RUN NAME: GRANITE DR BETW DOMINGUEZ & SIERRA COLLEGE RUN DATE: 022807

ADT: 6178 SPEED: 35 ACTIVE HALF WIDTH (FT): 18
SITE CHARACTERISTICS: SOFT GRADE (PERCENT): .5

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE = 64.34
* * DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL * *

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	61.9	128.8	275.3

RUN NAME: GRANITE DR BETW DOMINGUEZ & ROCKLIN RUN DATE: 022807

ADT: 8258 SPEED: 35 ACTIVE HALF WIDTH (FT): 18
SITE CHARACTERISTICS: SOFT GRADE (PERCENT): .5

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE = 65.60
* * DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL * *

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	74.1	155.8	333.8

RUN NAME: DOMINGUEZ RD BETW TAYLOR & GRANITE RUN DATE: 022807

ADT: 2382 SPEED: 35 ACTIVE HALF WIDTH (FT): 6
SITE CHARACTERISTICS: SOFT GRADE (PERCENT): .5

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE = 61.27
* * DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL * *

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	67.9	145.8

RUN NAME: KING RD BETW SIERRA COLLEGE & TAYLOR RUN DATE: 022807

ADT: 5610 SPEED: 35 ACTIVE HALF WIDTH (FT): 6
SITE CHARACTERISTICS: SOFT GRADE (PERCENT): .5

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE = 64.99
* * DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL * *

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	55.9	119.9	258.0

FHWA OUTPUT – BASELINE NO PROJECT YEAR 2010

```
   TRAFFIC DISTRIBUTION PERCENTAGES
     DAY        EVENING     NIGHT
     ---        -------     -----
AUTOS
     68.15      11.12       8.43
M-TRUCKS
      7.69      1.26        0.95
H-TRUCKS
      1.87      0.30        0.23

  RUN NAME: TAYLOR RD BETW KING & HORSESHOE BAR        RUN DATE: 030107

ADT:  17150      SPEED:  35      ACTIVE HALF WIDTH (FT):  6
SITE CHARACTERISTICS: SOFT     GRADE (PERCENT):  .5

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE =  69.99
* *  DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL * *
70 CNEL  65 CNEL   60 CNEL   55 CNEL
-------  -------   -------   -------
  55.9     119.9     258.0     555.7

  RUN NAME: TAYLOR RD BETW HORSESHOE BAR & SIERRA COLLEGE        RUN DATE: 030107

ADT:  10973      SPEED:  35      ACTIVE HALF WIDTH (FT):  6
SITE CHARACTERISTICS: SOFT     GRADE (PERCENT):  .5

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE =  68.05
* *  DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL * *
70 CNEL  65 CNEL   60 CNEL   55 CNEL
-------  -------   -------   -------
   0.0      89.1     191.7     412.7

  RUN NAME: PACIFIC ST BETW SIERRA COLLEGE & DOMINGUEZ        RUN DATE: 030107

ADT:  11868      SPEED:  35      ACTIVE HALF WIDTH (FT):  18
SITE CHARACTERISTICS: SOFT     GRADE (PERCENT):  .5

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE =  67.32
* *  DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL * *
70 CNEL  65 CNEL   60 CNEL   55 CNEL
-------  -------   -------   -------
   0.0      95.3     202.4     434.6

  RUN NAME: PACIFIC ST BETW DOMINGUEZ & ROCKLIN        RUN DATE: 030107

ADT:  19459      SPEED:  35      ACTIVE HALF WIDTH (FT):  18
SITE CHARACTERISTICS: SOFT     GRADE (PERCENT):  .5

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE =  69.47
* *  DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL * *
70 CNEL  65 CNEL   60 CNEL   55 CNEL
-------  -------   -------   -------
  63.0     131.4     280.8     604.0

  RUN NAME: ROCKLIN RD BETW PACIFIC & GRANITE        RUN DATE: 030107
```

ADT: 25371 SPEED: 35 ACTIVE HALF WIDTH (FT): 18
SITE CHARACTERISTICS: SOFT GRADE (PERCENT): .5

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE = 70.62
* * DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL * *

70 CNEL	65 CNEL	60 CNEL	55 CNEL
74.3	156.3	335.0	720.7

RUN NAME: ROCKLIN RD BETW I-80 & SIERRA COLLEGE RUN DATE: 030107

ADT: 14599 SPEED: 35 ACTIVE HALF WIDTH (FT): 18
SITE CHARACTERISTICS: SOFT GRADE (PERCENT): .5

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE = 68.22
* * DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL * *

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	108.9	232.1	498.9

RUN NAME: ROCKLIN RD BETW SIERRA COLLEGE & BARTON RUN DATE: 030107

ADT: 6646 SPEED: 35 ACTIVE HALF WIDTH (FT): 12
SITE CHARACTERISTICS: SOFT GRADE (PERCENT): .5

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE = 65.29
* * DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL * *

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	64.7	137.6	295.5

RUN NAME: BARTON RD BETW ROCKLIN & BRACE RUN DATE: 030107

ADT: 3514 SPEED: 35 ACTIVE HALF WIDTH (FT): 6
SITE CHARACTERISTICS: SOFT GRADE (PERCENT): .5

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE = 63.11
* * DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL * *

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	89.9	193.3

RUN NAME: HORSESHOE BAR RD BETW I-80 & BRACE RUN DATE: 030107

ADT: 6141 SPEED: 35 ACTIVE HALF WIDTH (FT): 6
SITE CHARACTERISTICS: SOFT GRADE (PERCENT): .5

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE = 65.53
* * DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL * *

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	60.7	130.2	280.3

RUN NAME: BRACE RD BETW I-80 & BARTON RUN DATE: 030107

ADT: 4046 SPEED: 35 ACTIVE HALF WIDTH (FT): 6
SITE CHARACTERISTICS: SOFT GRADE (PERCENT): .5

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE = 63.72
* * DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL * *
70 CNEL 65 CNEL 60 CNEL 55 CNEL
--- --- --- ---
0.0 0.0 98.7 212.3

RUN NAME: BRACE RD BETW I-80 & SIERRA COLLEGE RUN DATE: 030107

ADT: 3408 SPEED: 35 ACTIVE HALF WIDTH (FT): 6
SITE CHARACTERISTICS: SOFT GRADE (PERCENT): .5

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE = 62.98
* * DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL * *
70 CNEL 65 CNEL 60 CNEL 55 CNEL
--- --- --- ---
0.0 0.0 88.1 189.4

RUN NAME: SIERRA COLLEGE BLVD BETW ENGLISH COLONY & KING RUN DATE: 030107

ADT: 10430 SPEED: 35 ACTIVE HALF WIDTH (FT): 6
SITE CHARACTERISTICS: SOFT GRADE (PERCENT): .5

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE = 67.83
* * DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL * *
70 CNEL 65 CNEL 60 CNEL 55 CNEL
--- --- --- ---
0.0 86.2 185.3 399.0

RUN NAME: SIERRA COLLEGE BLVD BETW KING & TAYLOR RUN DATE: 030107

ADT: 11250 SPEED: 35 ACTIVE HALF WIDTH (FT): 6
SITE CHARACTERISTICS: SOFT GRADE (PERCENT): .5

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE = 68.16
* * DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL * *
70 CNEL 65 CNEL 60 CNEL 55 CNEL
--- --- --- ---
0.0 90.6 194.9 419.6

RUN NAME: SIERRA COLLEGE BLVD BETW TAYLOR & I-80 RUN DATE: 030107

ADT: 18296 SPEED: 35 ACTIVE HALF WIDTH (FT): 6
SITE CHARACTERISTICS: SOFT GRADE (PERCENT): .5

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE = 70.27
* * DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL * *
70 CNEL 65 CNEL 60 CNEL 55 CNEL
--- --- --- ---
58.4 125.2 269.4 580.2

RUN NAME: SIERRA COLLEGE BLVD I-80 & DOMINGUEZ RUN DATE: 030107

ADT: 14105 SPEED: 35 ACTIVE HALF WIDTH (FT): 18
SITE CHARACTERISTICS: SOFT GRADE (PERCENT): .5

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE = 68.07
* * DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL * *

70 CNEL 65 CNEL 60 CNEL 55 CNEL
--- --- --- ---
0.0 106.5 226.9 487.6

RUN NAME: SIERRA COLLEGE BLVD BETW DOMINGUEZ & ROCKLIN RUN DATE: 030107

ADT: 14745 SPEED: 35 ACTIVE HALF WIDTH (FT): 6
SITE CHARACTERISTICS: SOFT GRADE (PERCENT): .5

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE = 69.34
* * DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL * *
70 CNEL 65 CNEL 60 CNEL 55 CNEL
--- --- --- ---
50.6 108.5 233.3 502.4

RUN NAME: GRANITE DR BETW DOMINGUEZ & SIERRA COLLEGE RUN DATE: 030107

ADT: 6328 SPEED: 35 ACTIVE HALF WIDTH (FT): 18
SITE CHARACTERISTICS: SOFT GRADE (PERCENT): .5

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE = 64.59
* * DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL * *
70 CNEL 65 CNEL 60 CNEL 55 CNEL
--- --- --- ---
0.0 64.1 133.8 286.1

RUN NAME: GRANITE DR BETW DOMINGUEZ & ROCKLIN RUN DATE: 030107

ADT: 8458 SPEED: 35 ACTIVE HALF WIDTH (FT): 18
SITE CHARACTERISTICS: SOFT GRADE (PERCENT): .5

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE = 65.85
* * DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL * *
70 CNEL 65 CNEL 60 CNEL 55 CNEL
--- --- --- ---
0.0 76.8 161.9 346.9

RUN NAME: DOMINGUEZ RD BETW TAYLOR & GRANITE RUN DATE: 030107

ADT: 2422 SPEED: 35 ACTIVE HALF WIDTH (FT): 6
SITE CHARACTERISTICS: SOFT GRADE (PERCENT): .5

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE = 61.49
* * DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL * *
70 CNEL 65 CNEL 60 CNEL 55 CNEL
--- --- --- ---
0.0 0.0 70.2 150.9

RUN NAME: KING RD BETW SIERRA COLLEGE & TALYOR RUN DATE: 030107

ADT: 5610 SPEED: 35 ACTIVE HALF WIDTH (FT): 6
SITE CHARACTERISTICS: SOFT GRADE (PERCENT): .5

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE = 65.14
* * DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL * *
70 CNEL 65 CNEL 60 CNEL 55 CNEL
--- --- --- ---
0.0 57.2 122.6 263.9

FHWA OUTPUT – BASELINE PLUS PROJECT (ROCKLIN CROSSINGS) YEAR 2010

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
AUTOS	68.15	11.12	8.43
M-TRUCKS	7.69	1.26	0.95
H-TRUCKS	1.87	0.30	0.23

RUN NAME: TAYLOR RD BETW KING & HORSESHOE BAR RUN DATE: 030107

ADT: 18110 SPEED: 35 ACTIVE HALF WIDTH (FT): 6
SITE CHARACTERISTICS: SOFT GRADE (PERCENT): .5

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE = 70.23
* * DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL * *

70 CNEL	65 CNEL	60 CNEL	55 CNEL
58.0	124.3	267.6	576.2

RUN NAME: TAYLOR RD BETW HORSESHOE BAR & SIERRA COLLEGE RUN DATE: 030107

ADT: 11553 SPEED: 35 ACTIVE HALF WIDTH (FT): 6
SITE CHARACTERISTICS: SOFT GRADE (PERCENT): .5

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE = 68.28
* * DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL * *

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	92.2	198.4	427.1

RUN NAME: PACIFIC ST BETW SIERRA COLLEGE & DOMINGUEZ RUN DATE: 030107

ADT: 12378 SPEED: 35 ACTIVE HALF WIDTH (FT): 18
SITE CHARACTERISTICS: SOFT GRADE (PERCENT): .5

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE = 67.50
* * DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL * *

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	97.9	208.1	447.0

RUN NAME: PACIFIC ST BETW DOMINGUEZ & ROCKLIN RUN DATE: 030107

ADT: 19739 SPEED: 35 ACTIVE HALF WIDTH (FT): 18
SITE CHARACTERISTICS: SOFT GRADE (PERCENT): .5

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE = 69.53
* * DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL * *

70 CNEL	65 CNEL	60 CNEL	55 CNEL
63.6	132.6	283.5	609.7

RUN NAME: ROCKLIN RD BETW PACIFIC & GRANITE RUN DATE: 030107

ADT: 25701 SPEED: 35 ACTIVE HALF WIDTH (FT): 18
SITE CHARACTERISTICS: SOFT GRADE (PERCENT): .5

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE = 70.68
* * DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL * *

70 CNEL	65 CNEL	60 CNEL	55 CNEL
74.9	157.7	337.9	726.9

RUN NAME: ROCKLIN RD BETW I-80 & SIERRA COLLEGE RUN DATE: 030107

ADT: 16259 SPEED: 35 ACTIVE HALF WIDTH (FT): 18
SITE CHARACTERISTICS: SOFT GRADE (PERCENT): .5

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE = 68.69
* * DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL * *

70 CNEL	65 CNEL	60 CNEL	55 CNEL
56.5	116.8	249.3	535.8

RUN NAME: ROCKLIN RD BETW SIERRA COLLEGE & BARTON RUN DATE: 030107

ADT: 7886 SPEED: 35 ACTIVE HALF WIDTH (FT): 12
SITE CHARACTERISTICS: SOFT GRADE (PERCENT): .5

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE = 66.04
* * DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL * *

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	72.3	154.1	331.1

RUN NAME: BARTON RD BETW ROCKLIN & BRACE RUN DATE: 030107

ADT: 4104 SPEED: 35 ACTIVE HALF WIDTH (FT): 6
SITE CHARACTERISTICS: SOFT GRADE (PERCENT): .5

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE = 63.78
* * DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL * *

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	0.0	99.7	214.4

RUN NAME: HORSESHOE BAR RD BETW I-80 & BRACE RUN DATE: 030107

ADT: 6191 SPEED: 35 ACTIVE HALF WIDTH (FT): 6
SITE CHARACTERISTICS: SOFT GRADE (PERCENT): .5

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE = 65.57
* * DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL * *

70 CNEL	65 CNEL	60 CNEL	55 CNEL
0.0	61.0	131.0	281.8

RUN NAME: BRACE RD BETW I-80 & BARTON RUN DATE: 030107

ADT: 4156 SPEED: 35 ACTIVE HALF WIDTH (FT): 6
SITE CHARACTERISTICS: SOFT GRADE (PERCENT): .5

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE = 63.84
* * DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL * *
70 CNEL 65 CNEL 60 CNEL 55 CNEL
--- --- --- ---
0.0 0.0 100.5 216.2

RUN NAME: BRACE RD BETW I-80 & SIERRA COLLEGE RUN DATE: 030107

ADT: 3408 SPEED: 35 ACTIVE HALF WIDTH (FT): 6
SITE CHARACTERISTICS: SOFT GRADE (PERCENT): .5

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE = 62.98
* * DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL * *
70 CNEL 65 CNEL 60 CNEL 55 CNEL
--- --- --- ---
0.0 0.0 88.1 189.4

RUN NAME: SIERRA COLLEGE BLVD BETW ENGLISH COLONY & KING RUN DATE: 030107

ADT: 12160 SPEED: 35 ACTIVE HALF WIDTH (FT): 6
SITE CHARACTERISTICS: SOFT GRADE (PERCENT): .5

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE = 68.50
* * DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL * *
70 CNEL 65 CNEL 60 CNEL 55 CNEL
--- --- --- ---
0.0 95.4 205.2 442.0

RUN NAME: SIERRA COLLEGE BLVD BETW KING & TAYLOR RUN DATE: 030107

ADT: 13550 SPEED: 35 ACTIVE HALF WIDTH (FT): 6
SITE CHARACTERISTICS: SOFT GRADE (PERCENT): .5

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE = 68.97
* * DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL * *
70 CNEL 65 CNEL 60 CNEL 55 CNEL
--- --- --- ---
0.0 102.5 220.6 475.0

RUN NAME: SIERRA COLLEGE BLVD BETW TAYLOR & I-80 RUN DATE: 030107

ADT: 21716 SPEED: 35 ACTIVE HALF WIDTH (FT): 6
SITE CHARACTERISTICS: SOFT GRADE (PERCENT): .5

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE = 71.02
* * DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL * *
70 CNEL 65 CNEL 60 CNEL 55 CNEL
--- --- --- ---
65.3 140.3 302.0 650.4

RUN NAME: SIERRA COLLEGE BLVD I-80 & DOMINGUEZ RUN DATE: 030107

ADT: 23175 SPEED: 35 ACTIVE HALF WIDTH (FT): 18
SITE CHARACTERISTICS: SOFT GRADE (PERCENT): .5

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE = 70.23
* * DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL * *

```
70 CNEL  65 CNEL   60 CNEL   55 CNEL
-------  -------   -------   -------
  70.2      147.3      315.4      678.5

  RUN NAME: SIERRA COLLEGE BLVD BETW DOMINGUEZ & ROCKLIN        RUN DATE: 030107

ADT:  18465      SPEED:  35      ACTIVE HALF WIDTH (FT):  6
SITE CHARACTERISTICS: SOFT     GRADE (PERCENT):  .5

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE =  70.31
* *  DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL * *
70 CNEL  65 CNEL   60 CNEL   55 CNEL
-------  -------   -------   -------
  58.7      125.9      271.1      583.7

  RUN NAME: GRANITE DR BETW DOMINGUEZ & SIERRA COLLEGE        RUN DATE: 030107

ADT:  6348      SPEED:  35      ACTIVE HALF WIDTH (FT):  18
SITE CHARACTERISTICS: SOFT     GRADE (PERCENT):  .5

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE =  64.60
* *  DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL * *
70 CNEL  65 CNEL   60 CNEL   55 CNEL
-------  -------   -------   -------
   0.0       64.2      134.1      286.7

  RUN NAME: GRANITE DR BETW DOMINGUEZ & ROCKLIN        RUN DATE: 030107

ADT:  8519      SPEED:  35      ACTIVE HALF WIDTH (FT):  18
SITE CHARACTERISTICS: SOFT     GRADE (PERCENT):  .5

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE =  65.88
* *  DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL * *
70 CNEL  65 CNEL   60 CNEL   55 CNEL
-------  -------   -------   -------
   0.0       77.2      162.6      348.6

  RUN NAME: DOMINGUEZ RD BETW TAYLOR & GRANITE        RUN DATE: 030107

ADT:  2522      SPEED:  35      ACTIVE HALF WIDTH (FT):  6
SITE CHARACTERISTICS: SOFT     GRADE (PERCENT):  .5

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE =  61.67
* *  DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL * *
70 CNEL  65 CNEL   60 CNEL   55 CNEL
-------  -------   -------   -------
   0.0        0.0       72.2      155.0

  RUN NAME: KING RD BETW SIERRA COLLEGE & TALYOR        RUN DATE: 030107

ADT:  5610      SPEED:  35      ACTIVE HALF WIDTH (FT):  6
SITE CHARACTERISTICS: SOFT     GRADE (PERCENT):  .5

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE =  65.14
* *  DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL * *
70 CNEL  65 CNEL   60 CNEL   55 CNEL
-------  -------   -------   -------
   0.0       57.2      122.6      263.9
```

APPENDIX F

Water Supply Assessment

Placer County Water Agency

Business Center: 144 Ferguson Rd. • Mail: P.O. Box 6570 • Auburn, California 95604-6570
(530) 823-4850 800-464-0030 www.pcwa.net

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September 8, 2006
File No. Rocklin Crossings

RECEIVED
SEP 1 1 2006

Mr. David Mohlenbrok, Senior Planner
City of Rocklin
3970 Rocklin Road
Rocklin, CA 95677

SUBJECT: SB221 and SB610 Analysis for Rocklin Crossings

Dear Mr. Mohlenbrok:

This letter is in response to your request of June 20, 2006 for an analysis pursuant to SB221 and SB610 (Government Code 65858) for the proposed Rocklin Crossings Project.

The Rocklin Crossings Project is being proposed by the Donahue Schriber Asset Management Corporation and is located on approximately 52 acres at the north east corner of Interstate 80 at Sierra College Boulevard. It is proposed that this land will be subdivided into approximately 18 parcels and that a variety of retail and commercial developments will be constructed. In addition, other traveler servicing uses such as gas stations and a hotel could also be developed on the project site. Preliminary plans indicate 23 buildings with totaling 543,500 square feet. It is anticipated that this project will have build out demands of about 130 acre feet per year, a maximum day demand of 230,000 gallons and a fire flow of 4,000 gpm.

The Placer County Water Agency Board of Directors discussed and approved this response to your request at the meeting of September 7, 2006.

Additional comments, information and conditions relevant to water service to the Project follow.

SURFACE WATER

The Agency has several sources of surface water supply entitlements available for use in Western Placer County.

1. The first is a surface water supply contract with PG&E for 100,400 acre feet annually (afa) of Yuba/Bear River water that is delivered through PG&E's Drum Spaulding hydro system. This has been the Agency's primary source of supply for Zone 1 since the Agency began retailing water in 1968. The term of this contract is to 2013, but the Agency expects the contract to be renewed after the expiration of the present term.

This source of water has a high reliability during except under the most severe drought conditions. For example, between 1987 and 1992 the state experienced 5 years of drought, during which many areas in the state had reduced supplies. During that period, the Agency had a full Yuba/Bear river supply each year. However, in 1977 the Agency was only able to obtain a 50% supply from PG&E and had to impose drought restrictions on its customers. The Agency's 2005 Urban Water Management Plan was adopted on December 15, 2005 and contains a water shortage contingency analysis that includes a five stage rationing plan that will be invoked, to the extent necessary, during a declared water shortage. Also, see the section below entitled Allocation of Dry Year Water Shortages for further analysis on the impact of shortages from the PG&E supply in dry years.

Renewal of the PG&E Zone 1 Water Supply Contract

Most of the present supply of water used by PCWA to meet the demands of its customers in Zones 1 & 5 is supplied by Pacific Gas & Electric Company pursuant to the Agency's June 18, 1968 water supply contract with that company. While that contract states it will terminate May 2013, PG&E cannot change the place of use of that water if such a change in place of use would injure any legal user of that water. This is so whether PG&E's right to that water is based upon a pre-1914 appropriation or an appropriation pursuant to the Water Code. Sections 1706 and 1725 of the California Water Code state that a permittee or licensee may temporarily change the place of use provided that it would not injure any legal user of the water. That rule is also applicable to pre-1914 appropriations. That this is so with regard to pre-1914 appropriations is evidenced in Wells A. Hutchins' treatise entitled "The California Law of Water Rights" wherein he states on page 177:

> The invariable rule has come to be that the right to change the place of use can be exercised only when and to the extent that the change will not injure the rights of others.

This is supported by reference to the decisions in *Southern Cal Investment Co. v. Wilshire*, 144 Cal. 68 (1904) and *Southside Improvement Co. v. Burson*, 147 Cal. 401 (1905) and former Civil Code 1412 which was the derivation of Water Code Section 1206.

There can be no question that a change in the place of use of the water now furnished to the Agency by PG&E for use in Zone 1 would be extremely injurious to the Agency's customers served from that supply. These are the residents, industries, agricultural and commercial users in and around Auburn, Rocklin, Lincoln and Loomis who number many thousands. While the price and other terms may change from those in the 1968 contract after 2013, under California law the place of use for that water must continue to be the same, because any change in that place of use would be injurious to the present legal beneficiaries using that water.

Relicensing the Drum-Spaulding Hydroelectric Facility

The Drum-Spaulding Hydroelectric Project is a FERC licensed facility, owned by PG&E, located primarily within the South Yuba and Bear River watersheds. The Project provides wholesale water to PCWA for consumptive use in Placer County and produces electricity which PG&E uses to meet the demands of its retail electric customers. Generally, the facility

diverts water from Fordyce Creek and the South Fork of the Yuba River into storage. The main storage reservoirs are Lake Fordyce, with a storage capacity of 49,903 acre-feet, and Lake Spaulding, with a capacity of 74,800 acre-feet. The system conveys most of this water via canals and penstocks through a series of regulating reservoirs and powerhouses to Rollins Reservoir on the Bear River and then finally into Folsom Reservoir on the American River.

PG&E delivers Yuba-Bear River water to PCWA for consumptive use at numerous delivery points along the system. Portions of Drum Spaulding water system were built in the 1860s to supply water for mining and agriculture. Fordyce Lake was originally constructed in 1874. Hydroelectric generation capacity was added to the system in the early 1900s. The Drum Powerhouse was originally constructed in 1913. The current FERC license for the Drum Spaulding Hydroelectric Project expires in 2013.

FERC'S Relicensing Process

Under the 1920 Federal Power Act, FERC has the regulatory power to evaluate and approve license applications for hydropower projects and establish Protections, Mitigations and Enhancements as conditions for their operation. Under the Integrated License Process (ILP), the current default process that license applicants must use, five years before a hydropower license expires the applicant initiates the relicensing process by submitting a Pre-Application Document to FERC and filing a Notice of Intent to prepare and accompanying environmental documents. Over the next 3 years the applicant conducts environmental studies, consults with responsible resource agencies and prepares its license application with supporting environmental documentation. Concurrently, responsible agencies prepare recommended license conditions for submittal to FERC. Over the last 2 years FERC finalizes the environmental documents and issues final license conditions for the Project.

Water Quality Certification

The applicant must also prepare a Section 401 permit application under the Clean Water Act as part of the relicensing process. Section 401 allows the State Water Resources Control Board (SWRCB) to prescribe conditions necessary to ensure the facility complies with the Clean Water Act and any other applicable state laws. Section 401 also "provides that State certification conditions shall become conditions of any Federal license or permit for the facility."

License Conditions

Generally, FERC evaluates the entire relicensing application to determine what conditions to impose on the applicant. Due to particular system constraints, including physical or environmental factors, FERC may set license conditions that mandate minimum flows, reservoir levels, and temperature limitations.

Under the Federal Power Act (FPA), Congress allows some federal agencies, including the Secretary of the Interior and the Secretary of Commerce, to develop operating conditions

for FERC licenses "in order to adequately and equitably protect, mitigate damages to, and enhance, fish and wildlife" (16 U.S.C. Section 803(j)(1)). "[S]uch conditions shall be based on recommendations received pursuant to the Fish and Wildlife Coordination Act from the National Marine Fisheries Service, the United States Fish and Wildlife Service, and State fish and wildlife agencies" (16 U.S.C. Section 803(j)(1)). However, FERC can reject in whole or in part any recommended condition if it is inconsistent with the stated purposed of 16 U.S.C. Section 803(j)(1) or any other applicable laws.

Section 27 of the Federal Power Act, 16 U.S.C. § 821, however, provides:

> That nothing herein contained shall be construed as affecting or intending to affect or in any way to interfere with the laws of the respective States relating to the control, appropriation, use, or distribution of water used in irrigation or for municipal or other uses, or any vested right acquired therein.

This statutory provision attempts to draw a bright line between water for hydroelectric purposes, which use is governed under the Federal Power Act, and water rights associated with consumptive purposes, in which latter case State water right law prevails.

Allocation of Dry Year Water Shortages

The Yuba-Bear River supply purchased from PG&E (the PG&E supply) has historically been the primary water supply for western Placer County. The original water system dates back to the California gold rush and the Zone 1 facilities operated by PCWA today were purchased from PG&E in 1968. All of the Agency's Zone 1 raw water customers and the Auburn/Bowman treated water system are served exclusively from the PG&E supply. Most of the present demands on the Foothill/Sunset treated water system and some of the irrigation demands in Zone 5 are also met with the PG&E supply. The remainder of the Foothill/Sunset and Zone 5 demands are currently met from diversion of MFP water from the American River at Auburn. As the treated water demands on the Agency's system grow in the future it will be necessary to further develop the Agency's currently unused MFP and CVP supplies to meet these demands.

Surface water supplies from the Yuba-Bear River system are subject to reductions during dry periods. In any dry year the South Sutter Water District supply is assumed to be reduced to zero and we have assumed a PG&E supply cutback of 25% in multiple year droughts and a 50% cutback in the driest single year event, such as a repeat of 1977 hydrology.

Due to the physical and geographic layout of PCWA's water supply and raw water delivery system (open channel configuration, location and altitude), dry year reductions in the PG&E supply cannot be reasonably mitigated with other sources of supply. Water which is delivered from the Yuba-Bear River serves a geographical area that will continue to be mostly separated from the PCWA's other water sources as they are developed to meet the urban development proposed in western Placer County. There are physical, environmental, and economic constraints that will likely prevent supplying any significant backup water from other sources to supply PCWA's raw water system.

As a result, raw water customers that are supplied by the Yuba-Bear River System would be subject to more significant supply reductions than other customers during dry years.

The analysis of the allocation of the PG&E supply in the IWRP indicates that in a future multi-year drought, the reduction in deliveries through the Yuba-Bear system would be 30,000 ac-ft/yr. Although it would be the subject of Board policy at the time it occurs, it is assumed in the modeling that raw water cutbacks would be allocated as follows: Raw water to Zone 5 would be cut to zero first because they have greatest access to groundwater to replace PCWA deliveries; and then Zone I raw water customers would be cut to 97 percent of their normal supply as 10,000 AF of treated water demands in the Foothill/Sunset system are shifted to groundwater in this scenario.

In the single driest year, the reduction in Yuba-Bear system deliveries would be 55,000 ac-ft/yr. The modeling for this scenario is driven primarily by the inability to shift much additional water within the Yuba-Bear system from treated water deliveries to raw water deliveries. All of the rest of the loss in Yuba-Bear supply must be allocated to the raw water system. The result is that raw water deliveries would be reduced from a normal year supply of 75,000 ac-ft/yr to only 34,000 ac-ft/yr (57% supply in Zone 1, 45% overall) in a single driest year event.

Conclusions:

The Agency has begun negotiations with PG&E on the renewal of its Zone 1 water supply contract. The primary issue will be price. The parties agree that the price for water should represent an equitable sharing of the cost of operating the delivery system between power generation and water deliveries purposes. The Agency expects to conclude a new water supply contract with PG&E well before the expiration of the existing contract in 2013.

The Agency understands that there will be considerable emphasis on aquatic resource impacts associated with the diversion of water from the Yuba and Bear rivers for hydroelectric generation and consumptive use in Placer County. The Agency intends to be an active participant in this relicensing in an effort to find mutually beneficial solutions to improve the environment and protect its customers. The other participants will have to recognize however, that the consumptive uses predate the hydroelectric generation and under the Federal Power Act, FERC has limited ability to impose conditions on the hydroelectric operations which would adversely affect those consumptive uses.

Finally, because of the physical separation of the Agency's historic water systems that were supplied exclusively from PG&E's water system from the new systems being built for the proposed urban growth in western Placer County that will be met with MFP and CVP supplies, shortages in PG&E supply, whether as a result of drought or because of regulatory action, do not result in reduced supplies for new development.

2. The Agency's second source of surface water for consumptive use is its Middle Fork Project (MFP) water rights. Pursuant to agreements with the United States, the Agency is limited to a maximum consumptive use of 120,000 afa from this source. The Agency's MFP water right permits provide that this water supply may be diverted from the American River at either Auburn or at Folsom Reservoir. The Agency has done extensive modeling of the MFP system to determine its reliability during drought events using California's hydrologic record, which dates back to 1921. The conclusion of that analysis is that the MFP can provide 120,000 afa, even in dry years as severe as the 1976-1977 hydrologic event.

3. The Agency's third source of surface water is its federal Central Valley Project (CVP) Municipal and Industrial water supply contract with the United States Bureau of Reclamation. This contract is for 35,000 afa. This supply is subject to 25% deficiencies during single-dry and multiple-dry years. The contract presently provides that this water is to be provided to the Agency at Folsom Dam or other locations mutually agreed to by the parties. Reclamation and the Agency are now studying the feasibility of diverting this supply off of the Sacramento River instead of at Folsom. Under the Agency's Integrated Water Resources Plan, discussed in more detail below, the Agency plans to supplement its CVP contract supply with groundwater in dry years to improve the reliability to the point where the full contract amount can be relied upon to serve urban development needs.

4. The Agency also has a surface water contract to purchase up to 5,000 afa from South Sutter Water District (SSWD), but this supply is only available when it is surplus to SSWD's needs. Delivery is only available into the Auburn Ravine. The Agency's Board has directed that this water is to be made available as a supplemental supply to agricultural customers in Zone 5. This SSWD source is considered temporary because it is expected that the available supply will eventually be fully utilized by SSWD.

   Under the Board's policy for the use of SSWD water, it is not anticipated that the loss of the SSWD supply, either due to drought or prior use by SSWD, would affect the water supply to Zone 1.

The total surface water supply available to the western Placer County area that includes Zones 1 & 5 is 255,400 afa of permanent supply in normal years, plus 5,000 afa of temporary surplus water. Out of that permanent supply, the Agency has contracted to deliver up to 25,000 afa to San Juan Water District for use within the Placer County portion of its service area and up to 30,000 afa to the City of Roseville.

The Agency has also contracted to deliver up to 29,000 afa to Sacramento Suburban Water District for groundwater stabilization in that district's service area, but only when the supply is surplus to the needs of Placer County. Because of the surplus nature of this contract, it is not a factor in determining water availability for the Agency's service area.

On going water delivery efficiency efforts and Board policies relating to the Agency's raw water system have reduced the amount of water that must be committed to meet the Agency's customers demand by an estimated 5,000 af over the past 5 years. Through August 17, 2006, the Agency has committed approximately 115,181 af to meet the needs of its Zone 1 & 5 customers plus the 55,000 af committed to Roseville and San Juan Water District. Subtracting these amounts from the Agency's entitlements leaves 85,219 afa of surface water available in normal years for use in Western Placer County to meet future demands.

GROUNDWATER

Although groundwater use in Placer County by individual homes, farms and businesses is estimated to be about 90,000 acre-feet per year, the Agency does not currently use significant amounts of groundwater to meet its customers' demands. The Agency has a single well located in the Sunset

Industrial area that meets all drinking water standards but has not been utilized for several years due to customer concerns regarding water quality (hardness and silica) related to industrial use.

The following findings with regards to the use of groundwater can be concluded from the Agency's draft Integrated Water Resources Plan:

- The historic average annual rate of groundwater use within the Placer County portion of the North American River Groundwater Basin is estimated to be about 90,000 acre feet per year.

- According to semi-annual well data collected by the State Department of Water Resources since the 1940s, the subsurface groundwater level in western Placer County in the area west of Roseville has been relatively stable since the early 1980s following decades of steady decline.

- Based upon this information we believe that the current groundwater use and natural recharge rate are in balance and that current average annual groundwater pumping rates within the basin can be sustained indefinitely without a further decline in the subsurface groundwater level.

- Therefore, as urban development replaces historic groundwater irrigated agriculture, there is an opportunity to develop groundwater for use in meeting urban domestic and irrigation demands without adversely affecting groundwater levels or long term groundwater reliability.

PCWA's surface water supplies, particularly its 35,000 afa CVP contract entitlement and its Yuba Bear 100,400 afa contract with PG&E, may be subject to shortages in future dry years. To make up for such dry year shortfalls and for backup in the event of emergency or planned outages, PCWA is planning on developing groundwater resources as its service area expands west over the groundwater basin and into the area most likely to be served long term from the Sacramento River using the Agency's CVP contract supply. But to insure that there is no adverse long term impact of such dry year groundwater use there must be groundwater banking in normal and wet years to offset the planned dry year use. That banking can most efficiently occur through "in-lieu recharge" which is the reduction of historic groundwater use in normal and wet years allowing the natural recharge flow to accumulate in the aquifer. However, the Agency may also utilize groundwater resources as part of a conjunctive use aquifer storage and recovery program.

RECYCLED WATER USE

Recycled water use by projects within a reasonable service perimeter of reclaimed water supplies is assumed in the Agency's draft Integrated Water Resources Plan and in it's 2005 Urban Water Management Plan. This project is not located in an area that can utilize recycled water for irrigation purposes.

WATER SUPPLY ASSESSMENT

On December 15, 2005, the Agency Board of Directors adopted the 2005 Urban Water Management Plan update. This plan projects water supply and water demands for normal, single dry

and multiple dry years for 20 years into the future. The proposed Rocklin Crossings Project is included in this plan.

Through the integrated use of existing surface water entitlements, recycled water and demand reduction resources and groundwater as proposed herein, the Agency has an adequate water supply to meet the anticipated build out demands of the Rocklin Crossings Project in addition to the rest of the build out demands currently anticipated within the Agency's projected service area in western Placer County in normal, single dry and multiple dry years, subject to the qualifications set forth below.

INFRASTRUCTURE CAPACITY

To provide water service to a project the Agency must have both the water supply resources (discussed above) and adequate treatment and delivery infrastructure capacity. This section provides an assessment of the infrastructure capability and needs of the Agency to serve the Rocklin Crossing Project.

Raw Water Delivery from the Yuba/Bear River
There are no infrastructure limitations to the delivery of 100% of the Agency surface water supply entitlements under its PG&E (100,400 afa) and SSWD (5,000 afa) contracts.

Raw Water Delivery from the American River
The only facility that the Agency currently has to deliver water to its service area from its American River supplies is the temporary American River Pump Station at Auburn. Under an agreement between the Agency and the United States, the U.S. is required to install temporary pumps in the American River so that the Agency can access up to 25,000 afa of its MFP water at a rate of 50 cubic feet per second (cfs). Because of flooding concerns which necessitates the seasonal removal of the temporary pumps, and other technical limitations, the Agency estimates that it can only reliably divert up to 13,000 afa with the current configuration installed by the U.S.

As limited by the temporary American River Pump Station, the total current raw water delivery capacity available to Zones 1 & 5 is 117,332 afa on a permanent basis and 122,332 afa on temporary basis in normal/wet years.

Progress by the Agency and the U.S. Bureau of Reclamation is being made in completing a new, permanent American River Pump Station. On June 13, 2003, Reclamation entered into a contract to construct Phase I of the American River Pump Station. It is anticipated that Phase I will be completed in December of 2006. On August 24, 2006, Reclamation entered into a contract to construct Phase 2, which includes construction of the diversion facility and rewatering of the river It is estimated that completion will be in 2008.

Completion of this project will increase the Agency's raw water delivery capacity to Zone 1 and Western Placer County to 135,900 afa on a permanent basis in normal/wet years. Subtracting 115,181 afa of current and committed demands will leave 20,719 afa of uncommitted raw water delivery capacity available for new development once the permanent American River pump station is complete in 2008.

Raw Water Delivery with Proposed Sacramento River Diversion Facilities
Because of environmental concerns, the Agency has agreed in the Water Forum Agreement, dated January 2000, to limit the Agency's diversions from the American River to 35,500 afa, provided the Agency is able to obtain a diversion off the Sacramento River for the remainder of its MFP and/or CVP water not delivered off the American River.

The Agency is studying the feasibility of a project in which a new treatment plant would serve proposed developments in southwest Placer County with water diverted from the Sacramento River north of the Sacramento Airport. The project would provide an additional 35,000 afa of raw water supply, and 65 mgd of treatment capacity into the Agency service area. In 2001, Congress authorized Reclamation to complete a feasibility study and EIS/EIR on the project. If the project is approved, the Agency anticipates construction of the project could be completed by about 2016.

Completion of both the permanent American River Pump Station and the Sacramento River Diversion facilities would increase the amount of surface water available to the Agency's west Placer service area to 175,900 af and should enable the Agency to meet the projected increase in the raw water delivery needs of its service area in western Placer County until 2030.

Treatment, Transmission and Storage
The Agency completed the most recent expansion of its Foothill WTP in Newcastle in 2005. The treatment plant capacity of this facility is 55 million gallons per day (mgd). Combined with the Sunset WTP, which has a capacity of 8 mgd, the Foothill/Sunset system has a treatment capacity of 63 mgd. The Agency reserves capacity for new customers upon payment of the Agency's Water Connection Charge (WCC). There is typically an average time lag of approximately 18 months between the payment of WCC and the full development of demand from the occupied units. At this time, the Agency estimates that this reserved capacity for development that has already paid the WCC to be 5.3 mgd but these demands are not reflected in the 2006 maximum day demand of 51.8 mgd. This leaves 5.9 mgd of unallocated capacity that can serve approximately 5,130 equivalent dwelling units (EDUs) and which is available on a first-come, first-served basis.

The Agency has completed design of the Auburn Tunnel Pump Station No. 2 project. This pump station is located on Ophir Road in the Ophir area. This pump station will be capable of delivering American River water from the Auburn Tunnel to the existing Foothill WTP, to the proposed Ophir area WTP as well as to the Agency's canal system. This project has been bid and awarded. Construction started in February of 2006. It is anticipated it will be completed in 2007.

The Agency is currently working on the design of modifications to the Auburn Tunnel Outlet. These modifications will allow the Agency to control the water discharged into the Auburn Ravine and to more efficiently utilize the Agency's American River Water Supply. This project is scheduled for completion in 2008.

In addition, the Agency is in the design phase for a new Ophir Water Treatment Plant that will be located on Ophir Road in the Newcastle/Ophir area. This plant is scheduled for completion in 2010. This plant is being designed with an initial capacity of 30 mgd. When compete, this facility will be able to serve an additional 26,000 EDUs.

The proposed project would be served treated water from the Foothill WTP plant via the 20 inch pipeline in Taylor Road. This pipeline was the original pipeline from the Foothill Water Treatment Plant and delivers water from the Penryn area south on Taylor Road to the end of the system adjacent to the City of Roseville in the Stoneridge area. Due to the large demand currently placed on this pipe significant pressure fluctuations occur. Proposed project demands and fire flow cannot be served from this pipeline under Agency pressure and velocity criteria, therefore, off-site pipelines providing service from another transmission line will need to be constructed by the project. The project designer can meet with the Agency to discuss options.

PCWA'S DEMAND MANAGEMENT MEASURES

The Agency was created by the Placer County Water Agency Act, a special act of the California Legislature. The California Urban Water Management Planning Act requires water purveyors that serve more than 3,000 customers prepare a long-term water supply plan every five years. The Agency's most recent Urban Water Management Plan (UWMP) was adopted in December 2005.

The Agency is providing a comprehensive suite of demand management measures to its customers. All customers are metered. The Agency has implemented inclining block rates based upon water usage. System wide water audits are being conducted and customer usage is tracked on a monthly basis. Leak detections are conducted whenever unaccounted water exceeds 10%. Agency rules and regulations require discontinuance of service upon excessive wasting of water. Residential water surveys are provided upon request. The Agency has a full time water conservation coordinator on staff.

The long term effects of the Agency's demand management measures on per capita water use will be quantitatively evaluated in the Agency's Integrated Water Resources Plan and are included in the 2005 UWMP.

ADDITIONAL CONDITIONS FOR DELIVERY OF WATER SUPPLY

The Agency reserves water supply only when a project is located within an Agency service zone, a project proponent submits an application for water service and the Water Connection Charges are paid.

In 2002 the U.S. Fish and Wildlife Service (USFWS) imposed the following requirements on water service from the Agency's American River Pump Station:

1. PCWA shall only serve water to developments which have gone through section 7 or section 10 compliance.

2. PCWA shall not supply retail treated water service to new developments within environmentally sensitive areas of western Placer County until the Service has determined that the new development is consistent with current interim conservation strategies or any future Habitat Conservation Plan if developed.

These requirements were imposed due to USFWS concerns over adverse affects to the threatened vernal pool fairy shrimp, the endangered vernal pool tadpole shrimp, and the threatened California red-legged frog, and do not represent any new requirements for major land development projects proposed in western Placer County.

CONCLUSIONS

Through the integrated use of existing surface water entitlements, recycled water and demand reduction resources and groundwater as proposed herein, the Agency has an adequate water supply to meet the anticipated build out demands of the Rocklin Crossings Project in addition to the rest of the build out demands currently anticipated for 20 years within the Agency's projected service area in western Placer County in normal, single dry and multiple dry years.

However, depending upon the timing of water needs from this project and because the Agency has a first-come, first-serve policy for serving new customers, the completion of any or all of numerous Agency planned infrastructure projects may be required before the Agency can provide water service for the build out of the Rocklin Crossings Project. Those projects include completion of the permanent American River Pump Station, which is currently under construction, completion of the Auburn Tunnel Pump Station and completion of additional treatment capacity and transmission facilities associated with the Agency's planned Ophir Water Treatment Plant project, which are currently under design.

In addition, the Rocklin Crossings Project will need to enhance the Agency's existing transmission infrastructure to the project site and construct the needed onsite infrastructure.

If you have any questions on this subject, please call Brian Martin at (530) 823-4886.

Sincerely,

PLACER COUNTY WATER AGENCY

Lowell M. Jarvis for Alex Ferreira

Alex Ferreira
Chair, PCWA Board of Directors

AF/BCM/vf

pc: PCWA Board of Directors
Rocklin City Council